Flame, Gas, and Systems Product Catalog

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DET-TRONICS®

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Availability and specifications are subject to change without notice.

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MULTISPECTRUM INFRARED

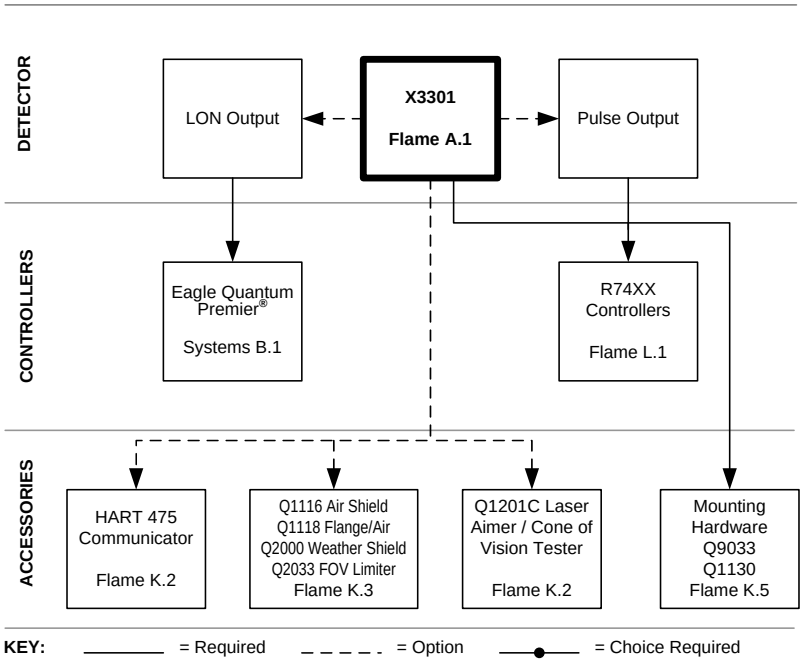
X3301 Protect•IR® Multispectrum Infrared Flame Detector

X3301 Protect•IR Multispectrum Infrared Flame Detector (Spec Sheet: 90-1143, 90-1144, 90-1190) establishes the benchmark in multiple-fuel fire detection performance and false alarm rejection. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. Multiple sensitivity and output options are available enabling the X3301 to be used in a variety of applications. For example, very high sensitivity version has a detection range of 210 feet (64 meters) to a 1 square foot n-Heptane fire. The medium sensitivity version has a detection range of 100 feet (30.5 meters) to a 1 square foot n-Heptane fire and is recommended for outdoor applications such as offshore oil/gas platforms. The detector has Division and Zone explosion-proof ratings and is available in aluminum or 316 stainless steel. Standard outputs include fire alarm, auxiliary alarm, and fault relays and RS-485 Modbus. Optional 4-20 mA, Eagle Quantum Premier®, or HART outputs are also available. Pulse output is available for easy retro fitting into controller-based systems.

- Eagle Quantum Premier compatible
- **Models available with SIL 2 certification**
- Increased sensitivity compared to traditional detectors.
- Third-party certified performance to multiple fuel types
- MTBF over 145,000 hours
- Beyond the standard for cone of vision, 100 feet of detection range on *and* off axis for methane
- Microprocessor controlled heated optics enable optimal performance in adverse environments
- Data logger for event time and date stamping
- Automatic optical integrity (**oi**) check on each sensor
- **Calibrated** manual testing/magnetic **oi**, no test lamp required
- Four conduit entries for easy installation
- FM, CSA, ATEX, CE, IECEx, DNV, MED, ULC
- EN 54 part 10 certified by VdS, LPCB
- Meets Construction Product Directive
- Optional HART output and AMS aware
- Models available with integral explosion proof camera option (xWatch)

5 YEAR WARRANTY

Meets NFPA 33 response requirements for under 0.5 seconds (available when model selected).



X3301 Model Matrix

MODEL	DESCRIPTION
X3301	Multispectrum IR Flame Detector

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
3M	3 Port, Metric M25
3N	3 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUTS
11	Relay
13	Relay and 4-20 mA
14	Eagle Quantum Premier (EQP)
15	Relay and Pulse
16	Addressable Module Only (third-party type)
21	Relay - Automotive
22	Eagle Quantum Premier - Automotive
23	HART, Relay, and 4-20 mA
33	Relay and 4-20 mA / NTSC (xWatch)
34	Eagle Quantum Premier / NTSC (xWatch)
43	Relay and 4-20 mA / PAL (xWatch)
44	Eagle Quantum Premier / PAL (xWatch)

TYPE	APPROVALS*
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CS/ULC**/ATEX/CE/IECEx
A	FM/CSA
B	INMETRO (BRAZIL)
R	VNIIPO/VNIIFTRI (RUSSIA)
U	TCCExEE/UKRCEPRO (UKRAINE)
Y	CCCF (CHINA)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

*Type *Approvals* can use one or more letters to designate the approvals of the product.
**ULC approval applies to output types 11, 13, 15, 21, and 23.

MULTISPECTRUM INFRARED

X3301 Protect•IR Multispectrum Infrared Flame Detector - SIL 2 (SIL/FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X3301A4N13T1	008258-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X3301A4M13T1	008259-XXX	AL	M25	Relay/4-20 mA	X		X
X3301S4N13T1	008260-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X3301S4M13T1	008261-XXX	316 SS	M25	Relay/4-20 mA	X		X
X3301A4N13T2	008270-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X3301A4M13T2	008271-XXX	AL	M25	Relay/4-20 mA		X	X
X3301S4N13T2	008272-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X3301S4M13T2	008273-XXX	316 SS	M25	Relay/4-20 mA		X	X
X3301A4N23T1	008244-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X3301A4M23T1	008245-XXX	AL	M25	Rly/4-20/HART	X		X
X3301S4N23T1	008246-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X3301S4M23T1	008247-XXX	316 SS	M25	Rly/4-20/HART	X		X
X3301A4N23T2	008248-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X3301A4M23T2	008249-XXX	AL	M25	Rly/4-20/HART		X	X
X3301S4N23T2	008250-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X3301S4M23T2	008251-XXX	316 SS	M25	Rly/4-20/HART		X	X
X3301A4N14T1	008262-001	AL	3/4 NPT	EQP	X		X
X3301A4M14T1	008263-001	AL	M25	EQP	X		X
X3301S4N14T1	008264-001	316 SS	3/4 NPT	EQP	X		X
X3301S4M14T1	008265-001	316 SS	M25	EQP	X		X
X3301A4N14T2	008274-001	AL	3/4 NPT	EQP		X	X
X3301A4M14T2	008275-001	AL	M25	EQP		X	X
X3301S4N14T2	008276-001	316 SS	3/4 NPT	EQP		X	X
X3301S4M14T2	008277-001	316 SS	M25	EQP		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting.

X3301 Protect•IR Multispectrum Infrared Flame Detector (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X3301A4N11W1	008100-XXX	AL	3/4 NPT	Relay	X		X
X3301A4M11W1	008101-XXX	AL	M25	Relay	X		X
X3301S4N11W1	008102-XXX	SS	3/4 NPT	Relay	X		X
X3301S4M11W1	008103-XXX	SS	M25	Relay	X		X
X3301A4N11W2	008104-XXX	AL	3/4 NPT	Relay		X	X
X3301A4M11W2	008105-XXX	AL	M25	Relay		X	X
X3301S4N11W2	008106-XXX	SS	3/4 NPT	Relay		X	X
X3301S4M11W2	008107-XXX	SS	M25	Relay		X	X
X3301A4N13W1	008108-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X3301A4M13W1	008109-XXX	AL	M25	Relay/4-20 mA	X		X
X3301S4N13W1	008110-XXX	SS	3/4 NPT	Relay/4-20 mA	X		X
X3301S4M13W1	008111-XXX	SS	M25	Relay/4-20 mA	X		X
X3301A4N13W2	008120-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X3301A4M13W2	008121-XXX	AL	M25	Relay/4-20 mA		X	X
X3301S4N13W2	008122-XXX	SS	3/4 NPT	Relay/4-20 mA		X	X
X3301S4M13W2	008123-XXX	SS	M25	Relay/4-20 mA		X	X
X3301A4N15W1	008112-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X3301A4M15W1	008113-XXX	AL	M25	Pulse/Relay	X		X
X3301S4N15W1	008114-XXX	SS	3/4 NPT	Pulse/Relay	X		X
X3301S4M15W1	008115-XXX	SS	M25	Pulse/Relay	X		X
X3301A4N15W2	008132-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X3301A4M15W2	008133-XXX	AL	M25	Pulse/Relay		X	X
X3301S4N15W2	008134-XXX	SS	3/4 NPT	Pulse/Relay		X	X
X3301S4M15W2	008135-XXX	SS	M25	Pulse/Relay		X	X
X3301A4N21W1	008116-005	AL	3/4 NPT	Automotive	X		X
X3301A4M21W1	008117-005	AL	M25	Automotive	X		X
X3301A4N21W2	008118-005	AL	3/4 NPT	Automotive		X	X
X3301A4M21W2	008119-005	AL	M25	Automotive		X	X
X3301A4N23W1	008208-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X3301A4M23W1	008209-XXX	AL	M25	Rly/4-20/HART	X		X
X3301S4N23W1	008210-XXX	SS	3/4 NPT	Rly/4-20/HART	X		X
X3301S4M23W1	008211-XXX	SS	M25	Rly/4-20/HART	X		X
X3301A4N23W2	008220-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X3301A4M23W2	008221-XXX	AL	M25	Rly/4-20/HART		X	X
X3301S4N23W2	008222-XXX	SS	3/4 NPT	Rly/4-20/HART		X	X
X3301S4M23W2	008223-XXX	SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

MULTISPECTRUM INFRARED

X3301 Protect•IR Multispectrum Infrared Flame Detector - EQP (FM/CSA/ATEX/CE/IECEx)

Model	Part Number	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X3301A4N14W1	008124-001	AL	3/4 NPT	EQP	X		X
X3301A4M14W1	008125-001	AL	M25	EQP	X		X
X3301S4N14W1	008126-001	316 SS	3/4 NPT	EQP	X		X
X3301S4M14W1	008127-001	316 SS	M25	EQP	X		X
X3301A4N14W2	008128-001	AL	3/4 NPT	EQP		X	X
X3301A4M14W2	008129-001	AL	M25	EQP		X	X
X3301S4N14W2	008130-001	316 SS	3/4 NPT	EQP		X	X
X3301S4M14W2	008131-001	316 SS	M25	EQP		X	X
X3301A4N14W1	008124-034	AL	3/4 NPT	EQP/Hangar	X		X
X3301A4M14W1	008125-034	AL	M25	EQP/Hangar	X		X
X3301S4N14W1	008126-034	316 SS	3/4 NPT	EQP/Hangar	X		X
X3301S4M14W1	008127-034	316 SS	M25	EQP/Hangar	X		X
X3301A4N14W2	008128-034	AL	3/4 NPT	EQP/Hangar		X	X
X3301A4M14W2	008129-034	AL	M25	EQP/Hangar		X	X
X3301S4N14W2	008130-034	316 SS	3/4 NPT	EQP/Hangar		X	X
X3301S4M14W2	008131-034	316 SS	M25	EQP/Hangar		X	X
X3301A4N22W1	008226-005	AL	3/4 NPT	EQP/Automotive	X		X
X3301A4M22W1	008227-005	AL	M25	EQP/Automotive	X		X
X3301A4N22W2	008228-005	AL	3/4 NPT	EQP/Automotive		X	X
X3301A4M22W2	008229-005	AL	M25	EQP/Automotive		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting. (Automotive version and Hangar version are not configurable).

NOTE: Hangar mode has delayed response.

X3301 Protect•IR Multispectrum Infrared Flame Detector - Brazil

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	INMETRO (Brazil)
X3301A4N11B2	008200-XXX	AL	3/4 NPT	Relay		X	X
X3301S4N11B2	008201-XXX	316 SS	3/4 NPT	Relay		X	X
X3301A4N13B2	008202-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X3301S4N13B2	008203-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X3301A4N14B2	008204-001	AL	3/4 NPT	EQP		X	X
X3301S4N14B2	008205-001	316 SS	3/4 NPT	EQP		X	X
X3301A4N23B2	008206-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X3301S4N23B2	008207-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.
The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.

X3301 Protect•IR Multispectrum Infrared Flame Detector - China

Model	Part Number	Material	Threads	Output	Ex d e	Ex d	CCCF (China)
X3301A4N11Y2	008280-001	AL	3/4 NPT	Relay		X	X
X3301A4M11Y2	008281-001	AL	M25	Relay		X	X
X3301S4N11Y2	008282-001	316 SS	3/4 NPT	Relay		X	X
X3301S4M11Y2	008283-001	316 SS	M25	Relay		X	X
X3301A4N13Y2	008284-001	AL	3/4 NPT	Relay/4-20 mA		X	X
X3301A4M13Y2	008285-001	AL	M25	Relay/4-20 mA		X	X
X3301S4N13Y2	008286-001	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X3301S4M13Y2	008287-001	316 SS	M25	Relay/4-20 mA		X	X
X3301A4N14Y2	008288-001	AL	3/4 NPT	EQP		X	X
X3301A4M14Y2	008289-001	AL	M25	EQP		X	X
X3301S4N14Y2	008290-001	316 SS	3/4 NPT	EQP		X	X
X3301S4M14Y2	008291-001	316 SS	M25	EQP		X	X
X3301A4N21Y2	008292-005	AL	3/4 NPT	Automotive		X	X
X3301A4M21Y2	008293-005	AL	M25	Automotive		X	X
X3301A4N23Y2	008294-001	AL	3/4 NPT	Rly/4-20/HART		X	X
X3301A4M23Y2	008295-001	AL	M25	Rly/4-20/HART		X	X
X3301S4N23Y2	008296-001	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X3301S4M23Y2	008297-001	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.

X3301 Protect•IR Multispectrum Infrared Flame Detector - Russia

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	VNIIPO/ VNIIFTRI (Russia)
X3301A4M11R1	008136-XXX	AL	M25	Relay	X		X
X3301S4M11R1	008137-XXX	316 SS	M25	Relay	X		X
X3301A4M11R2	008138-XXX	AL	M25	Relay		X	X
X3301S4M11R2	008139-XXX	316 SS	M25	Relay		X	X
X3301A4M13R1	008140-XXX	AL	M25	Relay/4-20 mA	X		X
X3301S4M13R1	008141-XXX	316 SS	M25	Relay/4-20 mA	X		X
X3301A4M13R2	008142-XXX	AL	M25	Relay/4-20 mA		X	X
X3301S4M13R2	008143-XXX	316 SS	M25	Relay/4-20 mA		X	X
X3301A4N15R1	008166-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X3301A4M15R1	008167-XXX	AL	M25	Pulse/Relay	X		X
X3301S4N15R1	008168-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X3301S4M15R1	008169-XXX	316 SS	M25	Pulse/Relay	X		X
X3301A4N15R2	008170-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X3301A4M15R2	008171-XXX	AL	M25	Pulse/Relay		X	X
X3301S4N15R2	008172-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X3301S4M15R2	008173-XXX	316 SS	M25	Pulse/Relay		X	X
X3301A4M23R1	008212-XXX	AL	M25	Rly/4-20/HART	X		X
X3301S4M23R1	008213-XXX	316 SS	M25	Rly/4-20/HART	X		X
X3301A4M23R2	008214-XXX	AL	M25	Rly/4-20/HART		X	X
X3301S4M23R2	008215-XXX	316 SS	M25	Rly/4-20/HART		X	X
X3301A4M14R1	008160-001	AL	M25	EQP	X		X
X3301S4M14R1	008161-001	316 SS	M25	EQP	X		X
X3301A4M14R2	008162-001	AL	M25	EQP		X	X
X3301S4M14R2	008163-001	316 SS	M25	EQP		X	X
X3301A4N14R1	008164-001	AL	3/4 NPT	EQP	X		X
X3301S4N14R1	008165-001	316 SS	3/4 NPT	EQP	X		X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.

MULTISPECTRUM INFRARED

X3301 Protect•IR Multispectrum Infrared Flame Detector - Ukraine

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	TCCExEE/ UKRCEPRO (Ukraine)
X3301A4M11U1	008152-XXX	AL	M25	Relay	X		X
X3301S4M11U1	008153-XXX	316 SS	M25	Relay	X		X
X3301A4M11U2	008154-XXX	AL	M25	Relay		X	X
X3301S4M11U2	008155-XXX	316 SS	M25	Relay		X	X
X3301A4M13U1	008156-XXX	AL	M25	Relay/4-20 mA	X		X
X3301S4M13U1	008157-XXX	316 SS	M25	Relay/4-20 mA	X		X
X3301A4M13U2	008158-XXX	AL	M25	Relay/4-20 mA		X	X
X3301S4M13U2	008159-XXX	316 SS	M25	Relay/4-20 mA		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

X3301 Protect•IR Multispectrum Infrared Flame Detector / xWatch Camera

Model	Part Number*	Material	Threads	Output	Video	FM/CSA
X3301A3N33A2	009500-XXX	AL	3/4 NPT	Relay/4-20	NTSC	X
X3301A3M33A2	009501-XXX	AL	M25	Relay/4-20	NTSC	X
X3301S3N33A2	009502-XXX	SS	3/4 NPT	Relay/4-20	NTSC	X
X3301S3M33A2	009503-XXX	SS	M25	Relay/4-20	NTSC	X
X3301A3N43A2	009504-XXX	AL	3/4 NPT	Relay/4-20	PAL	X
X3301A3M43A2	009505-XXX	AL	M25	Relay/4-20	PAL	X
X3301S3N43A2	009506-XXX	SS	3/4 NPT	Relay/4-20	PAL	X
X3301S3M43A2	009507-XXX	SS	M25	Relay/4-20	PAL	X
X3301A3N34A2	009508-001	AL	3/4 NPT	EQP	NTSC	X
X3301A3M34A2	009509-001	AL	M25	EQP	NTSC	X
X3301S3N34A2	009510-001	SS	3/4 NPT	EQP	NTSC	X
X3301S3M34A2	009511-001	SS	M25	EQP	NTSC	X
X3301A3N44A2	009512-001	AL	3/4 NPT	EQP	PAL	X
X3301A3M44A2	009513-001	AL	M25	EQP	PAL	X
X3301S3N44A2	009514-001	SS	3/4 NPT	EQP	PAL	X
X3301S3M44A2	009515-001	SS	M25	EQP	PAL	X
Ship Weight: Aluminum = 9lb (4.9kg) Stainless Steel = 16.8lb (7.6kg)						

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.
NOTES: 5 year warranty excludes xWatch camera.
Models listed above come with a 2.3 mm lens on the camera, which emulates the 90° field of view of the flame detector.
See section *Flame* F for additional lens options.

Table A1 - X3301 Software Part Number Configuration Matrix

Dash	Sensitivity	Alarm Relay	Aux Relay	Fault Relay	Special
-001	Medium	De-energized Non-latching	Energized Non-latching	Energized Non-latching	None
-002	Very High	De-energized Non-latching	Energized Non-latching	Energized Non-latching	None
-004	Low	De-energized Non-latching	Energized Non-latching	Energized Non-latching	None
-005*	Medium	De-energized Non-latching	De-energized Non-latching	Energized Non-latching	Automotive
-006	Medium	De-energized Latching	De-energized Latching	Energized Non-latching	None
-007	Very High	De-energized Latching	De-energized Latching	Energized Non-latching	None
-009	Low	De-energized Latching	De-energized Latching	Energized Non-latching	None
-010	T-Low	De-energized Non-latching	Energized Non-latching	Energized Non-latching	None
-011	T-Low	De-energized Latching	De-energized Latching	Energized Non-latching	None
-034	Medium	De-energized Non-Latching	De-energized Non-Latching	Energized Non-latching	Hangar**
-035	Very High	De-energized Non-Latching	De-energized Non-Latching	Energized Non-latching	Hangar**

*Available only on type 21 & 22 (Automotive) output.

**Consult Factory For Recommendations.

Application Guidelines

These are typical industry application settings.

They may not be applicable to all installations.

Contact factory for additional application guidance.

General Duty	001
Offshore	001, 004
Turbine	010, 001
Compressor	001, 002
Hangar	001, 002, 034 or 035
Automotive	005
High IR Backgrounds	004, 034

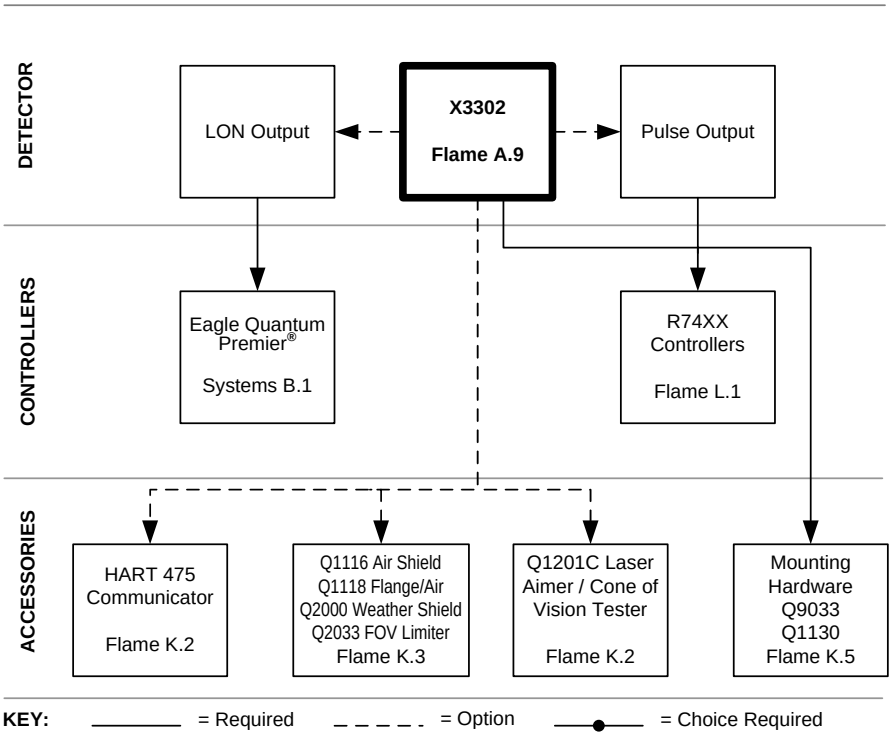
NOTE: Latching relays cannot be used in voted systems.

X3302 Protect•IR® Multispectrum Infrared Flame Detector

X3302 Multispectrum Infrared Flame Detector (Spec Sheet: 90-1185) provides a solid cone of vision for hydrogen fire detection coupled with superior false alarm rejection. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. The very high version has a detection range of 100 feet on and off axis to a hydrogen fire and is recommended for any indoor/outdoor application. The detector is available in aluminum or 316 stainless steel. Standard outputs include fire alarm, auxiliary alarm, and fault relays and RS-485 Modbus. Optional 4-20 mA, Eagle Quantum Premier, or HART outputs are also available. Pulse output is available for easy retro fitting into controller-based systems.

- Eagle Quantum Premier compatible
- **Models available with SIL 2 certification**
- Increased sensitivity and certified performance
- MTBF over 145,000 hours
- Beyond the standard for cone of vision, 100 feet on and off axis for hydrogen
- Microprocessor controlled heated optics, enable optimal performance in adverse environments
- Data logger for event time and date stamping
- Optional HART output and AMS aware
- Automatic optical integrity (**oi**) check on each sensor
- Calibrated manual testing/magnetic **oi**, no test lamp required
- Four conduit entries for easy installation
- FM, CSA, ATEX, CE, IECEx
- VdS verified
- Models available with integral explosion proof camera option (xWatch)

YEAR 5 WARRANTY



X3302 Model Matrix

MODEL	DESCRIPTION
X3302	Multispectrum IR Flame Detector

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
3M	3 Port, Metric M25
3N	3 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUTS
13	Relay and 4-20 mA
14	Eagle Quantum Premier (EQP)
15	Relay and Pulse
16	Addressable Module Only (third-party type)
23	HART, Relay, and 4-20 mA
33	Relay and 4-20 mA / NTSC (xWatch)
34	Eagle Quantum Premier / NTSC (xWatch)
43	Relay and 4-20 mA / PAL (xWatch)
44	Eagle Quantum Premier / PAL (xWatch)

TYPE	APPROVALS
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIPO/VNIIFTRI (RUSSIA)
A	FM/CSA

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

MULTISPECTRUM INFRARED

X3302 Protect•IR Multispectrum Infrared Flame Detector

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx	SIL 2
X3302A4N13T1	009008-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X	X
X3302A4M13T1	009009-XXX	AL	M25	Relay/4-20 mA	X		X	X
X3302S4N13T1	009010-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X	X
X3302S4M13T1	009011-XXX	316 SS	M25	Relay/4-20 mA	X		X	X
X3302A4N13T2	009012-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X	X
X3302A4M13T2	009013-XXX	AL	M25	Relay/4-20 mA		X	X	X
X3302S4N13T2	009014-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X	X
X3302S4M13T2	009015-XXX	316 SS	M25	Relay/4-20 mA		X	X	X
X3302A4N14W1	009024-002	AL	3/4 NPT	EQP	X		X	
X3302A4M14W1	009025-002	AL	M25	EQP	X		X	
X3302S4N14W1	009026-002	316 SS	3/4 NPT	EQP	X		X	
X3302S4M14W1	009027-002	316 SS	M25	EQP	X		X	
X3302A4N14W2	009028-002	AL	3/4 NPT	EQP		X	X	
X3302A4M14W2	009029-002	AL	M25	EQP		X	X	
X3302S4N14W2	009030-002	316 SS	3/4 NPT	EQP		X	X	
X3302S4M14W2	009031-002	316 SS	M25	EQP		X	X	
X3302A4N15W1	009016-XXX	AL	3/4 NPT	Pulse/Relay	X		X	
X3302A4M15W1	009017-XXX	AL	M25	Pulse/Relay	X		X	
X3302S4N15W1	009018-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X	
X3302S4M15W1	009019-XXX	316 SS	M25	Pulse/Relay	X		X	
X3302A4N15W2	009020-XXX	AL	3/4 NPT	Pulse/Relay		X	X	
X3302A4M15W2	009021-XXX	AL	M25	Pulse/Relay		X	X	
X3302S4N15W2	009022-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X	
X3302S4M15W2	009023-XXX	316 SS	M25	Pulse/Relay		X	X	
X3302A4N23T1	009032-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X	X
X3302A4M23T1	009033-XXX	AL	M25	Rly/4-20/HART	X		X	X
X3302S4N23T1	009034-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X	X
X3302S4M23T1	009035-XXX	316 SS	M25	Rly/4-20/HART	X		X	X
X3302A4N23T2	009036-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X	X
X3302A4M23T2	009037-XXX	AL	M25	Rly/4-20/HART		X	X	X
X3302S4N23T2	009038-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X	X
X3302S4M23T2	009039-XXX	316 SS	M25	Rly/4-20/HART		X	X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)								

*The last 3 digits of the part number identify the software configuration. Please see table A2 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -002 setting.

X3302 Protect•IR Multispectrum Infrared Flame Detector - Brazil

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	INMETRO (Brazil)
X3302A4N23B1	009085-XXX	AL	3/4 NPT	Relay/4-20/HART	X		X
X3302S4N23B1	009086-XXX	316 SS	3/4 NPT	Relay/4-20/HART	X		X
X3302A4N23B2	009087-XXX	AL	3/4 NPT	Relay/4-20/HART		X	X
X3302S4N23B2	009088-XXX	316 SS	3/4 NPT	Relay/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A2 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -002 setting.

X3302 Protect•IR Multispectrum Infrared Flame Detector - Russia

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	VNIIPO/ VNIIFTRI (Russia)
X3302A4M13R1	009040-XXX	AL	M25	Relay/4-20 mA	X		X
X3302S4M13R1	009041-XXX	316 SS	M25	Relay/4-20 mA	X		X
X3302A4M13R2	009042-XXX	AL	M25	Relay/4-20 mA		X	X
X3302S4M13R2	009043-XXX	316 SS	M25	Relay/4-20 mA		X	X
X3302A4N15R1	009048-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X3302A4M15R1	009049-XXX	AL	M25	Pulse/Relay	X		X
X3302S4N15R1	009050-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X3302S4M15R1	009051-XXX	316 SS	M25	Pulse/Relay	X		X
X3302A4N15R2	009052-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X3302A4M15R2	009053-XXX	AL	M25	Pulse/Relay		X	X
X3302S4N15R2	009054-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X3302S4M15R2	009055-XXX	316 SS	M25	Pulse/Relay		X	X
X3302A4M14R1	009044-002	AL	M25	EQP	X		X
X3302S4M14R1	009045-002	316 SS	M25	EQP	X		X
X3302A4M14R2	009046-002	AL	M25	EQP		X	X
X3302S4M14R2	009047-002	316 SS	M25	EQP		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg)							

*The last 3 digits of the part number identify the software configuration. Please see table A2 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -002 setting.

X3302 Protect•IR Multispectrum Infrared Flame Detector / xWatch Camera

Model	Part Number	Material	Threads	Output	Video	FM/CSA
X3302A3N33A2	009516-002	AL	3/4" NPT	Relay/4-20	NTSC	X
X3302A3M33A2	009517-002	AL	M25	Relay/4-20	NTSC	X
X3302S3N33A2	009518-002	SS	3/4" NPT	Relay/4-20	NTSC	X
X3302S3M33A2	009519-002	SS	M25	Relay/4-20	NTSC	X
X3302A3N43A2	009520-002	AL	3/4" NPT	Relay/4-20	PAL	X
X3302A3M43A2	009521-002	AL	M25	Relay/4-20	PAL	X
X3302S3N43A2	009522-002	SS	3/4" NPT	Relay/4-20	PAL	X
X3302S3M43A2	009523-002	SS	M25	Relay/4-20	PAL	X
X3302A3N34A2	009524-002	AL	3/4" NPT	EQP	NTSC	X
X3302A3M34A2	009525-002	AL	M25	EQP	NTSC	X
X3302S3N34A2	009526-002	SS	3/4" NPT	EQP	NTSC	X
X3302S3M34A2	009527-002	SS	M25	EQP	NTSC	X
X3302A3N44A2	009528-002	AL	3/4" NPT	EQP	PAL	X
X3302A3M44A2	009529-002	AL	M25	EQP	PAL	X
X3302S3N44A2	009530-002	SS	3/4" NPT	EQP	PAL	X
X3302S3M44A2	009531-002	SS	M25	EQP	PAL	X
Ship Weight: Aluminum = 9lb (4.9kg) Stainless Steel = 16.8lb (7.6kg)						

NOTES: 5 year warranty excludes xWatch camera.
Models listed above come with a 2.3 mm lens on the camera, which emulates the 90° field of view of the flame detector.
See section *Flame F* for additional lens options.

Table A2 - X3302 Software Part Number Configuration Matrix

Dash	Sensitivity	Alarm Relay	Aux Relay	Fault Relay	Special
-001	Medium	De-energized, Non-latching	Energized, Non-latching	Energized, Non-latching	None
-002	Very High	De-energized, Non-latching	Energized, Non-latching	Energized, Non-latching	None
-004	Low	De-energized, Non-latching	Energized, Non-latching	Energized, Non-latching	3 min **oi**/10 fails to fault
-006	Medium	De-energized, Latching	De-energized, Latching	Energized, Non-latching	None
-007	Very High	De-energized, Latching	De-energized, Latching	Energized, Non-latching	None
-009	Low	De-energized, Latching	De-energized, Latching	Energized, Non-latching	3 min **oi**/10 fails to fault
-050	High	De-energized, Non-latching	Energized, Non-latching	Energized, Non-latching	None
-051	High	De-energized, Latching	De-energized, Latching	Energized, Non-latching	None

Application Guidelines

These are typical industry application settings.

They may not be applicable to all installations.

Contact factory for additional application guidance.

General Duty, Fertilizer (Outdoor), Ammonia, Refridgerants	001
Aerospace, Hydrogen Storage	002
Filling Stations, Turbines	004
Fertilizer (Indoor), Refridgerants, Compressors, Battery Manufacturing	050

NOTE: Latching relays cannot be used in voted systems.

NOTES

ULTRAVIOLET/INFRARED

X5200 UVIR Flame Detector

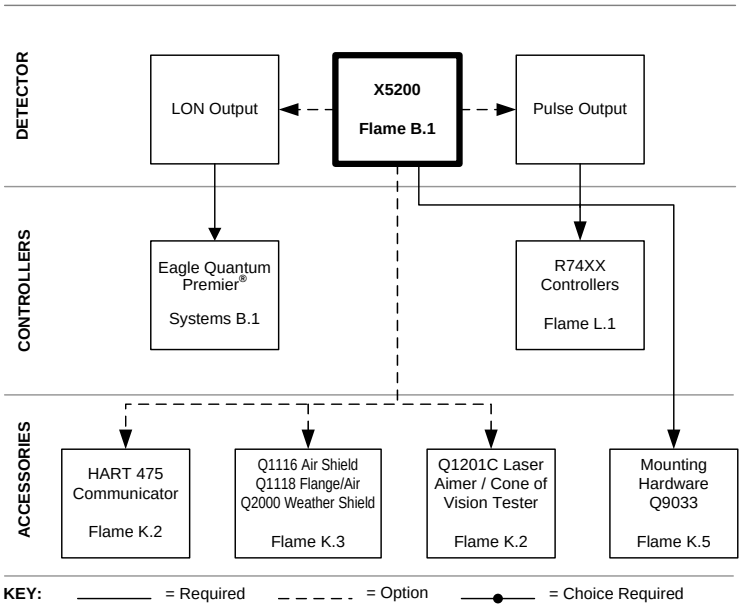
X5200 UVIR Flame Detector (Spec Sheet: 90-1156) meets the most stringent requirements worldwide with advanced high speed detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The combination of Arc rejection on the UV sensor and TDSA/Quick on the IR sensor make this detector the highest false alarm immune UVIR available. The mounting arrangement allows the UV and IR sensors to monitor the same hazardous location with a 90-degree cone of vision. When both sensors simultaneously detect the presence of a flame, an alarm signal is generated. The detector has Division and Zone explosion-proof ratings and is suitable for use in indoor and outdoor applications.

The standard output configuration includes fire, fault, and auxiliary relays and RS-485 Modbus. Optional 4-20 mA, Eagle Quantum Premier, or HART outputs are also available. A model with pulse output is available for easy retrofitting into existing Det-Tronics controller based systems. A tricolor LED on the detector faceplate indicates detector status condition.

The X5200 housing is available in aluminum or stainless steel, with NEMA 4X and IP66/IP67 rating. Typical applications include: Hangars, munitions, petrochemical applications, and turbines.

- Eagle Quantum Premier and Eagle Quantum compatible models available
- **Models available with SIL 2 certification**
- A new level of false alarm rejection
- Responds to a fire in the presence of modulated blackbody radiation (i.e., heaters, ovens, turbines) without false alarm
- High-speed capability
- Optional HART output and AMS aware
- Microprocessor-controlled heated optics for increased resistance to moisture and ice
- Automatic, manual, or magnetic optical integrity (**oi**) testing
- FM, CSA, ATEX, CE, IECEx
- EN 54 part 10 certified by VdS, LPCB
- Meets Construction Product Directive
- Integral wiring compartment for ease of installation
- Class A wiring per NFPA 72
- EMI, RFI, EMC Directive Compliant
- Built-in data logging / event monitoring
- Meets NFPA 33 Response requirement for under 0.5 second (when model selected)
- Models available with integral explosion proof camera option (xWatch)

YEAR 3 WARRANTY



X5200 Model Matrix

MODEL	DESCRIPTION
X5200	UVIR Flame Detector
X5200M[+]	UVIR Flame Detector with Molybdenum Tube

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
3M	3 Port, Metric M25
3N	3 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUTS
11	Relay
13	Relay and 4-20 mA
14	Eagle Quantum Premier
24	Eagle Quantum
15	Relay and Pulse
16	Addressable Module Only (third-party type)
23	HART, Relay, and 4-20 mA
33	Relay and 4-20 mA / NTSC (xWatch)
34	Eagle Quantum Premier / NTSC (xWatch)
43	Relay and 4-20 mA / PAL (xWatch)
44	Eagle Quantum Premier / PAL (xWatch)

TYPE	APPROVALS*
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
A	FM/CSA
B	INMETRO (BRAZIL)
R	VNIIPO/VNIIFTRI (RUSSIA)
U	TCCExEE/UKRCEPRO (UKRAINE)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

[+]Special Application - consult factory before ordering

*Type *Approvals* can use one or more letters to designate the approvals of the product

ULTRAVIOLET/INFRARED

X5200 UVIR Flame Detector - SIL 2 (SIL/FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X5200A4N13T1	008650-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X5200A4M13T1	008651-XXX	AL	M25	Relay/4-20 mA	X		X
X5200S4N13T1	008652-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X5200S4M13T1	008653-XXX	316 SS	M25	Relay/4-20 mA	X		X
X5200A4N13T2	008654-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X5200A4M13T2	008655-XXX	AL	M25	Relay/4-20 mA		X	X
X5200S4N13T2	008656-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X5200S4M13T2	008657-XXX	316 SS	M25	Relay/4-20 mA		X	X
X5200A4N23T1	008658-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X5200A4M23T1	008659-XXX	AL	M25	Rly/4-20/HART	X		X
X5200S4N23T1	008660-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X5200S4M23T1	008661-XXX	316 SS	M25	Rly/4-20/HART	X		X
X5200A4N23T2	008662-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X5200A4M23T2	008663-XXX	AL	M25	Rly/4-20/HART		X	X
X5200S4N23T2	008664-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X5200S4M23T2	008665-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.

X5200 UVIR Flame Detector - Moly - SIL 2 (SIL/FM/CSA/ATEX/CE/IECEx)

Model	Part Number *	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X5200MA4N23T1	008666-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X5200MA4M23T1	008667-XXX	AL	M25	Rly/4-20/HART	X		X
X5200MS4N23T1	008668-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X5200MS4M23T1	008669-XXX	316 SS	M25	Rly/4-20/HART	X		X
X5200MA4N23T2	008670-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X5200MA4M23T2	008671-XXX	AL	M25	Rly/4-20/HART		X	X
X5200MS4N23T2	008672-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X5200MS4M23T2	008673-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.

X5200 UVIR Flame Detector (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X5200A4N11W1	008500-XXX	AL	3/4 NPT	Relay	X		X
X5200A4M11W1	008501-XXX	AL	M25	Relay	X		X
X5200S4N11W1	008502-XXX	316 SS	3/4 NPT	Relay	X		X
X5200S4M11W1	008503-XXX	316 SS	M25	Relay	X		X
X5200A4N11W2	008504-XXX	AL	3/4 NPT	Relay		X	X
X5200A4M11W2	008505-XXX	AL	M25	Relay		X	X
X5200S4N11W2	008506-XXX	316 SS	3/4 NPT	Relay		X	X
X5200S4M11W2	008507-XXX	316 SS	M25	Relay		X	X
X5200A4N13W1	008508-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X5200A4M13W1	008509-XXX	AL	M25	Relay/4-20 mA	X		X
X5200S4N13W1	008510-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X5200S4M13W1	008511-XXX	316 SS	M25	Relay/4-20 mA	X		X
X5200A4N13W2	008512-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X5200A4M13W2	008513-XXX	AL	M25	Relay/4-20 mA		X	X
X5200S4N13W2	008514-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X5200S4M13W2	008515-XXX	316 SS	M25	Relay/4-20 mA		X	X
X5200A4N14W1	008516-001	AL	3/4 NPT	EQP	X		X
X5200A4M14W1	008517-001	AL	M25	EQP	X		X
X5200S4N14W1	008518-001	316 SS	3/4 NPT	EQP	X		X
X5200S4M14W1	008519-001	316 SS	M25	EQP	X		X
X5200A4N14W2	008520-001	AL	3/4 NPT	EQP		X	X
X5200A4M14W2	008521-001	AL	M25	EQP		X	X
X5200S4N14W2	008522-001	316 SS	3/4 NPT	EQP		X	X
X5200S4M14W2	008523-001	316 SS	M25	EQP		X	X
X5200A4N15W1	008524-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X5200A4M15W1	008525-XXX	AL	M25	Pulse/Relay	X		X
X5200S4N15W1	008526-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X5200S4M15W1	008527-XXX	316 SS	M25	Pulse/Relay	X		X
X5200A4N15W2	008528-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X5200A4M15W2	008529-XXX	AL	M25	Pulse/Relay		X	X
X5200S4N15W2	008530-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X5200S4M15W2	008531-XXX	316 SS	M25	Pulse/Relay		X	X
X5200A4N23W1	008608-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X5200A4M23W1	008609-XXX	AL	M25	Rly/4-20/HART	X		X
X5200S4N23W1	008610-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X5200S4M23W1	008611-XXX	316 SS	M25	Rly/4-20/HART	X		X
X5200A4N23W2	008612-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X5200A4M23W2	008613-XXX	AL	M25	Rly/4-20/HART		X	X
X5200S4N23W2	008614-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X5200S4M23W2	008615-XXX	316 SS	M25	Rly/4-20/HART		X	X
X5200A4N24W1	008556-001	AL	3/4 NPT	Eagle Quantum	X		X
X5200A4M24W1	008557-001	AL	M25	Eagle Quantum	X		X
X5200S4N24W1	008558-001	316 SS	3/4 NPT	Eagle Quantum	X		X
X5200S4M24W1	008559-001	316 SS	M25	Eagle Quantum	X		X
X5200A4N24W2	008560-001	AL	3/4 NPT	Eagle Quantum		X	X
X5200A4M24W2	008561-001	AL	M25	Eagle Quantum		X	X
X5200S4N24W2	008562-001	316 SS	3/4 NPT	Eagle Quantum		X	X
X5200S4M24W2	008563-001	316 SS	M25	Eagle Quantum		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.
The EQ and EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

ULTRAVIOLET/INFRARED

X5200M UVIR Flame Detector - Moly (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X5200MA4N13W1	008540-013	AL	3/4 NPT	Relay/4-20 mA	X		X
X5200MA4M13W1	008541-013	AL	M25	Relay/4-20 mA	X		X
X5200MS4N13W1	008542-013	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X5200MS4M13W1	008543-013	316 SS	M25	Relay/4-20 mA	X		X
X5200MA4N13W2	008544-013	AL	3/4 NPT	Relay/4-20 mA		X	X
X5200MA4M13W2	008545-013	AL	M25	Relay/4-20 mA		X	X
X5200MS4N13W2	008546-013	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X5200MS4M13W2	008547-013	316 SS	M25	Relay/4-20 mA		X	X
X5200MA4N14W1	008592-001	AL	3/4 NPT	EQP	X		X
X5200MA4M14W1	008593-001	AL	M25	EQP	X		X
X5200MS4N14W1	008594-001	316 SS	3/4 NPT	EQP	X		X
X5200MS4M14W1	008595-001	316 SS	M25	EQP	X		X
X5200MA4N14W2	008596-001	AL	3/4 NPT	EQP		X	X
X5200MA4M14W2	008597-001	AL	M25	EQP		X	X
X5200MS4N14W2	008598-001	316 SS	3/4 NPT	EQP		X	X
X5200MS4M14W2	008599-001	316 SS	M25	EQP		X	X
X5200MA4N15W1	008548-013	AL	3/4 NPT	Pulse/Relay	X		X
X5200MA4M15W1	008549-013	AL	M25	Pulse/Relay	X		X
X5200MS4N15W1	008550-013	316 SS	3/4 NPT	Pulse/Relay	X		X
X5200MS4M15W1	008551-013	316 SS	M25	Pulse/Relay	X		X
X5200MA4N15W2	008552-013	AL	3/4 NPT	Pulse/Relay		X	X
X5200MA4M15W2	008553-013	AL	M25	Pulse/Relay		X	X
X5200MS4N15W2	008554-013	316 SS	3/4 NPT	Pulse/Relay		X	X
X5200MS4M15W2	008555-013	316 SS	M25	Pulse/Relay		X	X
X5200MA4N23W1	008616-013	AL	3/4 NPT	Rly/4-20/HART	X		X
X5200MA4M23W1	008617-013	AL	M25	Rly/4-20/HART	X		X
X5200MS4N23W1	008618-013	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X5200MS4M23W1	008619-013	316 SS	M25	Rly/4-20/HART	X		X
X5200MA4N23W2	008620-013	AL	3/4 NPT	Rly/4-20/HART		X	X
X5200MA4M23W2	008621-013	AL	M25	Rly/4-20/HART		X	X
X5200MS4N23W2	008622-013	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X5200MS4M23W2	008623-013	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X5200 UVIR Flame Detector - Brazil

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	INMETRO (Brazil)
X5200A4N11B2	008641-XXX	AL	3/4 NPT	Relay		X	X
X5200S4N11B2	008642-XXX	316 SS	3/4 NPT	Relay		X	X
X5200A4N13B2	008643-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X5200S4N13B2	008644-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X5200A4N14B2	008645-001	AL	3/4 NPT	EQP		X	X
X5200S4N14B2	008646-001	316 SS	3/4 NPT	EQP		X	X
X5200A4N23B2	008647-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X5200S4N23B2	008648-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.
The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting

X5200 UVIR Flame Detector - Russia

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	VNIIPO/ VNIIFTRI (Russia)
X5200A4M11R1	008564-XXX	AL	M25	Relay	X		X
X5200S4M11R1	008565-XXX	316 SS	M25	Relay	X		X
X5200A4M11R2	008566-XXX	AL	M25	Relay		X	X
X5200S4M11R2	008567-XXX	316 SS	M25	Relay		X	X
X5200A4M13R1	008568-XXX	AL	M25	Relay/4-20 mA	X		X
X5200S4M13R1	008569-XXX	316 SS	M25	Relay/4-20 mA	X		X
X5200A4M13R2	008570-XXX	AL	M25	Relay/4-20 mA		X	X
X5200S4M13R2	008571-XXX	316 SS	M25	Relay/4-20 mA		X	X
X5200A4N15R1	008624-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X5200A4M15R1	008625-XXX	AL	M25	Pulse/Relay	X		X
X5200S4N15R1	008626-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X5200S4M15R1	008627-XXX	316 SS	M25	Pulse/Relay	X		X
X5200A4N15R2	008628-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X5200A4M15R2	008629-XXX	AL	M25	Pulse/Relay		X	X
X5200S4N15R2	008630-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X5200S4M15R2	008631-XXX	316 SS	M25	Pulse/Relay		X	X
X5200A4M14R1	008600-001	AL	M25	EQP	X		X
X5200S4M14R1	008601-001	316 SS	M25	EQP	X		X
X5200A4M14R2	008602-001	AL	M25	EQP		X	X
X5200S4M14R2	008603-001	316 SS	M25	EQP		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X5200 UVIR Flame Detector - Ukraine

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	TCCExEE/ UKRCEPRO (Ukraine)
X5200A4M11U1	008572-XXX	AL	M25	Relay	X		X
X5200S4M11U1	008573-XXX	316 SS	M25	Relay	X		X
X5200A4M11U2	008574-XXX	AL	M25	Relay		X	X
X5200S4M11U2	008575-XXX	316 SS	M25	Relay		X	X
X5200A4M13U1	008576-XXX	AL	M25	Relay/4-20 mA	X		X
X5200S4M13U1	008577-XXX	316 SS	M25	Relay/4-20 mA	X		X
X5200A4M13U2	008578-XXX	AL	M25	Relay/4-20 mA		X	X
X5200S4M13U2	008579-XXX	316 SS	M25	Relay/4-20 mA		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.

ULTRAVIOLET/INFRARED

X5200 UVIR Flame Detector / xWatch Camera

Model	Part Number*	Material	Threads	Output	Video	FM/CSA
X5200A3N33A2	009532-XXX	AL	3/4 NPT	Relay/4-20	NTSC	X
X5200A3M33A2	009533-XXX	AL	M25	Relay/4-20	NTSC	X
X5200S3N33A2	009534-XXX	SS	3/4 NPT	Relay/4-20	NTSC	X
X5200S3M33A2	009535-XXX	SS	M25	Relay/4-20	NTSC	X
X5200A3N43A2	009536-XXX	AL	3/4 NPT	Relay/4-20	PAL	X
X5200A3M43A2	009537-XXX	AL	M25	Relay/4-20	PAL	X
X5200S3N43A2	009538-XXX	SS	3/4 NPT	Relay/4-20	PAL	X
X5200S3M43A2	009539-XXX	SS	M25	Relay/4-20	PAL	X
X5200A3N34A2	009540-001	AL	3/4 NPT	EQP	NTSC	X
X5200A3M34A2	009541-001	AL	M25	EQP	NTSC	X
X5200S3N34A2	009542-001	SS	3/4 NPT	EQP	NTSC	X
X5200S3M34A2	009543-001	SS	M25	EQP	NTSC	X
X5200A3N44A2	009544-001	AL	3/4 NPT	EQP	PAL	X
X5200A3M44A2	009545-001	AL	M25	EQP	PAL	X
X5200S3N44A2	009546-001	SS	3/4 NPT	EQP	PAL	X
X5200S3M44A2	009547-001	SS	M25	EQP	PAL	X
Ship Weight: Aluminum = 9lb (4.1kg) Stainless Steel = 17.6lb (7.9kg)						

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.
NOTES: 3 year warranty excludes xWatch camera.
Models listed above come with a 2.3 mm lens on the camera, which emulates the 90° field of view of the flame detector.
See section *Flame* F for additional lens options.

NOTES

Table B1 - X5200 Software Part Number Configuration Matrix

Dash	UV Sensitivity	Arc Rejection	IR Sensitivity	Alarm Output IR Qualifications	Alarm Relay	Aux Output Function	Aux Output IR Qualifications	Aux Relay	Fault Relay
-001	High	High	High	TDSA Only	De-Energized Non-latching	Follows Alarm	TDSA	Energized Non-latching	Energized Non-latching
-002	High	Very High	High	TDSA or Quick	De-Energized Non-latching	Follows Alarm	TDSA or Quick	Energized Non-latching	Energized Non-latching
-003	High	Off	Very High	TDSA or Quick	De-Energized Non-latching	UV or IR	TDSA	Energized Non-latching	Energized Non-latching
-004	High	High	Very High	TDSA Only	De-Energized Non-latching	Pre-Alarm	TDSA	Energized Non-latching	Energized Non-latching
-005	Medium	High	High	TDSA or Quick	De-Energized Non-latching	UV or IR	TDSA	Energized Non-latching	Energized Non-latching
-006	High	High	Low	TDSA Only	De-Energized Non-latching	Pre-Alarm	TDSA	Energized Non-latching	Energized Non-latching
-007	High	High	High	TDSA Only	De-Energized Latching	Follows Alarm	TDSA	De-energized Latching	Energized Non-latching
-008	High	Very High	High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	De-energized Latching	Energized Non-latching
-009	High	Off	Very High	TDSA or Quick	De-Energized Latching	UV or IR	TDSA	De-energized Latching	Energized Non-latching
-010	High	High	Very High	TDSA Only	De-Energized Latching	Pre-Alarm	TDSA	De-energized Latching	Energized Non-latching
-011	Medium	High	High	TDSA or Quick	De-Energized Latching	UV or IR	TDSA	De-energized Latching	Energized Non-latching
-012	High	High	Low	TDSA Only	De-Energized Latching	Pre-Alarm	TDSA	De-energized Latching	Energized Non-latching
-013*	High	Off	High	TDSA or Quick	De-Energized Non-Latching	Follows Alarm	TDSA or Quick	Energized Non-Latching	Energized Non-latching
-014*	High	Off	High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	De-energized Latching	Energized Non-latching
-015	Very High	Low	Very High	TDSA or Quick	De-Energized Non-Latching	Follows Alarm	TDSA or Quick	Energized Non-Latching	Energized Non-latching
-016	Very High	Low	Very High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	De-energized Latching	Energized Non-latching
-019	Very High	Off	Very High	TDSA or Quick	De-Energized Non-Latching	UV or IR	TDSA	Energized Non-Latching	Energized Non-latching
-021	Very High	Off	Very High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	Energized Latching	Energized Non-latching
-022	Very High	Off	Very High	TDSA or Quick	De-Energized Non-Latching	UV or IR	TDSA or Quick	De-Energized Latching	Energized Non-latching

***Available only on the X5200M model**

ARC = Arc Rejection. An algorithm that prevents false alarms from transient UV sources

TDSA = "Time Domain Signal Analysis" Patented signal processing algorithm for superior IR false alarm rejection

Quick = Signal processing for explosive IR events

Application Guidelines

These are typical industry application settings.

They may not be applicable to all installations.

Contact factory for additional application guidance.

General Duty	001
Offshore	001
Compressor	002
Hangar	004
Automotive	005
Turbine	006
Munitions	013/022
High Speed	013/022

NOTE: Latching relays cannot be used in voted systems

SINGLE FREQUENCY INFRARED

X9800 IR Flame Detector

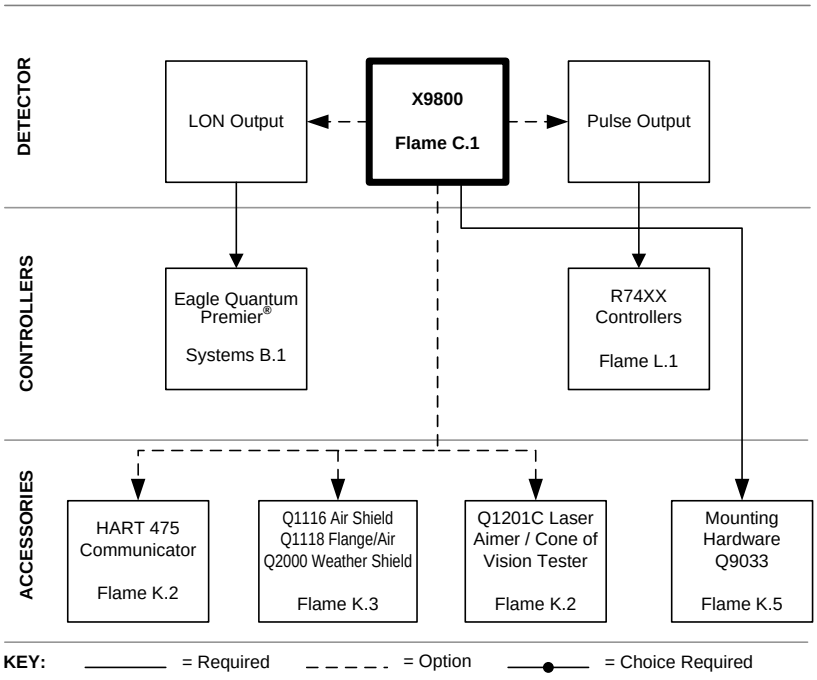
The X9800 IR Flame Detector (Spec Sheet: 90-1160) meets the most stringent requirements worldwide with advanced detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The detector is equipped with dual signal processing (high speed operation) and automatic/magnetic manual optical integrity (**oi**) test capability. The detector has Division and Zone explosion-proof ratings and is suitable for use in indoor and outdoor applications.

The standard output configuration includes fire, fault, and auxiliary relays and RS-485 Modbus. Optional 4-20 mA, Eagle Quantum Premier, or HART outputs are also available. A model with pulse output is available for easy retrofitting into existing Det-Tronics' controller-based systems. A tricolor LED on the detector faceplate indicates detector status condition.

The X9800 housing is available in aluminum or stainless steel, with NEMA 4X and IP66/IP67 rating. Typical applications include: turbines, petrochemical, automotive, and dirty environments.

- Eagle Quantum Premier compatible models available
- **Models available with SIL 2 certification**
- Unequaled false alarm rejection, TDSA
- Responds to a fire in the presence of modulated blackbody radiation
- High speed capability — 40 millisecond response time
- Microprocessor-controlled heated optics for increased resistance to moisture and ice
- Automatic, manual, or magnetic optical integrity (**oi**) testing
- Optional HART output and AMS aware
- Tricolor LED indicates normal operation, fire, and fault conditions
- FM, CSA, ATEX, CE, IECEx
- EN 54 part 10 certified by VdS, LPCB
- Mounting arm allows easy sighting
- Integral wiring compartment for ease of installation
- Class A wiring per NFPA 72
- Meets NFPA 33 response requirement for under 0.5 second (available when mode selected)
- Built-in data logging / event monitoring
- Models available with integral explosion proof camera option (xWatch)

YEAR 3 WARRANTY



X9800 Model Matrix

MODEL	DESCRIPTION
X9800	Single Frequency IR Flame Detector

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
3M	3 Port, Metric M25
3N	3 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUTS
11	Relay
13	Relay and 4-20 mA
14	Eagle Quantum Premier
15	Relay and Pulse
16	Addressable Module Only (third-party type)
23	HART, Relay, and 4-20 mA
33	Relay and 4-20 mA / NTSC (xWatch)
34	Eagle Quantum Premier / NTSC (xWatch)
43	Relay and 4-20 mA / PAL (xWatch)
44	Eagle Quantum Premier / PAL (xWatch)

TYPE	APPROVALS*
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
A	FM/CSA
R	VNIIPO/VNIIFTRI (RUSSIA)
U	TCCExEE/UKRCEPRO (UKRAINE)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

*Type Approvals can use one or more letters to designate the approvals of the product

X9800 Single Frequency IR Flame Detector - SIL 2 (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X9800A4N13T1	008800-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X9800A4M13T1	008801-XXX	AL	M25	Relay/4-20 mA	X		X
X9800S4N13T1	008802-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X9800S4M13T1	008803-XXX	316 SS	M25	Relay/4-20 mA	X		X
X9800A4N13T2	008804-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X9800A4M13T2	008805-XXX	AL	M25	Relay/4-20 mA		X	X
X9800S4N13T2	008806-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X9800S4M13T2	008807-XXX	316 SS	M25	Relay/4-20 mA		X	X
X9800A4N23T1	008808-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X9800A4M23T1	008809-XXX	AL	M25	Rly/4-20/HART	X		X
X9800S4N23T1	008810-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X9800S4M23T1	008811-XXX	316 SS	M25	Rly/4-20/HART	X		X
X9800A4N23T2	008812-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X9800A4M23T2	008813-XXX	AL	M25	Rly/4-20/HART		X	X
X9800S4N23T2	008814-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X9800S4M23T2	008815-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.

SINGLE FREQUENCY INFRARED

X9800 Single Frequency IR Flame Detector (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X9800A4N11W1	008700-XXX	AL	3/4 NPT	Relay	X		X
X9800A4M11W1	008701-XXX	AL	M25	Relay	X		X
X9800S4N11W1	008702-XXX	316 SS	3/4 NPT	Relay	X		X
X9800S4M11W1	008703-XXX	316 SS	M25	Relay	X		X
X9800A4N11W2	008704-XXX	AL	3/4 NPT	Relay		X	X
X9800A4M11W2	008705-XXX	AL	M25	Relay		X	X
X9800S4N11W2	008706-XXX	316 SS	3/4 NPT	Relay		X	X
X9800S4M11W2	008707-XXX	316 SS	M25	Relay		X	X
X9800A4N13W1	008708-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X9800A4M13W1	008709-XXX	AL	M25	Relay/4-20 mA	X		X
X9800S4N13W1	008710-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X9800S4M13W1	008711-XXX	316 SS	M25	Relay/4-20 mA	X		X
X9800A4N13W2	008712-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X9800A4M13W2	008713-XXX	AL	M25	Relay/4-20 mA		X	X
X9800S4N13W2	008714-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X9800S4M13W2	008715-XXX	316 SS	M25	Relay/4-20 mA		X	X
X9800A4N14W1	008716-001	AL	3/4 NPT	EQP	X		X
X9800A4M14W1	008717-001	AL	M25	EQP	X		X
X9800S4N14W1	008718-001	316 SS	3/4 NPT	EQP	X		X
X9800S4M14W1	008719-001	316 SS	M25	EQP	X		X
X9800A4N14W2	008720-001	AL	3/4 NPT	EQP		X	X
X9800A4M14W2	008721-001	AL	M25	EQP		X	X
X9800S4N14W2	008722-001	316 SS	3/4 NPT	EQP		X	X
X9800S4M14W2	008723-001	316 SS	M25	EQP		X	X
X9800A4N15W1	008724-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X9800A4M15W1	008725-XXX	AL	M25	Pulse/Relay	X		X
X9800S4N15W1	008726-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X9800S4M15W1	008727-XXX	316 SS	M25	Pulse/Relay	X		X
X9800A4N15W2	008728-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X9800A4M15W2	008729-XXX	AL	M25	Pulse/Relay		X	X
X9800S4N15W2	008730-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X9800S4M15W2	008731-XXX	316 SS	M25	Pulse/Relay		X	X
X9800A4N23W1	008774-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X9800A4M23W1	008775-XXX	AL	M25	Rly/4-20/HART	X		X
X9800S4N23W1	008776-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X9800S4M23W1	008777-XXX	316 SS	M25	Rly/4-20/HART	X		X
X9800A4N23W2	008778-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X9800A4M23W2	008779-XXX	AL	M25	Rly/4-20/HART		X	X
X9800S4N23W2	008780-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X9800S4M23W2	008781-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X9800 Single Frequency IR Flame Detector - Russia

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	VNIIPO/ VNIIFTRI (Russia)
X9800A4M11R1	008740-XXX	AL	M25	Relay	X		X
X9800S4M11R1	008741-XXX	316 SS	M25	Relay	X		X
X9800A4M11R2	008742-XXX	AL	M25	Relay		X	X
X9800S4M11R2	008743-XXX	316 SS	M25	Relay		X	X
X9800A4M13R1	008744-XXX	AL	M25	Relay/4-20 mA	X		X
X9800S4M13R1	008745-XXX	316 SS	M25	Relay/4-20 mA	X		X
X9800A4M13R2	008746-XXX	AL	M25	Relay/4-20 mA		X	X
X9800S4M13R2	008747-XXX	316 SS	M25	Relay/4-20 mA		X	X
X9800A4N15R1	008782-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X9800A4M15R1	008783-XXX	AL	M25	Pulse/Relay	X		X
X9800S4N15R1	008784-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X9800S4M15R1	008785-XXX	316 SS	M25	Pulse/Relay	X		X
X9800A4N15R2	008786-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X9800A4M15R2	008787-XXX	AL	M25	Pulse/Relay		X	X
X9800S4N15R2	008788-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X9800S4M15R2	008789-XXX	316 SS	M25	Pulse/Relay		X	X
X9800A4M14R1	008770-001	AL	M25	EQP	X		X
X9800S4M14R1	008771-001	316 SS	M25	EQP	X		X
X9800A4M14R2	008772-001	AL	M25	EQP		X	X
X9800S4M14R2	008773-001	316 SS	M25	EQP		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.
The EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting.

X9800 Single Frequency IR Flame Detector - Ukraine

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	TCCExEE/ UKRCEPRO (Ukraine)
X9800A4M11U1	008762-XXX	AL	M25	Relay	X		X
X9800S4M11U1	008763-XXX	316 SS	M25	Relay	X		X
X9800A4M11U2	008764-XXX	AL	M25	Relay		X	X
X9800S4M11U2	008765-XXX	316 SS	M25	Relay		X	X
X9800A4M13U1	008766-XXX	AL	M25	Relay/4-20 mA	X		X
X9800S4M13U1	008767-XXX	316 SS	M25	Relay/4-20 mA	X		X
X9800A4M13U2	008768-XXX	AL	M25	Relay/4-20 mA		X	X
X9800S4M13U2	008769-XXX	316 SS	M25	Relay/4-20 mA		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.

SINGLE FREQUENCY INFRARED

X9800 Single Frequency IR Flame Detector / xWatch Camera

Model	Part Number*	Material	Threads	Output	Video	FM/CSA
X9800A3N33A2	009548-XXX	AL	3/4 NPT	Relay/4-20	NTSC	X
X9800A3M33A2	009549-XXX	AL	M25	Relay/4-20	NTSC	X
X9800S3N33A2	009550-XXX	SS	3/4 NPT	Relay/4-20	NTSC	X
X9800S3M33A2	009551-XXX	SS	M25	Relay/4-20	NTSC	X
X9800A3N43A2	009552-XXX	AL	3/4 NPT	Relay/4-20	PAL	X
X9800A3M43A2	009553-XXX	AL	M25	Relay/4-20	PAL	X
X9800S3N43A2	009554-XXX	SS	3/4 NPT	Relay/4-20	PAL	X
X9800S3M43A2	009555-XXX	SS	M25	Relay/4-20	PAL	X
X9800A3N34A2	009556-001	AL	3/4 NPT	EQP	NTSC	X
X9800A3M34A2	009557-001	AL	M25	EQP	NTSC	X
X9800S3N34A2	009558-001	SS	3/4 NPT	EQP	NTSC	X
X9800S3M34A2	009559-001	SS	M25	EQP	NTSC	X
X9800A3N44A2	009560-001	AL	3/4 NPT	EQP	PAL	X
X9800A3M44A2	009561-001	AL	M25	EQP	PAL	X
X9800S3N44A2	009562-001	SS	3/4 NPT	EQP	PAL	X
X9800S3M44A2	009563-001	SS	M25	EQP	PAL	X
Ship Weight: Aluminum = 9lb (4.1kg) Stainless Steel = 17.6lb (7.9kg)						

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.
NOTES: 3 year warranty excludes xWatch camera.
Models listed above come with a 2.3 mm lens on the camera, which emulates the 90° field of view of the flame detector.
See section *Flame* F for additional lens options.

Table C1 - X9800 Software Part Number Configuration Matrix

Dash	IR Sensitivity	Alarm Output IR Qualification	Alarm Relay	Aux Output Function	Aux Output IR Qualification	Aux Relay	Fault Relay
-001	High	TDSA	De-Energized Non-latching	Follows Alarm	TDSA	Energized Non-latching	Energized Non-latching
-002	High	TDSA or Quick	De-Energized Non-latching	Follows Alarm	TDSA or Quick	Energized Non-latching	Energized Non-latching
-003	Very High	TDSA or Quick	De-Energized Non-latching	Follows Alarm	TDSA or Quick	Energized Non-latching	Energized Non-latching
-004	Very High	TDSA	De-Energized Non-latching	Follows Alarm	TDSA	Energized Non-latching	Energized Non-latching
-005	High	TDSA or Quick	De-Energized Non-latching	Independent	Quick	Energized Non-latching	Energized Non-latching
-006	Low	TDSA	De-Energized Non-latching	Follows Alarm	TDSA	Energized Non-latching	Energized Non-latching
-007	High	TDSA	De-Energized Latching	Follows Alarm	TDSA	De-energized Latching	Energized Non-latching
-008	High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	De-energized Latching	Energized Non-latching
-009	Very High	TDSA or Quick	De-Energized Latching	Follows Alarm	TDSA or Quick	De-energized Latching	Energized Non-latching
-010	Very High	TDSA	De-Energized Latching	Follows Alarm	TDSA	De-energized Latching	Energized Non-latching
-011	High	TDSA or Quick	De-Energized Latching	Independent	Quick	De-energized Latching	Energized Non-latching
-012	Low	TDSA	De-Energized Latching	Follows Alarm	TDSA	De-energized Latching	Energized Non-latching
-013	High	Quick	De-Energized Non-Latching	Pre-Alarm	None	Energized Non-Latching	Energized Non-latching

TDSA = "Time Domain Signal Analysis" Patented signal processing algorithm for superior IR false alarm rejection
Quick = Signal processing for explosive IR events

Application Guidelines

These are typical industry application settings.
They may not be applicable to all installations.
Contact factory for additional application guidance.

General Duty	001
Offshore	001
Compressor	002
High Speed	003
Hangar	004
Automotive	005
Turbine	006

NOTE: Latching relays cannot be used in voted systems.

NOTES

ULTRAVIOLET

X2200 UV Flame Detector

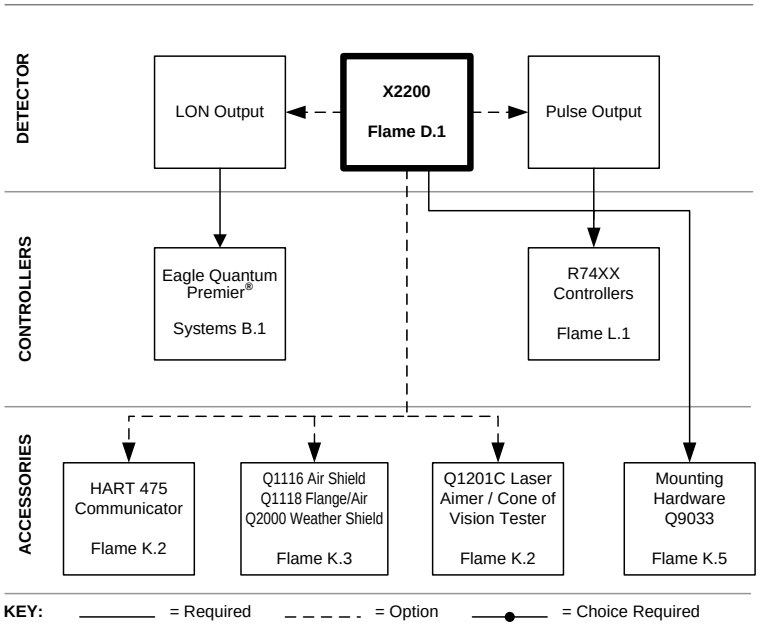
X2200 UV Flame Detector (Spec Sheet: 90-1157) meets the most stringent requirements worldwide with advanced signal processing and immunity to extraneous sources, combined with high speed capability. The detector is equipped with both automatic and manual optical integrity (oi) test capability. The detector has Division and Zone explosion-proof ratings and is suitable for use in a variety of applications.

The standard output configuration includes fire, fault, and auxiliary relays and RS-485 Modbus. Optional 4-20 mA, Eagle Quantum Premier, or HART outputs are also available. A model with pulse output is available for easy retrofitting into existing Det-Tronics controller based systems. A tricolor LED on the detector faceplate indicates detector status condition.

The X2200 housing is available in aluminum or stainless steel, with NEMA 4X and IP66/IP67 rating. Typical applications include: hydrogen storage, munitions, and silane storage.

- Eagle Quantum Premier and Eagle Quantum compatible models available
- **Models available with SIL 2 certification**
- Advanced signal processing
- Unequaled false alarm rejection - Solar blind
- Responds to a fire in the presence of modulated blackbody radiation without false alarm
- High-speed capability
- Optional HART output and AMS aware
- Automatic, manual, or magnetic optical integrity (oi) testing
- Pulse output for compatibility with controller-based systems (optional)
- FM, CSA, ATEX, CE, IECEx
- EN 54 part 10 certified by VdS, LPCB
- Tricolor LED indicates normal operation, fire, and fault conditions
- Mounting arm allows easy sighting
- Integral wiring compartment for ease of installation
- Class A wiring per NFPA 72
- Meets NFPA 33 response requirement for under 0.5 second (available when model selected)
- EMI, RFI, EMC Directive Compliant
- Built-in data logging / event monitoring
- Models available with integral explosion proof camera option (xWatch)

YEAR 3 WARRANTY



X2200 Model Matrix

MODEL	DESCRIPTION
X2200	UV Flame Detector
X2200M[+]	UV Flame Detector w/Molybdenum Tube

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
3M	3 Port, Metric M25
3N	3 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUTS
11	Relay
13	Relay and 4-20 mA
14	Eagle Quantum Premier
15	Relay and Pulse
16	Addressable Module Only (third-party type)
23	HART, Relay, and 4-20 mA
24	Eagle Quantum
33	Relay and 4-20 mA / NTSC (xWatch)
34	Eagle Quantum Premier / NTSC (xWatch)
43	Relay and 4-20 mA / PAL (xWatch)
44	Eagle Quantum Premier / PAL (xWatch)

TYPE	APPROVALS*
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
A	FM/CSA
B	INMETRO (BRAZIL)
R	VNIIPO/VNIIFTRI (RUSSIA)
U	TCCExEE/UKRCEPRO (UKRAINE)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

[+]Special Application - consult factory before ordering

*Type *Approvals* can use one or more letters to designate the approvals of the product

ULTRAVIOLET

X2200 UV Flame Detector - SIL 2 (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X2200A4N13T1	008430-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X2200A4M13T1	008431-XXX	AL	M25	Relay/4-20 mA	X		X
X2200S4N13T1	008432-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X2200S4M13T1	008433-XXX	316 SS	M25	Relay/4-20 mA	X		X
X2200A4N13T2	008434-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X2200A4M13T2	008435-XXX	AL	M25	Relay/4-20 mA		X	X
X2200S4N13T2	008436-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X2200S4M13T2	008437-XXX	316 SS	M25	Relay/4-20 mA		X	X
X2200A4N23T1	008438-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X2200A4M23T1	008439-XXX	AL	M25	Rly/4-20/HART	X		X
X2200S4N23T1	008440-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X2200S4M23T1	008441-XXX	316 SS	M25	Rly/4-20/HART	X		X
X2200A4N23T2	008442-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X2200A4M23T2	008443-XXX	AL	M25	Rly/4-20/HART		X	X
X2200S4N23T2	008444-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X2200S4M23T2	008445-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

X2200 UV Flame Detector - Moly - SIL 2 (FM/CSA/ATEX/CE/IECEx)

Model	Part Number *	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx
X2200MA4N23T1	008446-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X2200MA4M23T1	008447-XXX	AL	M25	Rly/4-20/HART	X		X
X2200MS4N23T1	008448-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X2200MS4M23T1	008449-XXX	316 SS	M25	Rly/4-20/HART	X		X
X2200MA4N23T2	008450-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X2200MA4M23T2	008451-XXX	AL	M25	Rly/4-20/HART		X	X
X2200MS4N23T2	008452-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X2200MS4M23T2	008453-XXX	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

X2200 UV Flame Detector (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X2200A4N11W1	008300-XXX	AL	3/4 NPT	Relay	X		X
X2200A4M11W1	008301-XXX	AL	M25	Relay	X		X
X2200S4N11W1	008302-XXX	316 SS	3/4 NPT	Relay	X		X
X2200S4M11W1	008303-XXX	316 SS	M25	Relay	X		X
X2200A4N11W2	008304-XXX	AL	3/4 NPT	Relay		X	X
X2200A4M11W2	008305-XXX	AL	M25	Relay		X	X
X2200S4N11W2	008306-XXX	316 SS	3/4 NPT	Relay		X	X
X2200S4M11W2	008307-XXX	316 SS	M25	Relay		X	X
X2200A4N13W1	008308-XXX	AL	3/4 NPT	Relay/4-20 mA	X		X
X2200A4M13W1	008309-XXX	AL	M25	Relay/4-20 mA	X		X
X2200S4N13W1	008310-XXX	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X2200S4M13W1	008311-XXX	316 SS	M25	Relay/4-20 mA	X		X
X2200A4N13W2	008312-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X2200A4M13W2	008313-XXX	AL	M25	Relay/4-20 mA		X	X
X2200S4N13W2	008314-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X2200S4M13W2	008315-XXX	316 SS	M25	Relay/4-20 mA		X	X
X2200A4N14W1	008316-001	AL	3/4 NPT	EQP	X		X
X2200A4M14W1	008317-001	AL	M25	EQP	X		X
X2200S4N14W1	008318-001	316 SS	3/4 NPT	EQP	X		X
X2200S4M14W1	008319-001	316 SS	M25	EQP	X		X
X2200A4N14W2	008320-001	AL	3/4 NPT	EQP		X	X
X2200A4M14W2	008321-001	AL	M25	EQP		X	X
X2200S4N14W2	008322-001	316 SS	3/4 NPT	EQP		X	X
X2200S4M14W2	008323-001	316 SS	M25	EQP		X	X
X2200A4N15W1	008324-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X2200A4M15W1	008325-XXX	AL	M25	Pulse/Relay	X		X
X2200S4N15W1	008326-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X2200S4M15W1	008327-XXX	316 SS	M25	Pulse/Relay	X		X
X2200A4N15W2	008328-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X2200A4M15W2	008329-XXX	AL	M25	Pulse/Relay		X	X
X2200S4N15W2	008330-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X2200S4M15W2	008331-XXX	316 SS	M25	Pulse/Relay		X	X
X2200A4N23W1	008400-XXX	AL	3/4 NPT	Rly/4-20/HART	X		X
X2200A4M23W1	008401-XXX	AL	M25	Rly/4-20/HART	X		X
X2200S4N23W1	008402-XXX	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X2200S4M23W1	008403-XXX	316 SS	M25	Rly/4-20/HART	X		X
X2200A4N23W2	008404-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X2200A4M23W2	008405-XXX	AL	M25	Rly/4-20/HART		X	X
X2200S4N23W2	008406-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X2200S4M23W2	008407-XXX	316 SS	M25	Rly/4-20/HART		X	X
X2200A4N24W1	008356-001	AL	3/4 NPT	Eagle Quantum	X		X
X2200A4M24W1	008357-001	AL	M25	Eagle Quantum	X		X
X2200S4N24W1	008358-001	316 SS	3/4 NPT	Eagle Quantum	X		X
X2200S4M24W1	008359-001	316 SS	M25	Eagle Quantum	X		X
X2200A4N24W2	008360-001	AL	3/4 NPT	Eagle Quantum		X	X
X2200A4M24W2	008361-001	AL	M25	Eagle Quantum		X	X
X2200S4N24W2	008362-001	316 SS	3/4 NPT	Eagle Quantum		X	X
X2200S4M24W2	008363-001	316 SS	M25	Eagle Quantum		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.
The EQ and EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting.

ULTRAVIOLET

X2200 UV Flame Detector - Moly (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
X2200MA4N13W1	008340-013	AL	3/4 NPT	Relay/4-20 mA	X		X
X2200MA4M13W1	008341-013	AL	M25	Relay/4-20 mA	X		X
X2200MS4N13W1	008342-013	316 SS	3/4 NPT	Relay/4-20 mA	X		X
X2200MS4M13W1	008343-013	316 SS	M25	Relay/4-20 mA	X		X
X2200MA4N13W2	008344-013	AL	3/4 NPT	Relay/4-20 mA		X	X
X2200MA4M13W2	008345-013	AL	M25	Relay/4-20 mA		X	X
X2200MS4N13W2	008346-013	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X2200MS4M13W2	008347-013	316 SS	M25	Relay/4-20 mA		X	X
X2200MA4N14W1	008372-001	AL	3/4 NPT	EQP	X		X
X2200MA4M14W1	008373-001	AL	M25	EQP	X		X
X2200MS4N14W1	008374-001	316 SS	3/4 NPT	EQP	X		X
X2200MS4M14W1	008375-001	316 SS	M25	EQP	X		X
X2200MA4N14W2	008376-001	AL	3/4 NPT	EQP		X	X
X2200MA4M14W2	008377-001	AL	M25	EQP		X	X
X2200MS4N14W2	008378-001	316 SS	3/4 NPT	EQP		X	X
X2200MS4M14W2	008379-001	316 SS	M25	EQP		X	X
X2200MA4N15W1	008348-013	AL	3/4 NPT	Pulse/Relay	X		X
X2200MA4M15W1	008349-013	AL	M25	Pulse/Relay	X		X
X2200MS4N15W1	008350-013	316 SS	3/4 NPT	Pulse/Relay	X		X
X2200MS4M15W1	008351-013	316 SS	M25	Pulse/Relay	X		X
X2200MA4N15W2	008352-013	AL	3/4 NPT	Pulse/Relay		X	X
X2200MA4M15W2	008353-013	AL	M25	Pulse/Relay		X	X
X2200MS4N15W2	008354-013	316 SS	3/4 NPT	Pulse/Relay		X	X
X2200MS4M15W2	008355-013	316 SS	M25	Pulse/Relay		X	X
X2200MA4N23W1	008408-013	AL	3/4 NPT	Rly/4-20/HART	X		X
X2200MA4M23W1	008409-013	AL	M25	Rly/4-20/HART	X		X
X2200MS4N23W1	008410-013	316 SS	3/4 NPT	Rly/4-20/HART	X		X
X2200MS4M23W1	008411-013	316 SS	M25	Rly/4-20/HART	X		X
X2200MA4N23W2	008412-013	AL	3/4 NPT	Rly/4-20/HART		X	X
X2200MA4M23W2	008413-013	AL	M25	Rly/4-20/HART		X	X
X2200MS4N23W2	008414-013	316 SS	3/4 NPT	Rly/4-20/HART		X	X
X2200MS4M23W2	008415-013	316 SS	M25	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X2200 UV Flame Detector - Brazil

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	INMETRO (Brazil)
X2200A4N11B2	008420-XXX	AL	3/4 NPT	Relay		X	X
X2200S4N11B2	008421-XXX	316 SS	3/4 NPT	Relay		X	X
X2200A4N13B2	008422-XXX	AL	3/4 NPT	Relay/4-20 mA		X	X
X2200S4N13B2	008423-XXX	316 SS	3/4 NPT	Relay/4-20 mA		X	X
X2200A4N14B2	008424-001	AL	3/4 NPT	EQP		X	X
X2200S4N14B2	008425-001	316 SS	3/4 NPT	EQP		X	X
X2200A4N23B2	008426-XXX	AL	3/4 NPT	Rly/4-20/HART		X	X
X2200S4N23B2	008427-XXX	316 SS	3/4 NPT	Rly/4-20/HART		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.
The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting

X2200 UV Flame Detector - Russia

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	VNIIPO/ VNIIFTRI (Russia)
X2200A4M11R1	008364-XXX	AL	M25	Relay	X		X
X2200S4M11R1	008365-XXX	316 SS	M25	Relay	X		X
X2200A4M11R2	008366-XXX	AL	M25	Relay		X	X
X2200S4M11R2	008367-XXX	316 SS	M25	Relay		X	X
X2200A4M13R1	008368-XXX	AL	M25	Relay/4-20 mA	X		X
X2200S4M13R1	008369-XXX	316 SS	M25	Relay/4-20 mA	X		X
X2200A4M13R2	008370-XXX	AL	M25	Relay/4-20 mA		X	X
X2200S4M13R2	008371-XXX	316 SS	M25	Relay/4-20 mA		X	X
X2200A4N15R1	008392-XXX	AL	3/4 NPT	Pulse/Relay	X		X
X2200A4M15R1	008393-XXX	AL	M25	Pulse/Relay	X		X
X2200S4N15R1	008394-XXX	316 SS	3/4 NPT	Pulse/Relay	X		X
X2200S4M15R1	008395-XXX	316 SS	M25	Pulse/Relay	X		X
X2200A4N15R2	008396-XXX	AL	3/4 NPT	Pulse/Relay		X	X
X2200A4M15R2	008397-XXX	AL	M25	Pulse/Relay		X	X
X2200S4N15R2	008398-XXX	316 SS	3/4 NPT	Pulse/Relay		X	X
X2200S4M15R2	008399-XXX	316 SS	M25	Pulse/Relay		X	X
X2200A4M14R1	008388-001	AL	M25	EQP	X		X
X2200S4M14R1	008389-001	316 SS	M25	EQP	X		X
X2200A4M14R2	008390-001	AL	M25	EQP		X	X
X2200S4M14R2	008391-001	316 SS	M25	EQP		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.
The EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting.

X2200 UV Flame Detector - Ukraine

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	TCCExEE/ UKRCEPRO (Ukraine)
X2200A4M11U1	008380-XXX	AL	M25	Relay	X		X
X2200S4M11U1	008381-XXX	316 SS	M25	Relay	X		X
X2200A4M11U2	008382-XXX	AL	M25	Relay		X	X
X2200S4M11U2	008383-XXX	316 SS	M25	Relay		X	X
X2200A4M13U1	008384-XXX	AL	M25	Relay/4-20 mA	X		X
X2200S4M13U1	008385-XXX	316 SS	M25	Relay/4-20 mA	X		X
X2200A4M13U2	008386-XXX	AL	M25	Relay/4-20 mA		X	X
X2200S4M13U2	008387-XXX	316 SS	M25	Relay/4-20 mA		X	X
Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)							

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

ULTRAVIOLET

X2200 UV Flame Detector / xWatch Camera

Model	Part Number*	Material	Threads	Output	Video	FM/CSA
X2200A3N33A2	009564-XXX	AL	3/4 NPT	Relay/4-20	NTSC	X
X2200A3M33A2	009565-XXX	AL	M25	Relay/4-20	NTSC	X
X2200S3N33A2	009566-XXX	SS	3/4 NPT	Relay/4-20	NTSC	X
X2200S3M33A2	009567-XXX	SS	M25	Relay/4-20	NTSC	X
X2200A3N43A2	009568-XXX	AL	3/4 NPT	Relay/4-20	PAL	X
X2200A3M43A2	009569-XXX	AL	M25	Relay/4-20	PAL	X
X2200S3N43A2	009570-XXX	SS	3/4 NPT	Relay/4-20	PAL	X
X2200S3M43A2	009571-XXX	SS	M25	Relay/4-20	PAL	X
X2200A3N34A2	009572-001	AL	3/4 NPT	EQP	NTSC	X
X2200A3M34A2	009573-001	AL	M25	EQP	NTSC	X
X2200S3N34A2	009574-001	SS	3/4 NPT	EQP	NTSC	X
X2200S3M34A2	009575-001	SS	M25	EQP	NTSC	X
X2200A3N44A2	009576-001	AL	3/4 NPT	EQP	PAL	X
X2200A3M44A2	009577-001	AL	M25	EQP	PAL	X
X2200S3N44A2	009578-001	SS	3/4 NPT	EQP	PAL	X
X2200S3M44A2	009579-001	SS	M25	EQP	PAL	X
Ship Weight: Aluminum = 9lb (4.1kg) Stainless Steel = 17.6lb (7.9kg)						

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.
The standard EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.
NOTES: 3 year warranty excludes xWatch camera.
Models listed above come with a 2.3 mm lens on the camera, which emulates the 90° field of view of the flame detector.
See section *Flame* F for additional lens options.

Table D1 - X2200 Software Part Number Configuration Matrix

Dash	UV Sensitivity	Arc Rejection	Alarm Relay	Aux Output Function	Aux Relay	Fault Relay
-001	High	High	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-002	High	Very High	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-003	High	Off	De-Energized Non-latching	Pre-Alarm	Energized Non-latching	Energized Non-latching
-005	Medium	High	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-006	High	High	De-Energized Non-latching	Pre-Alarm	Energized Non-latching	Energized Non-latching
-007	High	High	De-Energized Latching	Follows Alarm	De-energized Latching	Energized Non-latching
-008	High	Very High	De-Energized Latching	Follows Alarm	De-energized Latching	Energized Non-latching
-009	High	Off	De-Energized Latching	Pre-Alarm	De-energized Latching	Energized Non-latching
-010	Medium	High	De-Energized Latching	Follows Alarm	De-energized Latching	Energized Non-latching
011	High	High	De-Energized Latching	Pre-Alarm	De-energized Latching	Energized Non-latching
-013*	High	Off	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-014*	High	Off	De-Energized Latching	Follows Alarm	De-energized Latching	Energized Non-latching
-015	Very High	Low	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-016	Very High	Low	De-Energized Latching	Follows Alarm	De-energized Latching	Energized Non-latching
-017	Very High	Off	De-Energized Non-latching	Pre-Alarm	Energized Non-latching	Energized Non-latching
-018	Very High	Off	De-Energized Non-latching	Follows Alarm	Energized Non-latching	Energized Non-latching
-019	Very High	Off	De-Energized Non-latching	Pre-Alarm	De-Energized Non-latching	Energized Non-latching

***Available only on the X2200M model**
ARC = Arc Rejection. An algorithm that prevents false alarms from transient UV sources.

Application Guidelines

These are typical industry application settings.
They may not be applicable to all installations.
Contact factory for additional application guidance.

General Duty	001
Offshore	001
Compressor	002
High Speed	003
Automotive	005
Turbine	006
Munitions	013

NOTE: Latching relays cannot be used in voted systems

NOTES

X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

Spare Parts

X-Series Sensor Modules - SIL 2 Certified

Model	Part Number *	Material	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
X3301	009965-XXX	AL	X		X	2 lb (0.9 kg)
X3301	009966-XXX	316 SS	X		X	4 lb (1.8 kg)
X3301	009967-XXX	AL		X	X	2 lb (0.9 kg)
X3301	009968-XXX	316 SS		X	X	4 lb (1.8 kg)
X3301 EQP/LON	007866-001	AL	X		X	2 lb (0.9 kg)
X3301 EQP/LON	007867-001	316 SS	X		X	4 lb (1.8 kg)
X3301 EQP/LON	007868-001	AL		X	X	2 lb (0.9 kg)
X3301 EQP/LON	007869-001	316 SS		X	X	4 lb (1.8 kg)
X5200	012130-XXX	AL	X		X	2 lb (0.9 kg)
X5200	012131-XXX	316 SS	X		X	4 lb (1.8 kg)
X5200	012132-XXX	AL		X	X	2 lb (0.9 kg)
X5200	012133-XXX	316 SS		X	X	4 lb (1.8 kg)
X5200M	012134-XXX	AL	X		X	2 lb (0.9 kg)
X5200M	012135-XXX	316 SS	X		X	4 lb (1.8 kg)
X5200M	012136-XXX	AL		X	X	2 lb (0.9 kg)
X5200M	012137-XXX	316 SS		X	X	4 lb (1.8 kg)
X9800	012138-XXX	AL	X		X	2 lb (0.9 kg)
X9800	012139-XXX	316 SS	X		X	4 lb (1.8 kg)
X9800	012140-XXX	AL		X	X	2 lb (0.9 kg)
X9800	012141-XXX	316 SS		X	X	4 lb (1.8 kg)
X2200	012142-XXX	AL	X		X	2 lb (0.9 kg)
X2200	012143-XXX	316 SS	X		X	4 lb (1.8 kg)
X2200	012144-XXX	AL		X	X	2 lb (0.9 kg)
X2200	012145-XXX	316 SS		X	X	4 lb (1.8 kg)
X2200M	012146-XXX	AL	X		X	2 lb (0.9 kg)
X2200M	012147-XXX	316 SS	X		X	4 lb (1.8 kg)
X2200M	012148-XXX	AL		X	X	2 lb (0.9 kg)
X2200M	012149-XXX	316 SS		X	X	4 lb (1.8 kg)

*The last 3 digits of the part number identify the software configuration.

The EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting.

X-Series Sensor Modules

Model	Part Number*	Material	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
X3301	007752-XXX	AL	X		X	2 lb (0.9 kg)
X3301	007753-XXX	AL		X	X	2 lb (0.9 kg)
X3301	007754-XXX	316 SS	X		X	4 lb (1.8 kg)
X3301	007755-XXX	316 SS		X	X	4 lb (1.8 kg)
X3301 Automotive	007752-005	AL	X		X	2 lb (0.9 kg)
X3301 Automotive	007753-005	AL		X	X	2 lb (0.9 kg)
X3302	008992-002	AL	X		X	2 lb (0.9 kg)
X3302	008993-002	AL		X	X	2 lb (0.9 kg)
X3302	008994-002	316 SS	X		X	4 lb (1.8 kg)
X3302	008995-002	316 SS		X	X	4 lb (1.8 kg)
X5200	007756-XXX	AL	X		X	2 lb (0.9 kg)
X5200	007757-XXX	AL		X	X	2 lb (0.9 kg)
X5200	007758-XXX	316 SS	X		X	4 lb (1.8 kg)
X5200	007759-XXX	316 SS		X	X	4 lb (1.8 kg)
X5200M	011225-013	AL	X		X	2 lb (0.9 kg)
X5200M	011226-013	AL		X	X	2 lb (0.9 kg)
X5200M	011227-013	316 SS	X		X	4 lb (1.8 kg)
X5200M	011228-013	316 SS		X	X	4 lb (1.8 kg)
X9800	007760-XXX	AL	X		X	2 lb (0.9 kg)
X9800	007761-XXX	AL		X	X	2 lb (0.9 kg)
X9800	007762-XXX	316 SS	X		X	4 lb (1.8 kg)
X9800	007763-XXX	316 SS		X	X	4 lb (1.8 kg)
X2200	007764-XXX	AL	X		X	2 lb (0.9 kg)
X2200	007765-XXX	AL		X	X	2 lb (0.9 kg)
X2200	007766-XXX	316 SS	X		X	4 lb (1.8 kg)
X2200	007767-XXX	316 SS		X	X	4 lb (1.8 kg)
X2200M	007706-013	AL	X		X	2 lb (0.9 kg)
X2200M	007707-013	AL		X	X	2 lb (0.9 kg)
X2200M	007708-013	316 SS	X		X	4 lb (1.8 kg)
X2200M	007709-013	316 SS		X	X	4 lb (1.8 kg)

*The last 3 digits of the part number identify the software configuration.

X-Series Flame Detector EMI Output Boards

Description	Part Number	Ship Weight
EMI/Relay/4-20 Board (X-Series)	007308-001	<1 lb (<0.45 kg)
EMI/Pulse/Relay Board (X-Series)	007308-002	<1 lb (<0.45 kg)
EMI/EQP Board (X-Series)	007308-003	<1 lb (<0.45 kg)
EMI/EQ Retrofit Board (X2200 and X5200 only)	007308-004	<1 lb (<0.45 kg)
EMI/Relay/4-20/HART Board (X-Series)	007308-005	<1 lb (<0.45 kg)
EMI/Automotive Board (X3301)	007308-006	<1 lb (<0.45 kg)

X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

Accessories

X-Series Miscellaneous Spare Parts

Description	Part Number	Material	Ship Weight
Note: oi Replacement Kits consist of five (5) plates and a W6300B1003			
oi Replacement Kit, X3301	009208-001		<1 lb (<0.45 kg)
oi Replacement Kit, X3301, SS	010831-001	SS	<1 lb (<0.45 kg)
oi Replacement Kit, X3302	009208-003		<1 lb (<0.45 kg)
oi Replacement Kit, X3302, SS	010831-002	SS	<1 lb (<0.45 kg)
oi Replacement Kit, X5200/X9800/X2200	009208-002		<1 lb (<0.45 kg)
Note: oi plates for any X-Series Flame Detector require a W6300 Inspector Connector to calibrate			
oi Reflector Plate, X3301	007307-001		<1 lb (<0.45 kg)
oi Reflector Plate, X3301, SS	010830-001	SS	<1 lb (<0.45 kg)
oi Reflector Plate, X3302	007307-003		<1 lb (<0.45 kg)
oi Reflector Plate, X3302, SS	010830-002	SS	<1 lb (<0.45 kg)
oi Reflector Plate, X5200/X9800/X2200	007307-002		<1 lb (<0.45 kg)
O-ring - Rear Cover	107427-040	Viton	<1 lb (<0.45 kg)

NOTE: Reference instruction manual 95-8530 to determine the correct **oi** replacement plate.

X-Series Miscellaneous Accessories

Description	Part Number	Ship Weight
Magnet*	102740-002	<1 lb (<0.45 kg)
Magnet and Adapter for Extension Pole	008082-001	<1 lb (<0.45 kg)
Magnet and Extension Pole	007739-001	<1 lb (<0.45 kg)
14mm Hex Wrench	103363-001	<1 lb (<0.45 kg)
Screwdriver	103406-001	<1 lb (<0.45 kg)
1 oz grease for detectors (non-silicon)	005003-001	<1 lb (<0.45 kg)
Black Static Cap for **oi** Calibration	102991-001	<1 lb (<0.45 kg)
Window cleaner (6 pack)	001680-001	<1 lb (<0.45 kg)

*1 magnet ships with each individual order of X-Series detectors, free of charge.

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition Teflon tape.

Upgrade Parts for Controllers when Converting to Pulse Output Models X3301, X9800, X5200 or X2200

Model	Part Number	STAR	Description	Ctrlr	Pin Chip	Replaces	Ship Weight
DE4431-001	004431-001		Auto. **oi** and No. 3 Detector monitor board*	R7302 R7303	N/A	N/A	1 lb (0.45 kg)
DE2267-025	004101-025		EPROM	R7404	28	002267-025	0.5 lb (0.23 kg)
DE2267-030	004101-030	X	EPROM	R7404	28	002267-030	0.5 lb (0.23 kg)

***NOTE:** Plug in circuit boards required for each R7302 or R7303 conversion.

NOTES

X7050

X7050 xWatch® Explosion-Proof Surveillance Camera

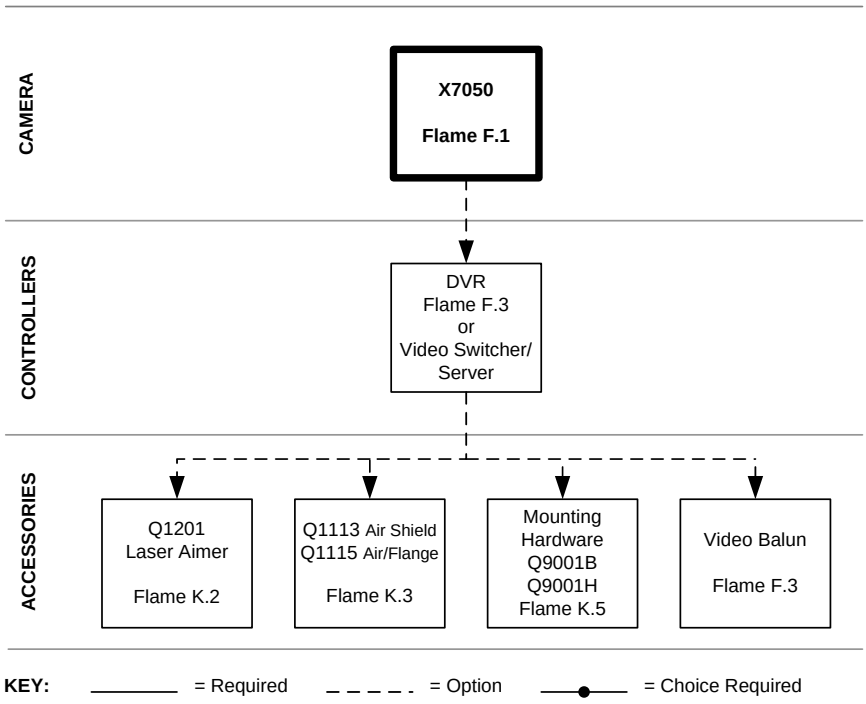
X7050 xWatch Explosion-Proof Surveillance Camera (Spec Sheet 90-1193) An explosion-proof surveillance camera providing high-resolution color images of activity in the monitored area, which allows the capture and recording of fires and other activities on video. When a detector goes into alarm, the operator can immediately view the monitored area in real time and accurately assess the risk and location of the fire. The camera can be used with any video switcher or server for a live video feed and the output can be directed to a DVR or computer monitor.

xWatch camera features:

- Easy connection to a video switcher using twisted pair wiring
- Existing wiring can be used in most applications
- FM, CSA, ATEX, CE, IECEx
- Three lens choices for field of view requirements
- Retrofit into a standard C7050 housing by simply replacing the tube module with the DE2020 camera module

Three configurations are available:

- As a stand-alone device to perform typical CCTV functions
- Retrofitted into a C7050 Detector, replacing the UV tube module with the camera module
- Ordered as a combined unit with any of the X-Series Flame Detectors (see flame detector sections for specific models) - FM/CSA only.



X7050 Model Matrix xWatch Camera

MODEL	DESCRIPTION
X7050	xWatch Explosion Proof Camera

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	THREAD TYPE
1E	1/2" NPT
1F	M20

TYPE	VIDEO OUTPUT
50	NTSC
51	PAL

TYPE	FIELD OF VIEW
1	Wide FOV (90°), 2.3mm Lens*
2	Normal FOV (50°), 4.3mm Lens
3	Narrow FOV (30°), 8.0mm Lens

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx

TYPE	CLASSIFICATION
2	Division/Zone Ex d

*This lens emulates the 90° field of view to match the X-Series Flame Detectors.

X7050 xWatch Camera

Model	Part Number	Material	Threads	FOV	Output	Ship Weight
X7050A1E501W2	009580-001	AL	1/2 NPT	2.3mm	NTSC	1.5 lb (0.7 kg)
X7050A1E502W2	009580-002	AL	1/2 NPT	4.3mm	NTSC	1.5 lb (0.7 kg)
X7050A1E503W2	009580-003	AL	1/2 NPT	8.0mm	NTSC	1.5 lb (0.7 kg)
X7050A1F501W2	009581-001	AL	M20	2.3mm	NTSC	1.5 lb (0.7 kg)
X7050A1F502W2	009581-002	AL	M20	4.3mm	NTSC	1.5 lb (0.7 kg)
X7050A1F503W2	009581-003	AL	M20	8.0mm	NTSC	1.5 lb (0.7 kg)
X7050S1E501W2	009582-001	SS	1/2 NPT	2.3mm	NTSC	2.5 lb (1.2 kg)
X7050S1E502W2	009582-002	SS	1/2 NPT	4.3mm	NTSC	2.5 lb (1.2 kg)
X7050S1E503W2	009582-003	SS	1/2 NPT	8.0mm	NTSC	2.5 lb (1.2 kg)
X7050S1F501W2	009583-001	SS	M20	2.3mm	NTSC	2.5 lb (1.2 kg)
X7050S1F502W2	009583-002	SS	M20	4.3mm	NTSC	2.5 lb (1.2 kg)
X7050S1F503W2	009583-003	SS	M20	8.0mm	NTSC	2.5 lb (1.2 kg)
X7050A1E511W2	009584-001	AL	1/2 NPT	2.3mm	PAL	1.5 lb (0.7 kg)
X7050A1E512W2	009584-002	AL	1/2 NPT	4.3mm	PAL	1.5 lb (0.7 kg)
X7050A1E513W2	009584-003	AL	1/2 NPT	8.0mm	PAL	1.5 lb (0.7 kg)
X7050A1F511W2	009585-001	AL	M20	2.3mm	PAL	1.5 lb (0.7 kg)
X7050A1F512W2	009585-002	AL	M20	4.3mm	PAL	1.5 lb (0.7 kg)
X7050A1F513W2	009585-003	AL	M20	8.0mm	PAL	1.5 lb (0.7 kg)
X7050S1E511W2	009586-001	SS	1/2 NPT	2.3mm	PAL	2.5 lb (1.2 kg)
X7050S1E512W2	009586-002	SS	1/2 NPT	4.3mm	PAL	2.5 lb (1.2 kg)
X7050S1E513W2	009586-003	SS	1/2 NPT	8.0mm	PAL	2.5 lb (1.2 kg)
X7050S1F511W2	009587-001	SS	M20	2.3mm	PAL	2.5 lb (1.2 kg)
X7050S1F512W2	009587-002	SS	M20	4.3mm	PAL	2.5 lb (1.2 kg)
X7050S1F513W2	009587-003	SS	M20	8.0mm	PAL	2.5 lb (1.2 kg)

X7050

X7050 Spare Camera Modules

Model	Part Number	Material	Threads	FOV	Output	Ship Weight
DE2020N	009448-003	N/A	N/A	2.3mm	NTSC	5 oz. (0.14 kg)
DE2020P	009448-004	N/A	N/A	2.3mm	PAL	5 oz. (0.14 kg)
DE2022N	009448-005	N/A	N/A	4.3mm	NTSC	5 oz. (0.14 kg)
DE2022P	009448-006	N/A	N/A	4.3mm	PAL	5 oz. (0.14 kg)
DE2023N	009448-007	N/A	N/A	8.0mm	NTSC	5 oz. (0.14 kg)
DE2023P	009448-008	N/A	N/A	8.0mm	PAL	5 oz. (0.14 kg)

X7050 Mounting Hardware

Model	Part Number	Material	Threads	Output	Ship Weight
Q9001B1175	002099-003	AL	N/A	N/A	.5 lb (0.23 kg)
Q9001H8001	004404-002	SS	N/A	N/A	1 lb (0.45 kg)

X7050 Accessories

Part Number	Description	Ship Weight
000499-132	Screw Terminal Balun, **Active,** converts single composite CCTV video signal from CAT-5 twisted pair wiring to BNC coaxial connector on DVR or video multiplexer, active type, suitable for distances over 750 ft.	<1 lb (<0.45 kg)
000499-073	Screw Terminal Balun, **Passive,** converts single composite CCTV video signal from CAT-5 twisted pair wiring to BNC coaxial connector on DVR or video multiplexer, passive type, suitable for distances up to 750 ft.	<1 lb (<0.45 kg)

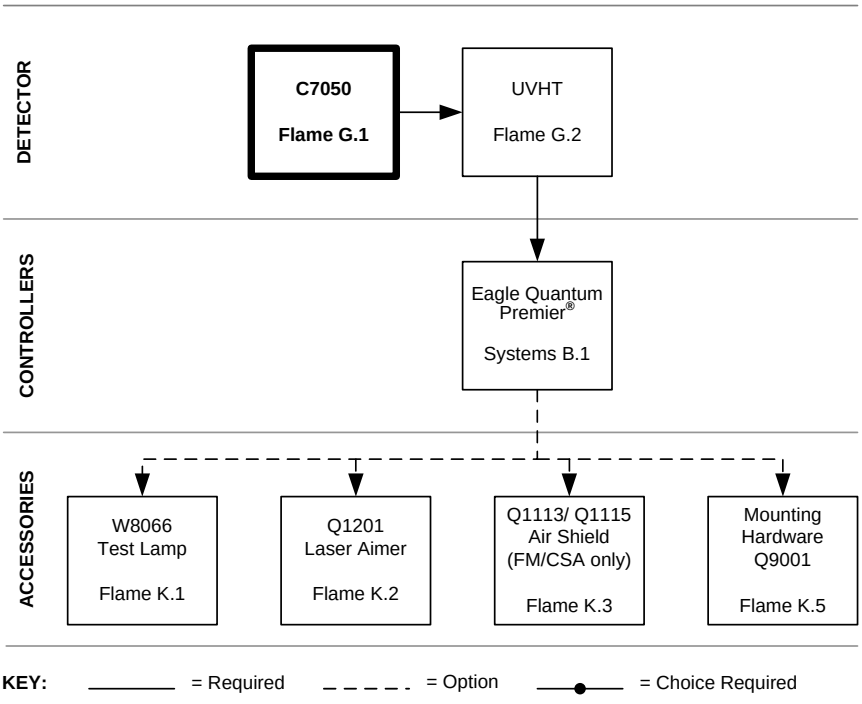
NOTES

C7050

C7050 Detector

C7050 Detector (Manual: 95-8214) combined with the EQ2200UVHT (95-8570) on an EQP (or as a replacement on an older EQ system) provides fast, reliable flame detection in a wide variety of applications. The detector has the Automatic Optical Integrity (**oi**) feature, providing a continuous check of detector optical surfaces, detector sensitivity, and electronic circuitry of the detector/controller system. Not recommended for applications where welding or lightning may be present.

- Replaceable tube module
- External Automatic **oi**
- Internal Automatic **oi**
- Standard temperature option
- High temperature option, 125°C continuous duty
- Variable sensitivities available to match hazard
- FM, CSA, ATEX, CE, IECEx



C7050 Model Matrix

MODEL	DESCRIPTION
C7050B	Controller Based UV Flame Detector

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	
6	1 Port

TYPE	THREAD TYPE
E	1/2" NPT
F	M20

TYPE	OUTPUTS
4	Pulse (Standard)

TYPE	TUBE MODULE OPTION
E	DE1888K3 (High Temperature for UVHT)

TYPE	OPTIONS
1S	Normal Operating Temperature 75C
1H	High Operating Temperature 125C

TYPE	APPROVAL TYPE
1	Explosion Proof

TYPE	APPROVALS
E	ATEX/CE/IECEx
A	FM/CSA

C7050B Ultraviolet Flame Detectors (ATEX/CE/IECEx)

Model	Part Number	Encl Material	Conduit Entry	Tube Module	ATEX/CE/ IECEx	Ship Weight
C7050BS6F4E1H1E	006899-040	SS	M20	DE1888K3	X	2.2 lb (1.0 kg)
C7050 LENS CAP/BODY	008054-001	SS	N/A	N/A	X	1 lb (0.45 kg)

High temperature rating - continuous duty at 125° Celsius, for environments that normally exceed 75° Celsius operation.

C7050B Ultraviolet Flame Detectors (FM/CSA)

Model	Part Number	Encl Material	Conduit Entry	Tube Module	FM/CSA	Ship Weight
C7050BA6E4E1H1A	006899-037	AL	1/2"	DE1888K3	X	1.2 lb (0.6 kg)
C7050BS6E4E1H1A	006899-038	SS	1/2"	DE1888K3	X	2.2 lb (1.0 kg)
C7050BA6F4E1H1A	006899-039	AL	M20	DE1888K3	X	1.2 lb (0.6 kg)
C7050 LENS CAP/BODY	004907-021	AL	N/A	N/A	X	<1 lb (<0.45 kg)
C7050 LENS CAP/BODY	004907-022	SS	N/A	N/A	X	1 lb (0.45 kg)

High temperature rating - continuous duty at 125° Celsius, for environments that normally exceed 75° Celsius operation.

*EQP UVHT Electronic Module**

Model	Part Number	Encl Material	Conduit Entry	Tube Module	FM/CSA/ ATEX/CE / IECEx	Ship Weight
EQ2253UVHT*	007082-001	AL	3/4"	N/A	X	4.0 lb (1.8 kg)
EQ2207UVHT*	007082-002	AL	M25/M20	N/A	X	4.0 lb (1.8 kg)
EQ2263UVHT*	007082-003	SS	3/4"	N/A	X	9.5 lb (4.3 kg)
EQ2217UVHT*	007082-004	SS	M25/M20	N/A	X	9.5 lb (4.3 kg)

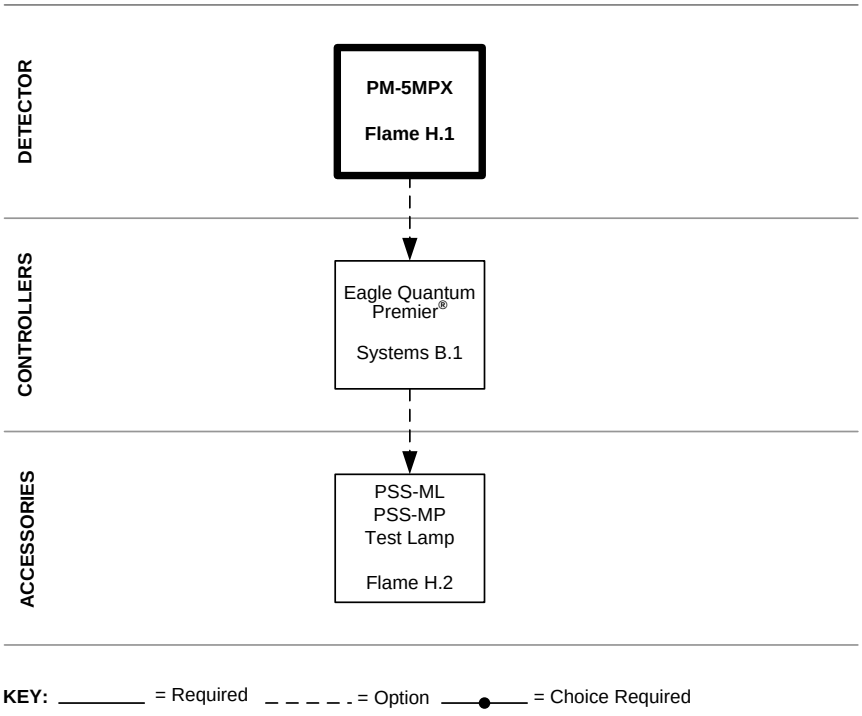
*One (1) Electronic Module (EQxxxxUVHT) is required for use with each C7050B Detector

DUAL SPECTRUM INFRARED

Det-Tronics PM-5MPX Dual Spectrum Flame Detector

Det-Tronics PM-5MPX Dual Spectrum Flame Detector (Spec Sheet: 90-1182) is optimized for the rigorous semiconductor fabrication industry, which is beset with many hazards that result in stringent and application-specific requirements for fire protection safety systems.

- Complies to FM wet bench performance standards
- Approved to FM3260: 2000
- Dual Spectrum IR design
- Compact size
- LED indicator for operational status
- Built-in mounting plate
- Typical response of <0.5 sec
- Fast response—as fast as 25 milliseconds
- Polypropylene housing: Excellent resistance to corrosion and contamination effects
- FM approved for intrinsic safety
- CE marked
- Highly resistant to false alarms



PM-5MPX Dual Spectrum IR Flame Detector for Semiconductor Fabrication Tools

Model	Part Number	Encl Material	Cable Length	FM	Ship Weight
PM-5MPX	421132-001	Polypropylene	50 ft	X	0.5 lb (0.23 kg)

Dual Spectrum Accessories

Part Number	Description	Ship Weight
007351-001	PSS-ML	<1 lb (<0.45 kg)
420116-001	PSS-MP Test Lamp (PM-5SX, PM-5MP, PM-5MP+, PM-5MPX, PM-6M, PM6MX)	1 lb (0.46 kg)
421129-001	PSS-MP Replacement Bulb	<1 lb (0.46 kg)

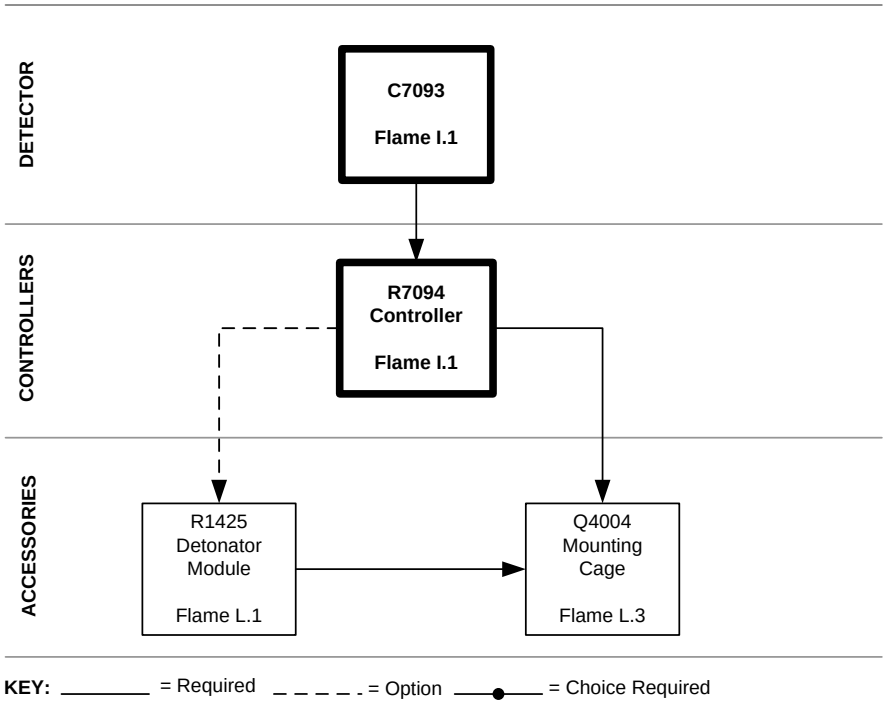
NOTES

HIGH-SPEED INFRARED

C7093/R7094 High-Speed Infrared Flame Detection System

The C7093/R7094 High-Speed Infrared Flame Detection System (Spec Sheet: 90-1028) responds in less than 5 milliseconds to a high-intensity flash fire. Designed specifically for applications such as munitions manufacturing, the C7093/R7094 can trigger high-speed extinguishing systems.

- Extremely fast response (under 5 milliseconds) to flash fire
- Remote test feature provides manual test of optical and electrical components and interconnecting wiring
- Can be used with an external disarming circuit
- Provision for a manual external emergency actuation with circuit ("Manual Pull") for any contact closure device (Class B Supervised)
- Electronically supervises external detonator circuit
- Provisions for an optional external power supply for use with solenoid valves, etc.
- Auxiliary solid state outputs make the system compatible with other Det-Tronics systems
- Can be connected to remote "Armed" and "Fault" lamps
- Intrinsically safe design



C7093 High Speed Infrared Fire Detector

Model	Part Number	Enclosure Material	Conduit Entry	Cable Length	Ship Weight
C7093D6025	004083-006	316 SS	1/2 in	25 ft	2.75 lb (1.24 kg)
C7093E8010	004083-102*	316 SS	1/2 in	10 ft	2.75 lb (1.24 kg)

* Aliant Tech Model

C7093 Test Lamp

Model	Part Number	Ship Weight
PSS-ML	007351-001	<1 lb (<0.45 kg)

R7094 High Speed Infrared Detection Controller

Model	Part Number	Mounting	Ship Weight
R7094A2001	003703-001	Rack	4.4 lb (2.0 kg)

NOTES

SMOKE DETECTORS

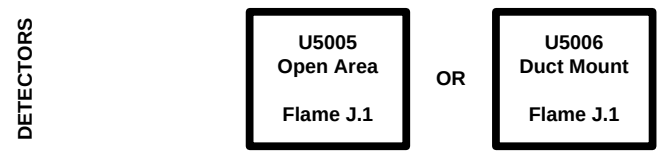
U5005 and U5006 Smoke Detectors

U5005 Smoke Detector (Spec Sheet: 90-1101) is a sensitive, yet rugged, state-of-the-art protection device that is designed for classified areas in hazardous industrial and commercial locations. The detector is designed to operate effectively with both slow smoldering and fast-burning fires. Includes an external alarm indicating LED and one set of normally open relay contacts for alarm and one set of normally closed relay contacts for power supervision.

- Trouble-free photoelectric operation
- Standard 4-wire 24 Vdc operation (U5006)
- Rugged design for environmental extremes
- Explosion-proof junction box with terminal board
- Auxiliary relay
- CSA approved Class I, Div 2, Groups A, B, C, and D

U5006 Air Duct Smoke Detector (Spec Sheet: 90-1101), using the technology of the U5005 Smoke Detector mounted into a fiberglass NEMA 4 enclosure, is designed to detect the presence of smoke for the primary purpose of controlling blowers and dampers in air conditioning and ventilation systems. The unit mounts directly to heating, ventilating, and air conditioning ducts and uses a cross-sectional sampling tube arrangement that allows large volume air sampling. Includes an auxiliary alarm relay contact, which can be normally open or closed.

- Trouble-free photoelectric operation
- Standard 4-wire 24 Vdc operation (U5006)
- Designed to meet ANSI/UL 268A smoke obscuration limits
- 600 to 4000 feet per minute airflow range
- Rugged design for environmental extremes
- Explosion-proof junction box with terminal board
- Auxiliary relay
- CSA approved Class I, Div 2, Groups A, B, C, and D



U5005 Smoke Detector

Model	Part Number	Housing Material	J-box Material	# of Ports	Conduit Entry	CSA	VNIIPO/ VNIIFTRI (Russia)	Ship Weight
U5005A1001	004784-007	AL	AL	1	3/4" NPT*	X		2 lb (0.91 kg)
U5005A1002	004784-008	AL	AL	2	3/4" NPT*	X		2 lb (0.91 kg)
U5005A1004	004784-009	AL	AL	4	3/4" NPT*	X		2 lb (0.91 kg)
U5005A1001-R	004784-908	AL	AL	1	M25		X	2 lb (0.91 kg)
U5005A1004-R	004784-909	AL	AL	4	M25		X	2 lb (0.91 kg)

*Uses a permanently installed M25 to 3/4" NPT adapter

U5006 Duct Mount Smoke Detector

Model	Part Number	Housing Material	J-box Material	# of Ports	Conduit Entry	CSA	VNIIPO/ VNIIFTRI (Russia)	Ship Weight
U5006A1001	004785-004	Fiberglass	AL	1	3/4" NPT*	X		13 lb (5.9 kg)
U5006A1004	004785-005	Fiberglass	AL	4	3/4" NPT*	X		13 lb (5.9 kg)
U5006A1001-R	004785-905	Fiberglass	AL	1	M25		X	13 lb (5.9 kg)
U5006A1004-R	004785-906	Fiberglass	AL	4	M25		X	13 lb (5.9 kg)

*Uses a permanently installed M25 to 3/4" NPT adapter

NOTE: 1 inlet tube and 1 return tube included at no extra cost. Specify length of inlet tube at time of order (1,3,6, or 10 ft)

Replacement Sample Tubes for U5006

Part Number	Length
004783-001	1 ft
004783-002	3 ft
004783-003	6 ft
004783-004	10 ft
004736-001*	1 ft

*Return tube

Miscellaneous Replacement Parts

Model	Part Number	Description	Ship Weight
23-402	004924-002	U5006 Smoke detector head w/fitting (CSA module)	2.5 lb (1.28 kg)
	004788-002	Circuit board for J-box	0.5 lb (0.23 kg)
23-401	102359-001	Rubber plug for sampling tube	0.5 lb (0.23 kg)
	004736-001	RT-1 Return tube, 1 foot length	1 lb (0.46 kg)
	000119-008	Smoke detector tester (canned smoke)	1 lb (0.46 kg)

ACCESSORIES

Test Lamps

W8066 Portable UV Test Lamp (Spec Sheet: 90-1055) is used for on-site testing of all UV detector types. It replaces W866. Consists of a UV lamp powered by a replaceable 9 volt battery and is contained in a plastic enclosure. Intrinsically safe.

W867C Portable UV/IR Test Lamp (Spec Sheet: 90-1055) is used for on-site testing of UV, single frequency IR, or UVIR detectors. Consists of a high-energy broad band lamp powered by rechargeable batteries and is contained in an explosion-proof non-ferrous metallic enclosure.

W8067S Long Range Test Lamp (Manual: 95-8626) for on-site testing of the UVIR and single frequency IR detectors.
NON EXPLOSION-PROOF - CANNOT BE USED IN HAZARDOUS LOCATIONS.

W8066 Portable UV Test Lamp

Model/Description	Part Number	FM	CSA	Ship Weight
W8066A1001	004483-001	X	X	1.5 lb (0.7 kg)
Replacement Bulb	002405-002			<1 lb (<0.45 kg)
Screw-on cap, red for Lens	004520-003			1.5 lb (0.7 kg)
Window, Fused Silica	004648-001			1.5 lb (0.7 kg)
Seal, Pushbutton Boot	102219-001			1.5 lb (0.7 kg)

W867 Portable UV/IR Test Lamp

Model	Part Number	FM	Ship Weight
W867C3004 Test Lamp 110/220 VAC*	004000-006	X	14 lb (6.2 kg)
Universal Battery Charger for W867 and W8067, 110/220 VAC	009997-001		1 lb (0.4 kg)
Battery Charger, W8673001, 120 VAC	009117-001		1 lb (0.4 kg)
W867 Battery Pack Kit	004611-002		7 lb (3.2 kg)
W867 Bulb Replacement Assembly	010543-001		<1 lb (<0.4 kg)

*Includes Universal Battery Charger

W8067 Long Range Test Lamp

Model	Part Number	Ship Weight
W8067S1003	006439-004	2.0 lb (0.95 kg)
W1212 Battery, Charger and Case	006438-001	2.0 lb (0.95 kg)
Universal Battery Charger for W867 and W8067, 110/220 VAC	009997-001	<1 lb (<0.4 kg)
Replacement Bulb for W8067S	103853-001	<1 lb (<0.4 kg)
W8067S Battery, 6V (2 required for 12V operation)	103855-001	<1 lb (<0.4 kg)
W8067S Battery, 12V	103937-001	<1 lb (<0.4 kg)

Laser, Laser Holder, W6300 Detector Inspector

Laser is for use with the Q1201A and Q1201C Laser Holder in sighting and testing the area of flame detection coverage. Battery-powered laser projects a red beam of light and has a toggle switch for turning the device on and off. When used with its holder, the laser beam identifies the center and edges of the detector's COV. Includes battery.

Q1201A Laser Holder (Manual: 95-8404) is for use with the Laser for sighting and testing area of flame detection coverage. Easily attaches to the front of Det-Tronics' older model UV, single frequency IR and UV/IR detectors for use during system startup, checkout, and re-alignments.

Q1201C Laser/ Aimer Holder (Manual: 95-8596) is for use with X3301, X3302, X2200, X5200, X9800 and X3300 flame detectors. Easily attaches to the front of Det-Tronics' X-Series flame detectors for use during system startup, checkout, and re-alignments. Designed to hold the Laser (which projects a red beam of laser light) to show exact location of the center of the detector's COV. Two additional holding positions are available for locating the outside edges of the COV at either 30 degrees off center (75 degrees total COV) or at 45 degrees off center (90 degrees total COV). While laser is being used to locate edges of the COV it can be rotated 360 degrees to identify the entire area of flame detection coverage.

The Model 475 HART Field Communicator is available from Detector Electronics Corporation under agreement with Emerson Process Management. The intrinsically safe 475 Field Communicator works with all X-Series detectors that provide HART output.

W6300B Inspector Connector with Inspector Monitor Software (Manual: 95-8581) for use with X3301, X3302, X5200, X9800 and X2200 flame detectors. Allows for validation of configuration and uploading of important detector status data such as power-up/down, faults and alarms to a personal computer (PC) where it can be displayed, saved and/or printed. Inspector Monitor CD included

Laser

Description	Part Number	For Use With	Ship Weight
Laser Aimer	006097-001	Q1201A, B, and C	1 lb (0.46 kg)
Battery, 3V Lithium	102871-001		<1 lb (<0.46 kg)

Q1201 Laser Aimer/Holder

Model	Part Number	For Use With	Ship Weight
Q1201A1001	006066-001	C7050, C7052, U7602, X7050	2 lb (0.95 kg)
Q1201C1001	007255-001	X3300, X3301, X3302, X2200, X5200, X9800	2 lb (0.95 kg)
N/A	012125-001	Q1201C1001 (Provides 10° & 20° field of view)	1 lb (0.46 kg)

475 HART Communicator

Part Number	Description	Ship Weight
103922-001	475 HART Field Communicator	7.5 lb (3.4 kg)

NOTE: Discount does not apply.

W6300 Inspector Connector – X-Series

Model/Description	Part Number	Converter	Ship Weight
W6300B1002 (120/220 Vac)	007819-001	Serial	<1 lb (<0.46 kg)
W6300B1003 (120/220 Vac)	007819-002	USB	<1 lb (<0.46 kg)
Replacement Converter RS485 to RS232	000511-029	Serial	<1 lb (<0.46 kg)
Replacement Converter RS485 to USB	103881-001	USB	<1 lb (<0.46 kg)
Flame Inspector Monitor CD	009207-001	N/A	<1 lb (<0.46 kg)

ACCESSORIES

Detector Hardware

Q1113A Universal Air Shield Assembly (Manual: 95-8321). Use on UV, IR, and UV/IR detectors (C7050A, B and H, C7051, C7052, C7098, U7600, U7602 and U7698) in areas with high levels of airborne contamination. Consists of Delrin (solvent-resistant plastic) air shield housing with bronze sintered air diffuser. Quick connect air line fitting accepts 1/4 inch O.D. nylon tubing for instrument grade air supply of 5 to 15 psi at 3 or more cubic feet per minute. Easy to install on existing detectors.

Q1115 Universal Air Shield/Flange Mount Assembly (Manual: 95-8467). Use on UV and IR detectors (C7050B, C7098, U7600, U7602 and U7698) in areas with high levels of air-borne contaminants. Available in either aluminum or stainless steel with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 5 to 15 psi at 3 or more cubic feet per minute.

Q1116 Universal Air Shield Assembly (Manual: 95-8597). Use on X3301, X3302, X2200, X5200 and X9800 in areas with high levels of air-borne contaminants. Available in aluminum with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 12 to 20 psi at 3 or more cubic feet per minute.

Q1118 Universal Air Shield/Flange Mount Assembly (Manual: 95-8595). Use on X3301, X3302, X2200, X5200 and X9800 in areas with high levels of air-borne contaminants. Available in either aluminum or stainless steel with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 10 to 20 psi at 3 or more cubic feet per minute.

Q1198 Dual Air Shield/Flange Mount Assembly (Manual: 95-8598). Use on X9800 in areas with super high levels of powder air-borne contaminants. Aluminum with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 10 to 60 psi at 3 or more cubic feet per minute.

Q2000 X-Series Weather Shield provides added weather protection. Epoxy coated aluminum.

Q2033 Field of View "FOV" limiter / Weather Shield for the X3301 or X3302
For applications with friendly fires or flares, which require a controlled cone of vision. Order the 10° model for the greatest reduction in field of view, the 20° for standard limitation, or the 30° to maintain the field of view and use as a weather shield.

Q1113 Universal Air Shield Assembly

Model	Part Number	Air Connection	Air Supply	Air Requirement	Ship Weight
Q1113A1001	004273-002	1/4 in OD nylon tubing	5-15 psi	3 cfm minimum	1 lb (0.45 kg)

Q1115 Universal Air Shield / Flange Mount Assembly

Model	Part Number	Material	Air Connection	Air Supply	Air Requirement	Ship Weight
Q1115A1001	006528-001	SS	1/4 in OD nylon tubing	5-15 psi	3 cfm minimum	2 lb (0.9 kg)
Q1115A1002	006528-002	AL	1/4 in OD nylon tubing	5-15 psi	3 cfm minimum	1 lb (0.45 kg)

Q1116 Universal Air Shield Assembly

Model	Part Number	Air Connection	Air Supply	Air Requirement	Ship Weight
Q1116A1001	007240-001	1/4 in OD nylon tubing	12-20 psi	3 cfm minimum	2 lb (0.9 kg)
N/A	011990-001	Q1116/Q1118 SINTER RPLCMNT KIT			2 lb (0.9 kg)

Q1118 Universal Air Shield / Flange Mount Assembly

Model	Part Number	Material	Air Connection	Air Supply	Air Requirement	Ship Weight
Q1118A1001	007818-001	AL	1/4 in OD nylon tubing	10-30 psi	3-20 cfm target	2 lb (0.9 kg)
Q1118S1001	007818-002	SS	1/4 in OD nylon tubing	10-30 psi	3-20 cfm target	6 lb (2.75 kg)
N/A	011990-001	Q1116/Q1118 SINTER RPLCMNT KIT				2 lb (0.9 kg)

NOTE: Not compatible with Q9033

Q1198 Dual Air Shield / Flange Mount Assembly for X9800

Model	Part Number	Material	Air Connection	Air Supply	Air Requirement	Ship Weight
Q1198A1001	009199-001	AL	6mm OD nylon tubing	10-20 psi	3-5 cfm min	2 lb (0.9 kg)

NOTE: Not compatible with Q9033

Q2000 X-Series Weather Shield

Model	Part Number	Material*	Ship Weight
Q2000A1001	007338-001	AL	1 lb (0.45 kg)

*Epoxy coated

Q2033 FOV Limiter for X3301 and X3302

Model	Part Number	Material*	Ship Weight
Q2033A10R 10° FOV Limiter for X3301/X3302	007338-010	AL	1 lb (0.45 kg)
Q2033A20R 20° FOV Limiter for X3301/X3302	007338-020	AL	1 lb (0.45 kg)
Q2033A30R 30° FOV Limiter for X3301/X3302	007338-030	AL	1 lb (0.45 kg)
Spare Restrictor Plate 10 degree FOV	007912-010	AL	<1 lb (<0.45 kg)
Spare Restrictor Plate 20 degree FOV	007912-020	AL	<1 lb (<0.45 kg)
Spare Restrictor Plate 30 degree FOV	007912-030	AL	<1 lb (<0.45 kg)

*Epoxy coated

ACCESSORIES

Detector Mounting Hardware

Q9001B (Manual: 95-8338) Aluminum swivel for positioning the C7050 and X7050.

Q9001H (Manual: 95-8338) Stainless steel swivel for positioning the C7050 and X7050.

Q9033A Aluminum Mounting Arm for X3301, X3302, X2200, X5200, and X9800.
NOTE: For use with aluminum body detectors only.

Q9033B Stainless steel Mounting Arm for X3301, X3302, X2200, X5200, and X9800.
(DNV approved with X3301)

Q9033 Collar Attachment (Manual: 95-8686) for X3301, X3302, X2200, X5200, and X9800. Used in conjunction with the Q9033A/B Mounting Arm. The Collar Attachment adds versatility to the mounted detector by allowing a wider (3-dimensional) range of motion and improved viewing angles.

Q1130 (Manual: 95-8662) Flange mount assembly for X3301 and X3302, allows the detector to be mounted externally to monitor storage or process areas. Not suitable for Zone 0 installations.

Flame Detector Mounting Hardware

Model	Part Number	For Use With	Ship Weight
Q9001B1175	002099-003	Al C7050 and X7050	0.5 lb (0.23 kg)
Q9001H8001	004404-002	SS C7050 and X7050	1 lb (0.45 kg)
Q9033A1000	007290-002	AL X2200, X5200, X9800, X3301, X3302	6 lb (2.75 kg)
Q9033B1000	007290-001	SS X2200, X5200, X9800, X3301, X3302	14 lb (6.4 kg)
Q9033 Collar Attachment	011385-001	Q9033A, Q9033B	2.05 lb (0.9 kg)
Q1130A1001	010857-001	X3301, X3302	2.8 lb (1.3 kg)

Power Supplies

EQP21XXPS Power Supplies can be used as singular or duplex. The power supply is available in a DIN rail mount or panel mount configuration for ease of mounting. Power supplies should be sized to approximately 50% of the normal requirement or to local code requirements.

EQP21XX Power Supply

Model	Part Number	Description	Ship Weight
EQP2120PS-B	010988-001*	EQP2120PS-B 20A 120/220V PANEL	3.7 lb (1.7 kg)
EQP2120PS	010988-002	EQP2120PS 20A 120/220V DIN	3.7 lb (1.7 kg)
EQP2110PS-P	010985-001*	EQP2110PS-P 10A 120/220V, PANEL	2.9 lb (1.3 kg)
EQP2110PS	010985-002	EQP2110PS 10A 120/220V, DIN	2.9 lb (1.3 kg)

*For FM/USCG approved system

NOTES

CONTROLLERS

Output Devices for RXXXX Controllers

R1425 Rack Mount Detonator Module (Spec Sheet: 90-1021) for high-speed extinguishing systems. Features two independent capacitive-discharge detonator firing circuits monitored for opens. Use with the R7404 controller. Mounts in Q4004 Cage Assembly (sold separately). Operates on 12 or 24 Vdc.

R1425 Rack Mount Detonator Module for the R7404 Controller

Model	Part Number	Description	Ship Weight
R1425A2024	002791-001	Standard Model	3 lb (1.4 kg)
R1425B3001	002791-002	Requires "UV" and "Matrix" inputs at the same time [Hercules Model]	3 lb (1.4 kg)

R6006 Rack Mount Relay Output Module (Spec Sheet: 90-1016). Units have eight individual form C relay outputs rated at 3 amps per relay. Relays can be operated by solid state outputs from one R7404, R7409 or R7494 controller. Zone relays can be grouped for voting outputs. R6006C and R6006D have load monitoring capabilities. Operates on either 12 or 24 Vdc. Mounts in Q4004 Cage Assembly (sold separately).

R6006 Rack Mount Relay Output Module

Model	Part Number	Ind Relays	Alarm Relays	Fault Relays	CSA	Ship Weight
R6006A2001	002320-001	6	1	1		4.5 lb (2 kg)
R6006C1008	002478-002	6	1	1	X	4.5 lb (2 kg)

R6007A Auxiliary Relay Output Assembly (Spec Sheet: 90-1029). Provides relay contacts actuated by solid state outputs from one R7404, R7409, R7484, or R7494 controller. Four, eight, or twelve relays are supplied on either one or two PC boards. All relays are form C (N.O./N.C.) rated 3 amps at up to 30 Vdc or 250 Vac. Only one controller per R6007A. Mount on Q4004 Cage Assembly (sold separately). Operates on 12 or 24 Vdc. SPECIFY CONTROLLER MODEL AND NUMBER OF RELAYS.

R6007 Auxiliary Relay Output Assembly

Model	Part Number	Zone Relays	Fire Logic Relays	Common Alarm Relay	Common Fault Relay	Ship Weight
R6007A1006	003436-004	0	A and B	X	X	2.2 lb (1.0 kg)
R6007A1002	003436-001	8	A and B	X	X	2.2 lb (1.0 kg)

R74XX Controllers

The R7404 Controller (Spec Sheet: 90-1014) provide fast, reliable flame detection in a wide variety of applications. The microprocessor-based controller simultaneously monitors up to 16 C7050 ultraviolet detectors in up to eight different zones. The detector has the Automatic Optical Integrity (**oi**) feature, providing a continuous check of detector optical surfaces, detector sensitivity, and electronic circuitry of the detector/controller system. Selectable time delay. (Indoor applications.)

NOTE: Check X-Series flame detector pulse retrofit options.

The STAR (Selectable Transient Arc Rejection) (Manual: 95-8294) logic program for the R7404 Controller has been specifically designed to reject transient electric arcs, such as those produced in electrostatic powder coating or paint spraying booths emitting UV radiation, which can cause false actuation of a UV flame detection system. Supports up to eight detectors in up to eight different zones using adjustable transient arc rejection parameters. (Outdoor applications.)

- Automatic **oi**
- Adjustable sensitivity and time delay
- Automatic fault identification
- Individual zone identification with eight voting options
- Latching ZONE LEDs identify the zone responding to fire
- Selectable latching or non-latching output circuits
- Individual detector output (count rate) can be measured and observed on digital display
- CSA certified

NOTE: Check X-Series flame detector pulse retrofit options.

The **R7494** controller continuously monitors up to eight detectors and generates the fire alarm in response to the detector's fire signal. The front panel provides switches for selecting mode of operation and initiating test functions.

- Ignores false alarm sources such as arc welding, x-rays, gamma radiation and radiation from flickering hot objects
- Fast response–typically 1 to 5 seconds for an intense hydrocarbon fire
- Each detector independently registers an alarm
- Microprocessor control provides continuous diagnostics and automatic fault identification
- Automatic **oi** for both UV and IR sensors
- Explosion-proof (flame-proof) detector housing
- Count test mode allows monitoring of actual detector output
- Voting circuitry for improved false alarm rejection
- Up to eight controllers can be wired to provide up to 64 voting detector zones
- FM and CSA certified

NOTE: Check X-Series flame detector pulse retrofit options.

CONTROLLERS

R7404 UV Fire Detection Controller

Model	Part Number	Channels	Backplate Connector	STAR Logic	High Speed	FM	CSA	Ship Weight
R7404B7001	002257-001	8	X		X	X	X	4.4 lb (2.0 kg)
R7404B7003*	002257-006	8	X	X		X	X	4.4 lb (2.0 kg)
R7404B7004	002257-007	8				X	X	4.4 lb (2.0 kg)

*Star logic controllers are recommended for outdoor applications.

NOTE: R7404 C5020 replaced by R7404B7001

R7494 Controller

Model	Part Number	Channels	Backplate Connector	CSA	Ship Weight
R7494B5001	003955-001	8	X	X	4.4 lb (2.0 kg)
R7494B5012	003955-003	8		X	4.4 lb (2.0 kg)

Mounting Cages and Enclosures

Q4004 Universal Mounting Cage (Manual: 95-8241) for use with R6006, R6007, R7094, R7404, R7405, R7409, R7484, R7494, R7495, R1425 and W4220. Also holds R8471 gas controllers.

Q4004 Universal Mounting Cages

Model	Part Number	Number of Flame Detectors	Ship Weight
Q4004A2019	005269-001	8	9.3 lb (4.2 kg)
Q4004E2027	005269-002	6	7.6 lb (3.5 kg)
Q4004B2011	005269-003	4	5.9 lb (2.7 kg)
Q4004C2009	005269-004	3	5.1 lb (2.3 kg)
Q4004D2007	005269-005	2	4.2 lb (1.9 kg)
Q4004A2050	005269-006	1	3.1 lb (1.4 kg)
Blank filler plates	002188-001	N/A	0.3 lb (1.04 kg)

NOTES

SPARE PARTS

Spare and Replacement Parts

PM-9SBE Replacement Parts

Part Number	Description	Ship Weight
411288-004	Fiber optic cable (10 foot)	2.5 lb (1.2 kg)
411288-001	Fiber optic cable (30 foot)	2.5 lb (1.2 kg)
411288-002	Fiber optic cable (45 foot)	2.5 lb (1.2 kg)
411288-005	Fiber optic cable (60 foot)	2.5 lb (1.2 kg)
411288-003	Fiber optic cable (100 foot)	2.5 lb (1.2 kg)
421368-001	Fiber optic sensor head (conductive)	0.5 lb (0.23 kg)
411833-001	PSS-F test lamp (PM-9CBE, PM-9SBE)	1 lb (0.46 kg)

U7698E Spare Parts

Part Number	Description	Size	Required per Housing	Ship Weight
003525-001	**oi** ring for IR detectors	-	-	0.5 lb (0.23 kg)
107427-004	Viton O-ring for UV and IR sensor housings	Small	1	0.5 lb (0.23 kg)
107427-040	Viton O-ring (U7698E rear housings)	Large	1	0.5 lb (0.23 kg)

U7602E Spare Parts

Part Number	Description	Ship Weight
002469-001	DE2189-001 Terminal block for U7602E and C7050	0.5 lb (0.23 kg)
002519-001	**oi** ring for UV detectors	0.5 lb (0.23 kg)

Replacement Parts for UV/IR Detectors

Model	Part Number	Description	Use With	Required per Housing	Ship Weight
DE4431	004431-001	Automatic **oi** and No. 3 board conversion kit	R7302, R7303	1	1 lb (0.45 kg)
N/A	002519-001	**oi** ring for UV detectors	UV Detectors	1	0.5 lb (0.23 kg)
N/A	003525-001	**oi** ring for IR detectors	IR Detectors	1	0.5 lb (0.23 kg)
N/A	107427-006	Small Viton O-ring for UV and IR sensor housings		2	0.5 lb (0.23 kg)
N/A	009928-001	R7302/R7303 CB UPDATE KIT	Use to update R7302/R7303 chassis to current rev.	N/A	
DE4432-001	004432-001	Circuit board for cast J-box	C7052J5000, C7052K5000	1	0.5 lb (0.23 kg)

UV Sensor Modules

Model	Part Number	Comments	Controller	Ship Weight
DE1888A2	003240-201	Replaces DE1666A, DE1666C, DE1777A, DE1777C, DE1888A	C7050, C7052	5 oz. (0.14 kg)
DE1888B2	003240-202	Replaces DE1666B, DE1777B, DE1777D, DE1888D, DE1888B	U7600, U7602, U7652	5 oz. (0.14 kg)
DE1888B3	003240-218	LED for VDS approved devices	U7602B Only	5 oz. (0.14 kg)
DE1888K2	003240-210	Replaces DE1777K, DE1888K, for high temp applications to +125°C (257°F)	C7050B	5 oz. (0.14 kg)
DE1888K3	003240-221	For UVHT only	Quantum	5 oz. (0.14 kg)
DE1888M2	003240-212	Replaces DE1777M, DE1888M; for remote surveillance	C7050B	5 oz. (0.14 kg)
DE1888N	003240-013	For black powder, sulfur fires, etc. (high speed)	C7050B	5 oz. (0.14 kg)
DE1888N2	003240-213	For special high sensitivity applications (munitions, propellents)	C7050, C7052	5 oz. (0.14 kg)
DE1888T2	004433-201	For electro painting, spec appl; reduced sensitivity (SF)	C7050B, C7052	5 oz. (0.14 kg)
DE1888V2	003240-217	Internal reflection	C7050B, C7052	5 oz. (0.14 kg)
DE1888V3	003240-219	Internal reflection, LED	U7652, U7602E	5 oz. (0.14 kg)
DE1888W2	004433-204	Internal reflection w/reduced sensitivity	C7050, U7602B	5 oz. (0.14 kg)

IR Sensor Modules

Model	Part Number	Controller	Sensitivity	Ship Weight
DE3895-001	003895-001	C7052J4	Std	5 oz. (0.14 kg)
DE4161-001	004161-001	U7698A, U7698C	Std	5 oz. (0.14 kg)
DE4960-001	004960-001	U7698B	Std	5 oz. (0.14 kg)
DE4933-001	004933-001	U7698D	Std	5 oz. (0.14 kg)
DE5400-001*	005400-001*	U7652/C7052J - Replaces 005500-001	Std	5 oz. (0.14 kg)
DE5500-003	005500-003	C7052K5	Std	5 oz. (0.14 kg)
DE5600-001	005600-001	C7052C5, C7098	Std	5 oz. (0.14 kg)
DE5600-002	005600-002	C7098B, C7052C5	High	5 oz. (0.14 kg)
DE6000-001	006000-001	U7698E	Std	5 oz. (0.14 kg)

* Replaces 005500-XXX IR Sensors

ID Tags and Drawings

Part Number	Comments
STAINLESS TAGS	Stainless steel tag with custom text
SS TAG ATTACHED	SS Tag attached to product
PAPER TAGS	Paper tag with custom text
N/A	Certified Drawings (per drawing)

SPARE PARTS

Backplate Terminal Connectors

Use With	Part Number	Replaces	Ship Weight
R1425	002805-001	-	1 lb (0.45 kg)
R6006	002296-001	-	1 lb (0.45 kg)
R6007	003356-001	-	1 lb (0.45 kg)
R7094	003715-001	-	1 lb (0.45 kg)
R7404, R7409, R7484, R7494	002242-001	003551-001, 003957-001	1 lb (0.45 kg)

Miscellaneous Detector Parts for Regular Maintenance

Part Number	Description	Use With	Ship Weight
001680-001	K1003A1006 6PK Window Cleaner	-	0.5 lb (0.26 kg)
002507-001	K1002A1001 UV window cleaning kit (2 bottles cleaner, 8 **oi** rings)	-	0.5 lb (0.26 kg)
002519-001	**oi** ring for UV detectors	-	0.5 lb (0.26 kg)
003525-001	**oi** ring for IR detectors	-	0.5 lb (0.26 kg)
003996-001	UV/IR window cleaning kit (2 bottles cleaner, 4 ea of UV/IR **oi** rings)	-	0.5 lb (0.26 kg)
107427-004	Viton O-ring (small) for UV and IR sensor housings	2 per housing	0.5 lb (0.26 kg)
107427-006	Viton O-ring	-	0.5 lb (0.26 kg)
107427-007	Viton O-ring	U7600, U7602, U7698, U70988	0.5 lb (0.26 kg)
107427-040	Viton O-ring	U7698E rear housings	0.5 lb (0.26 kg)
001981-001	Banana jacks for base conversion to plug in sensor module (qty 4 required)	C7050	0.5 lb (0.26 kg)
004231-001	Adapter	C7037	0.5 lb (0.26 kg)

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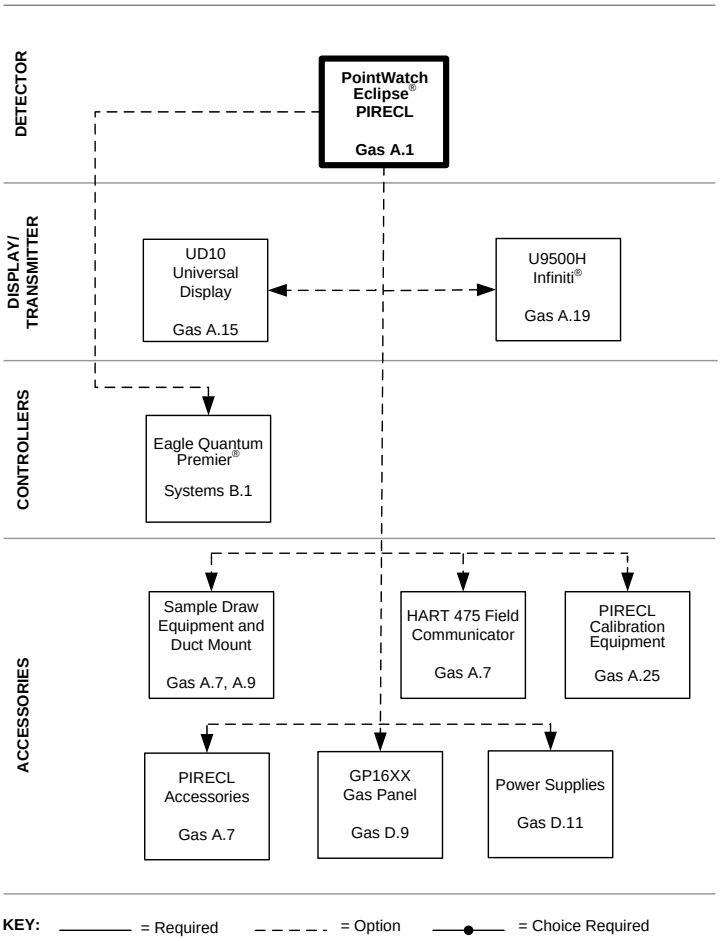
Availability and specifications are subject to change without notice.

PointWatch Eclipse® PIRECL Infrared Hydrocarbon Gas Detector

The **PointWatch Eclipse PIRECL Hydrocarbon Detector** (Spec Sheet: 90-1138) is our most rugged stainless steel, point infrared gas detector providing detection of methane, propane, butane and ethylene, among other flammable hydrocarbon gases in the LFL range. Standard signal outputs include isolated 4-20 mA, HART communication protocol, and RS-485 serial communication supporting Modbus. An Eagle Quantum Premier (EQP) version, and optional 2-alarm or 1-fault relay package are also available. A tri-color LED provides visual display of operating status. The weather baffle provides excellent optics protection with an easy twist-lock removal. Additional features include:

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to ATEX EN60079-29-1, FM 6310/6320, and CSA 22.2 #152
- **Models available with SIL 2 certification**
- Internal wiring compartment saves money and time spent on installation
- Heated optics
- Non-intrusive calibration
- Immune to poisoning
- Handheld communicator capability
- Ex d, e, ib protection designs
- IECEx, FM, CSA, ATEX, CE hazardous location certifications
- DNV and MED offshore certifications
- Conforms to global life safety requirements for combustible gas when connected through:
  Internal relays, EQP Controller, FlexVu UD10, UD10/DCU,
  Infiniti U9500, R8471H Controller, EQ3710 Analog Input Module (AIM)
- Remote calibration capability using UD10 or model PIRTB junction box
- LON configurations are certified as NFPA 72 Class X devices

YEAR 5 WARRANTY



PointWatch Eclipse Model Matrix

MODEL	DESCRIPTION
PIRECL	PointWatch Eclipse Point Infrared Gas Detector

TYPE	THREAD TYPE
A	3/4" NPT
B	Metric M25

TYPE	OUTPUT AND MEASUREMENT OPTIONS
1	4-20 mA with HART Protocol and RS-485: 0-100% LFL Full Scale Range
4	Eagle Quantum Premier Compatible Only: 0-100% LFL Full Scale Range

TYPE	OPTIONAL OUTPUTS
A	HART Communication Port
B	HART Communication Port and Relay Board (not compatible with EQP) **Ex d only**
D	No Optional Outputs
E	Relay Board (not compatible with EQP) **Ex d only**

TYPE	WEATHER PROTECTION
1	Weather Baffle with Hydrophobic filter
2	Weather Baffle without Hydrophobic filter
3	Weather Baffle with Hydrophobic filter and 1/16" threaded calibration port
5	No Weather Protection installed

TYPE	APPROVALS
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
BT	SIL/INMETRO (BRAZIL)
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)
Y	CCCF (CHINA)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

Typical PIRECL Customer Proposal

Qty	Model	Part Number	Description
1	PIRECLA1B1T2	007168-205	3/4 NPT, 4-20 mA, w/relays, w/hydrophobic filter, SIL/FM/CSA/ATEX/CE/IECEx approvals

Spare Parts

Qty	Model	Part Number	Description
1	N/A	007165-002	Weather baffle with standard inlet nozzle w/hydrophobic filter

Accessories

Qty	Part Number	Description
1	103922-001	Model 475 HART Field Communicator
1	006468-001	Methane Gas Calibration Kit
1	000118-020*	Remote HART Port Cable Kit - 20 meter
1	000118-021**	Extension Cord - 1 meter

*Kit requires the use of a Communicator-to-Cable Connector (p/n 000118-021) for connection to the HART field communicator.
**Qty 1 required per each 475 Communicator.

INFRARED

PointWatch Eclipse Models - SIL 2 (SIL/FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection**	Ex d e	Ex d	SIL FM/CSA/ ATEX/CE/ IECEx
PIRECLA1A1T1	007168-201	3/4 NPT	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLA1A1T2	007168-241	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA1A2T1	007168-203	3/4 NPT	4-20 mA	X	No	no hydrophobic	X		X
PIRECLA1B1T2	007168-205	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA1B2T2	007168-207	3/4 NPT	4-20 mA	X	Yes	no hydrophobic		X	X
PIRECLA1A3T1	007168-210	3/4 NPT	4-20 mA	X	No	1/16 NPT w/hydro	X		X
PIRECLA1A3T2	007168-242	3/4 NPT	4-20 mA	X	No	1/16 NPT w/hydro		X	X
PIRECLB1A1T1	007168-202	M25	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLB1A1T2	007168-245	M25	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLB1A2T1	007168-204	M25	4-20 mA	X	No	no hydrophobic	X		X
PIRECLB1A2T2	007168-218	M25	4-20 mA	X	No	no hydrophobic		X	X
PIRECLB1B1T2	007168-206	M25	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLB1B2T2	007168-227	M25	4-20 mA	X	Yes	no hydrophobic		X	X
PIRECLB1A3T1	007168-240	M25	4-20 mA	X	No	1/16 NPT w/hydro	X		X
PIRECLB1A3T2	007168-246	M25	4-20 mA	X	No	1/16 NPT w/hydro		X	X
PIRECLA1D1T1	010195-201	3/4 NPT	4-20 mA		No	w/ hydrophobic	X		X
PIRECLA1D1T2	010195-241	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
PIRECLA1D2T1	010195-203	3/4 NPT	4-20 mA		No	no hydrophobic	X		X
PIRECLA1E1T2	010195-205	3/4 NPT	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLA1E2T2	010195-207	3/4 NPT	4-20 mA		Yes	no hydrophobic		X	X
PIRECLA1D3T1	010195-210	3/4 NPT	4-20 mA		No	1/16 NPT w/hydro	X		X
PIRECLA1D3T2	010195-242	3/4 NPT	4-20 mA		No	1/16 NPT w/hydro		X	X
PIRECLB1D1T1	010195-202	M25	4-20 mA		No	w/ hydrophobic	X		X
PIRECLB1D1T2	010195-245	M25	4-20 mA		No	w/ hydrophobic		X	X
PIRECLB1D2T1	010195-204	M25	4-20 mA		No	no hydrophobic	X		X
PIRECLB1D2T2	010195-218	M25	4-20 mA		No	no hydrophobic		X	X
PIRECLB1E1T2	010195-206	M25	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLB1E2T2	010195-227	M25	4-20 mA		Yes	no hydrophobic		X	X
PIRECLB1D3T1	010195-240	M25	4-20 mA		No	1/16 NPT w/hydro	X		X
PIRECLB1D3T2	010195-246	M25	4-20 mA		No	1/16 NPT w/hydro		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-201**P**).
Add "E" for ethylene or "B" for butane.
**Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PointWatch Eclipse Models - EQP - SIL 2 (SIL/FM/CSA/ATEX/CE/IECEx)

Model	Part number*	Threads	Output	HART Port	Relays	Weather Protection**	Ex d e	Ex d	SIL FM/CSA/ ATEX/CE/ IECEx
PIRECLA4A1T1	007168-212	3/4 NPT	EQP	X	No	w/ hydrophobic	X		X
PIRECLA4A1T2	007168-243	3/4 NPT	EQP	X	No	w/ hydrophobic		X	X
PIRECLA4A2T1	007168-214	3/4 NPT	EQP	X	No	no hydrophobic	X		X
PIRECLA4A3T1	007168-216	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	X		X
PIRECLA4A3T2	007168-244	3/4 NPT	EQP	X	No	1/16 NPT w/hydro		X	X
PIRECLB4A1T1	007168-213	M25	EQP	X	No	w/ hydrophobic	X		X
PIRECLB4A1T2	007168-247	M25	EQP	X	No	w/ hydrophobic		X	X
PIRECLB4A2T1	007168-215	M25	EQP	X	No	no hydrophobic	X		X
PIRECLB4A3T1	007168-217	M25	EQP	X	No	1/16 NPT w/hydro	X		X
PIRECLB4A3T2	007168-248	M25	EQP	X	No	1/16 NPT w/hydro		X	X
PIRECLA4D1T1	010195-212	3/4 NPT	EQP		No	w/ hydrophobic	X		X
PIRECLA4D1T2	010195-243	3/4 NPT	EQP		No	w/ hydrophobic		X	X
PIRECLA4D2T1	010195-214	3/4 NPT	EQP		No	no hydrophobic	X		X
PIRECLA4D3T1	010195-216	3/4 NPT	EQP		No	1/16 NPT w/hydro	X		X
PIRECLA4D3T2	010195-244	3/4 NPT	EQP		No	1/16 NPT w/hydro		X	X
PIRECLB4D1T1	010195-213	M25	EQP		No	w/ hydrophobic	X		X
PIRECLB4D1T2	010195-247	M25	EQP		No	w/ hydrophobic		X	X
PIRECLB4D2T1	010195-215	M25	EQP		No	no hydrophobic	X		X
PIRECLB4D3T1	010195-217	M25	EQP		No	1/16 NPT w/hydro	X		X
PIRECLB4D3T2	010195-248	M25	EQP		No	1/16 NPT w/hydro		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-201**P**).
Add "E" for ethylene or "B" for butane.
**Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PointWatch Eclipse Models (FM/CSA/ATEX/CE/IECEx)

Model	Part number*	Threads	Output	HART Port	Relays	Weather protection**	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
PIRECLA1A1W1	007168-001	3/4 NPT	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLA1A1W2	007168-041	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA1B1W2	007168-005	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA1A5W1	007168-022	3/4 NPT	4-20 mA	X	No	None	X		X
PIRECLA1B5W2	007168-023	3/4 NPT	4-20 mA	X	Yes	None		X	X
PIRECLA1A3W1	007168-010	3/4 NPT	4-20 mA	X	No	1/16 NPT w/hydro	X		X
PIRECLA1A3W2	007168-042	3/4 NPT	4-20 mA	X	No	1/16 NPT w/hydro		X	X
PIRECLA1B3W2	007168-038	3/4 NPT	4-20 mA	X	Yes	1/16 NPT w/hydro		X	X
PIRECLB1A3W1	007168-040	M25	4-20 mA	X	No	1/16 NPT w/hydro	X		X
PIRECLB1A3W2	007168-046	M25	4-20 mA	X	No	1/16 NPT w/hydro		X	X
PIRECLB1A1W1	007168-002	M25	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLB1A1W2	007168-045	M25	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLB1B1W2	007168-006	M25	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLB1A5W1	007168-024	M25	4-20 mA	X	No	None	X		X
PIRECLB1B5W2	007168-025	M25	4-20 mA	X	Yes	None		X	X
PIRECLA1D1W1	010195-001	3/4 NPT	4-20 mA		No	w/ hydrophobic	X		X
PIRECLA1D1W2	010195-041	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
PIRECLA1E1W2	010195-005	3/4 NPT	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLA1D5W1	010195-022	3/4 NPT	4-20 mA		No	None	X		X
PIRECLA1E5W2	010195-023	3/4 NPT	4-20 mA		Yes	None		X	X
PIRECLA1D3W1	010195-010	3/4 NPT	4-20 mA		No	1/16 NPT w/hydro	X		X
PIRECLA1D3W2	010195-042	3/4 NPT	4-20 mA		No	1/16 NPT w/hydro		X	X
PIRECLA1E3W2	010195-038	3/4 NPT	4-20 mA		Yes	1/16 NPT w/hydro		X	X
PIRECLB1D3W1	010195-040	M25	4-20 mA		No	1/16 NPT w/hydro	X		X
PIRECLB1D3W2	010195-046	M25	4-20 mA		No	1/16 NPT w/hydro		X	X
PIRECLB1D1W1	010195-002	M25	4-20 mA		No	w/ hydrophobic	X		X
PIRECLB1D1W2	010195-045	M25	4-20 mA		No	w/ hydrophobic		X	X
PIRECLB1E1W2	010195-006	M25	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLB1D5W1	010195-024	M25	4-20 mA		No	None	X		X
PIRECLB1E5W2	010195-025	M25	4-20 mA		Yes	None		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-201**P**).
Add "E" for ethylene or "B" for butane.
**Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PointWatch Eclipse Models - EQP (FM/CSA/ATEX/CE/IECEx)

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection**	Ex d e	Ex d	FM/CSA/ ATEX/CE/ IECEx
PIRECLA4A3W1	007168-016	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	X		X
PIRECLA4A3W2	007168-044	3/4 NPT	EQP	X	No	1/16 NPT w/hydro		X	X
PIRECLA4A1W1	007168-012	3/4 NPT	EQP	X	No	w/ hydrophobic	X		X
PIRECLA4A1W2	007168-043	3/4 NPT	EQP	X	No	w/ hydrophobic		X	X
PIRECLA4A2W1	007168-014	3/4 NPT	EQP	X	No	no hydrophobic	X		X
PIRECLB4A3W1	007168-017	M25	EQP	X	No	1/16 NPT w/hydro	X		X
PIRECLB4A3W2	007168-048	M25	EQP	X	No	1/16 NPT w/hydro		X	X
PIRECLB4A1W1	007168-013	M25	EQP	X	No	w/ hydrophobic	X		X
PIRECLB4A1W2	007168-047	M25	EQP	X	No	w/ hydrophobic		X	X
PIRECLB4A2W1	007168-015	M25	EQP	X	No	no hydrophobic	X		X
PIRECLA4D3W1	010195-016	3/4 NPT	EQP		No	1/16 NPT w/hydro	X		X
PIRECLA4D3W2	010195-044	3/4 NPT	EQP		No	1/16 NPT w/hydro		X	X
PIRECLA4D1W1	010195-012	3/4 NPT	EQP		No	w/ hydrophobic	X		X
PIRECLA4D1W2	010195-043	3/4 NPT	EQP		No	w/ hydrophobic		X	X
PIRECLA4D2W1	010195-014	3/4 NPT	EQP		No	no hydrophobic	X		X
PIRECLB4D3W1	010195-017	M25	EQP		No	1/16 NPT w/hydro	X		X
PIRECLB4D3W2	010195-048	M25	EQP		No	1/16 NPT w/hydro		X	X
PIRECLB4D1W1	010195-013	M25	EQP		No	w/ hydrophobic	X		X
PIRECLB4D1W2	010195-047	M25	EQP		No	w/ hydrophobic		X	X
PIRECLB4D2W1	010195-015	M25	EQP		No	no hydrophobic	X		X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-201**P**).
Add "E" for ethylene or "B" for butane.
**Units with 1/16 NPT are 007529-XXX Duct Kit compatible

INFRARED

PointWatch Eclipse Models - INMETRO (Brazil) / SIL 2

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection	Ex d e	Ex d	SIL/ INMETRO (Brazil)
PIRECLA1A1BT2	007168-220	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA1B1BT2	007168-221	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA1D1BT2	010195-220	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-220**P**).
Add "E" for ethylene or "B" for butane.

PointWatch Eclipse Models - INMETRO (Brazil)

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection	Ex d e	Ex d	INMETRO (Brazil)
PIRECLA1A1B2	007168-020	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA1B1B2	007168-021	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA1D1B2	010195-020	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-220**P**).
Add "E" for ethylene or "B" for butane.

PointWatch Eclipse Models - EQP - INMETRO (Brazil) / SIL 2

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection	Ex d e	Ex d	SIL/ INMETRO (Brazil)
PIRECLA4A1BT2	007168-251	3/4 NPT	EQP	X	No	w/ hydrophobic		X	X
PIRECLA4D1BT2	010195-251	3/4 NPT	EQP		No	w/ hydrophobic		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-220**P**).
Add "E" for ethylene or "B" for butane.

PointWatch Eclipse Models - EQP - INMETRO (Brazil)

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection	Ex d e	Ex d	INMETRO (Brazil)
PIRECLA4A1B2	007168-051	3/4 NPT	EQP	X	No	w/ hydrophobic		X	X
PIRECLA4D1B2	010195-051	3/4 NPT	EQP		No	w/ hydrophobic		X	X
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-220**P**).
Add "E" for ethylene or "B" for butane.

PointWatch Eclipse Models - Russia

Model	Part Number*	Threads	Output	HART Port	Relays	Weather Protection**	Ex d e	Ex d	Approvals
PIRECLB1A1R1	007168-902	M25	4-20 mA	X	No	w/ hydrophobic	X		VNIIFTRI (RUSSIA)
PIRECLB1A1R2	007168-905	M25	4-20 mA	X	No	w/ hydrophobic		X	
PIRECLB1A2R1	007168-904	M25	4-20 mA	X	No	no hydrophobic	X		
PIRECLB1A2R2	007168-907	M25	4-20 mA	X	No	no hydrophobic		X	
PIRECLB1B1R2	007168-906	M25	4-20 mA	X	Yes	w/ hydrophobic		X	
PIRECLB1B2R2	007168-908	M25	4-20 mA	X	Yes	no hydrophobic		X	
PIRECLA4A3R1	007168-916	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	X		
PIRECLB4A1R2	007168-913	M25	EQP	X	No	w/ hydrophobic		X	
PIRECLB4A2R2	007168-915	M25	EQP	X	No	no hydrophobic		X	
Ship Weight: 11.5lb (5.2kg)									

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-902**P**). Add "E" for ethylene or "B" for butane.

**Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PointWatch Eclipse Models - China

Model	Part Number	Threads	Output	HART Port	Relays	Weather Protection*	Ex d e	Ex d	Approvals
PIRECLA1A1Y1	007168-101	3/4 NPT	4-20 mA	X	No	w/ hydrophobic	X		CCCF (CHINA)
PIRECLA1A2Y1	007168-103	3/4 NPT	4-20 mA	X	No	no hydrophobic	X		
PIRECLA1B1Y2	007168-105	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	
PIRECLA1B2Y2	007168-107	3/4 NPT	4-20 mA	X	Yes	no hydrophobic		X	
PIRECLA1A3Y1	007168-110	3/4 NPT	4-20 mA	X	No	1/16 NPT w/hydro	X		
PIRECLB1A1Y1	007168-102	M25	4-20 mA	X	No	w/ hydrophobic	X		
PIRECLB1A2Y1	007168-104	M25	4-20 mA	X	No	no hydrophobic	X		
PIRECLB1B1Y2	007168-106	M25	4-20 mA	X	Yes	w/ hydrophobic		X	
PIRECLA4A1Y1	007168-112	3/4 NPT	EQP	X	No	w/ hydrophobic	X		
PIRECLA4A2Y1	007168-114	3/4 NPT	EQP	X	No	no hydrophobic	X		
PIRECLA4A3Y1	007168-116	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	X		
PIRECLB4A1Y1	007168-113	M25	EQP	X	No	w/ hydrophobic	X		
PIRECLB4A2Y1	007168-115	M25	EQP	X	No	no hydrophobic	X		
PIRECLB4A3Y1	007168-117	M25	EQP	X	No	1/16 NPT w/hydro	X		
Ship Weight: 11.5lb (5.2kg)									

*Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PIRECL Accessories and Sample Draw

The **Model 475 HART Field Communicator** is available from Detector Electronics Corporation under agreement with Emerson Process Management. The intrinsically safe 475 Field Communicator enables connection to the PIRECL via the onboard optional HART port connection. Features include a full color LCD display, 4x battery life and half the start up time from previous releases.

The **Remote HART Port Kit and Remote HART cable kit** (Manual: 95-8553) are used with the Model PIRECL PointWatch Eclipse IR gas detector to provide access to the Eclipse's optional onboard, intrinsically-safe HART port for a distance up to 20 meters. Cable set is 20 meter long, 2-core, shielded 20 awg conductors with overall PVC-jacket, and is IEC332 approved.

The standard factory-installed **Weather Baffle** (Spec Sheet: 90-1155) for the PIRECL Eclipse comes with a 3/16" (4.8 mm) barb fitted inlet tube. A special replacement weather baffle is available with a 1/16" FNPT, internally-threaded calibration gas opening. It enables users to install a threaded compression fitting (not supplied) into the baffle for use with plastic or metal tubing, and is 007529-XXX Direct Duct compatible. Also available is a replacement weather baffle with an external, 7/16-20 threaded calibration gas opening, used within the PIRECL sample draw cup assembly p/n 007378-001.

The **Sample Draw Cup Assembly** (Spec Sheet: 90-1154) enables the Model PIRECL Eclipse to function within a gas sampling system. It consists of an outer cup assembly with stainless-steel, inlet/outlet compression fittings for 0.25 inch diameter tubing, a special inner baffle assembly with external-threaded extension, and silicon gaskets to ensure proper cup assembly seal is provided.

Miscellaneous PIRECL Accessories

475 HART Communicator

Part Number	Description	Ship Weight
103922-001*	475 HART Field Communicator	7.5 lb (3.4 kg)
103922-002*	475 HART & Foundation Fieldbus Field Communicator	7.5 lb (3.4 kg)

*Discount does not apply.

PIRECL Weather Baffles

Part Number	Description	Ship Weight
007165-001	Weatherbaffle with std inlet nozzle, w/o hydrophobic filter	<1 lb (<0.45 kg)
007165-002	Weatherbaffle with std inlet nozzle, w/hydrophobic filter (standard)	<1 lb (<0.45 kg)
007165-003	Weatherbaffle with 1/16" FNPT cal gas inlet, w/o hydrophobic filter	<1 lb (<0.45 kg)
007165-004	Weatherbaffle with 1/16" FNPT cal gas inlet, w/ hydrophobic filter	<1 lb (<0.45 kg)
007165-005	Weatherbaffle w/ 7/16-20 ext threads (use w/sample cup 007378-001)	<1 lb (<0.45 kg)

Remote HART Replicator Kits for use with PIRECL

Part Number	Description	Ship Weight
000118-010	Remote HART Port Kit, includes 20 meter prefab cable set	7.5 lb (3.4 kg)
000118-020*	Remote HART Cable Kit, includes 20 meter prefab cable set	7.5 lb (3.4 kg)

*Kit requires the use of a Communicator-to-Cable Connector (p/n 000118-021) for connection to the HART field communicator.

Spare Parts for HART Port Replicator Kit

Part Number	Description	Ship Weight
000118-011	Cordset, 20 meters intrinsically safe cable with prefab connectors	6 lb (2.7 kg)
000118-012	Stainless steel adapter for PIRECL HART connector	<1 lb (<0.45 kg)
000118-013	HART port connector box, IP67 rated, w/stainless connectors	<1 lb (<0.45 kg)
000118-016	SS Cap, Male	<1 lb (<0.45 kg)
000118-021*	Extension cordset, HART 475 to 000118-011	1 lb (0.45 kg)

*Qty 1 required per each 475 Communicator.

PIRECL Sample Draw Cup

Part Number	Description	Ship Weight
007378-001	Sample draw cup assembly for PIRECL (not included), 1/4" fitting	8 oz (0.23 kg)

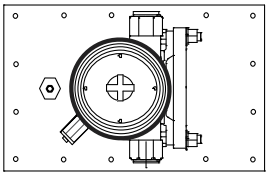
PIRECL Miscellaneous Parts

Part Number	Description	Ship Weight
006672-002	PIRECL windshield calibration bag	<1 lb (<0.45 kg)
009192-001	Cover, cal port tethered, clear*	<1 lb (<0.45 kg)
007145-001	Relay Board	<1 lb (<0.45 kg)
107427-040	O-ring, 3.75" I.D., j-box cover	<1 lb (<0.45 kg)
107427-052	O-ring, 2.43" I.D., weathershield	<1 lb (<0.45 kg)
107427-053	O-ring, 3.25" I.D., front flange (internal)	<1 lb (<0.45 kg)

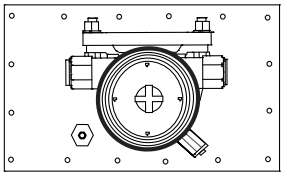
*Replaces discontinued calibration cap p/n's 102823-001 and 103035-001

Duct-Mounting Kits for PointWatch Eclipse Model PIRECL

The **Direct Duct Mount Assembly** (p/n 007525-XXX series) (Spec Sheet: 90-1151) is FM approved for use with PointWatch Eclipse model PIRECL to be installed directly within air handling ductwork. The assembly is mounted on the duct wall, with the PIRECL sensing chamber exposed directly to duct airflow, ensuring fast response to Methane. A built-in calibration gas nozzle with an external, self-sealing fitting enables testing and calibration without removal of the detector from the duct. Not recommended for applications where duct air temperatures can exceed 167 °F (75 °C). Price includes all necessary hardware for proper operation, but does not include the PointWatch Eclipse PIRECL gas detector. A factory pre-assembled Direct Duct Mount Kit is available (p/n 007529-XXX series) that provides a PIRECL detector prefit into the Direct Duct Mount kit assembly. Pricing for the 007529-XXX assembly includes the PIRECL gas detector. The Direct Duct Mount Assembly complies to the ANSI/ISA-12.13.01-2000 performance standards.



Vertical Mount



Horizontal Mount

The **Model Q900 Duct Mount Kit** (Spec Sheet: 90-1152) is FM approved for use with PointWatch Eclipse model PIRECL to detect combustible hydrocarbon gases within air handling ductwork. The Q900 is mounted to the exterior (top or side) of the duct wall and utilizes a duct inlet / return tube arrangement that provides cross-duct air sampling without the need for vacuum pumps or aspirators. The Duct Mount Kit is ideal for high temperature applications, and high temperature flexible teflon tubes are provided to enable easy access to optics for inspection purposes. Price includes all necessary hardware for proper operation, but does not include the PIRECL gas detector. One duct air inlet tube and one return tube are furnished with each Q900 kit. The Q900 Duct Mount Kit complies to the ANSI/ISA-12.13.01-2000 performance standards.

Direct Duct Mount Kits and Assemblies

Part Number	Description	Ship Weight
007525-003	Direct-Duct Mount Kit for PIRECL, 316 SS (**PIRECL not included***) - Vertical	1 lb (0.46 kg)
007525-004	Direct-Duct Mount Kit for PIRECL, AL (**PIRECL not included***) - Vertical	1 lb (0.46 kg)
007525-005	Direct-Duct Mount Kit for PIRECL, 316 SS (**PIRECL not included***) - Horizontal	1 lb (0.46 kg)
007525-006	Direct-Duct Mount Kit for PIRECL, AL (**PIRECL not included***) - Horizontal	1 lb (0.46 kg)
007529-001	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1A3W1 - Vertical	15 lb (6.8 kg)
007529-003	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA4A3W1 (EQP) - Vertical	15 lb (6.8 kg)
007529-006	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1B3W2 (relays) - Vertical	15 lb (6.8 kg)
007529-007	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1A3W1 - Horizontal	15 lb (6.8 kg)
007529-008	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA4A3W1 (EQP) - Horizontal	15 lb (6.8 kg)
007529-009	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB1A3W1 - Vertical	15 lb (6.8 kg)
007529-010	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1A3T1 - Vertical	15 lb (6.8 kg)
007529-011	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA4A3T1 (EQP) - Vertical	15 lb (6.8 kg)
007529-012	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB1A3T1 - Vertical	15 lb (6.8 kg)
007529-013	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB4A3T1 (EQP) - Vertical	15 lb (6.8 kg)
007529-014	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1A3T1 - Horizontal	15 lb (6.8 kg)
007529-015	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA4A3T1 (EQP) - Horizontal	15 lb (6.8 kg)
007529-016	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB1A3T1 - Horizontal	15 lb (6.8 kg)
007529-017	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB4A3T1 (EQP) - Horizontal	15 lb (6.8 kg)
007529-018	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA1D3T1 - Vertical	15 lb (6.8 kg)
007529-019	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB1D3T1 - Vertical	15 lb (6.8 kg)
007529-020	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLA4D3T1 (EQP) - Vertical	15 lb (6.8 kg)
007529-021	Direct-Duct Mount Assembly (SS) w/factory-fit PIRECLB4D3T1 (EQP) - Vertical	15 lb (6.8 kg)

*Use PIRECL with standard baffle.

Model Q900 Duct Mount Kit

Part Number	Description	Ship Weight
007355-001	**Q900A1001 Duct Mount Kit**, 316 SS (PIRECL not included) specify length of inlet tube at time of order (1, 3, 6, 10, or 13 ft.)	7 lb (3.2 kg)
009931-001	**Q900C1001 Duct Mount Kit for Marine applications**, 316 SS (PIRECL not included) specify length of inlet tube at time of order (1, 3, 6, 10, or 13 ft.)	27 lb (12.25 kg)
010283-001	Q900 Spare Sample Cup	1 lb (0.46 kg)

Model Q900 Sample Tubes

Part Number	Material	Ship Weight	Length
000214-281	316 SS	8 oz (0.23 kg)	1 ft
000214-282	316 SS	1 lb (0.45 kg)	3 ft
000214-283	316 SS	3 lb (1.35 kg)	6 ft
000214-284	316 SS	6 lb (2.4 kg)	10 ft
000214-285	316 SS	9 lb (4.0 kg)	13 ft
000214-280*	316 SS	8 oz (0.23 kg)	1 ft

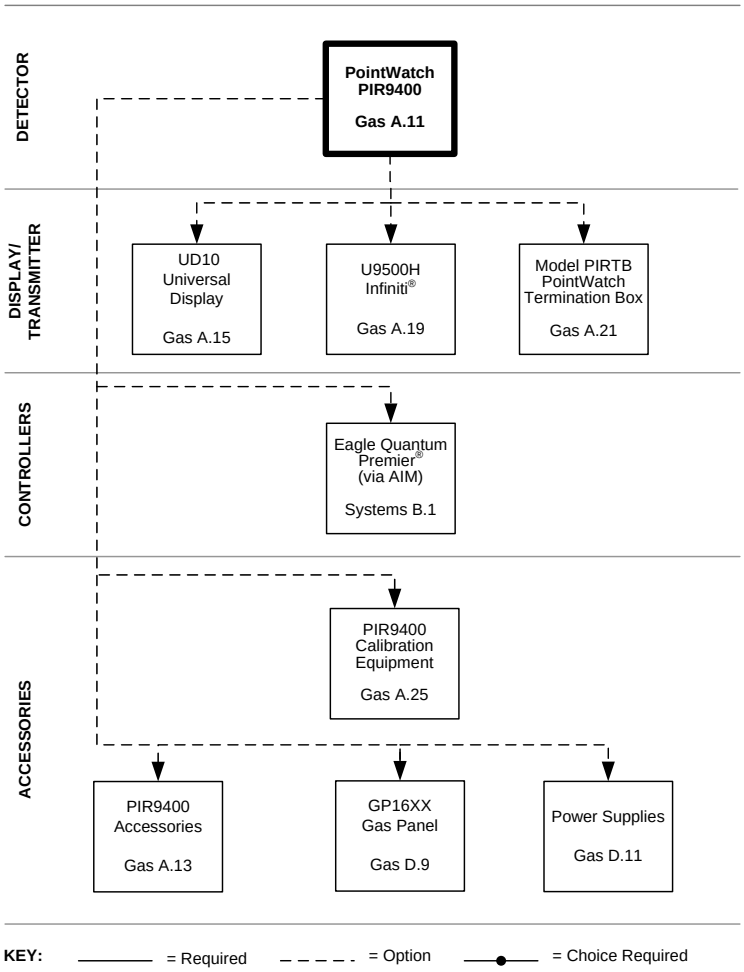
*Return tube.

PointWatch PIR9400 IR Hydrocarbon Gas Detector

PointWatch PIR9400 Infrared Hydrocarbon Detector (Spec Sheet: 90-1074). Approved for methane combustible gas. Provides reliable operation in high concentrations of background hydrocarbon gases and has low maintenance costs. It is immune to poisoning. Five year warranty.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to ATEX EN60079-29-1, FM 6310/6320, and CSA 22.2 #154
- Conforms to global life safety requirements for combustible gas when connected through:
  - FlexVu UD10, UD10/DCU
  - U9500 Infiniti Transmitter
  - EQ3710 Analog Input Module (AIM)
- 4-20 mA output
- Automatic Calibration function
- Heated optics
- 0% to 100% LFL detection range
- Non-intrusive calibration capability
- Stainless steel or aluminum housing option
- Aluminum or plastic baffle option
- Sample draw option
- Can be terminated with full digital interface on the FlexVu UD10

5 YEAR WARRANTY



PointWatch PIR9400 Model Matrix

MODEL	DESCRIPTION
PIR9400	PointWatch Gas Detector

TYPE	DETECTOR BODY MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	THREAD TYPE
2	Metric M20
3	3/4" NPT

TYPE	WEATHER BAFFLE MATERIAL
A	Aluminum
P	Polyphthalamide Plastic

TYPE	HYDROPHOBIC FILTER
1	Factory-Fitted Hydrophobic filter
2	No hydrophobic filter

TYPE	LEAD WIRE LENGTH
A	22 inch
B	44 inch

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
R	VNIIFTRI (RUSSIA)
B	INMETRO (BRAZIL)

PointWatch PIR9400 Models and Typical Proposals

PointWatch PIR9400 IR Gas Detectors

Model	Part Number	Thread	Wires Length	Body Matl	Baffle Type	Hydro Filter	Approvals	Ship Weight
PIR9400A3A1AW	006300-001	3/4 NPT	22"	AL	AL	yes	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400A2A1AW	006300-002	M20	22"	AL	AL	yes	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400S3P2AW	006300-003	3/4 NPT	22"	SS	Plastic	no	FM/CSA/ATEX/CE/IECEx	4 lb (1.8 kg)
PIR9400S2P2AW	006300-004	M20	22"	SS	Plastic	no	FM/CSA/ATEX/CE/IECEx	4 lb (1.8 kg)
PIR9400A3P2AW	006300-005	3/4 NPT	22"	AL	Plastic	no	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400A2P2AW	006300-006	M20	22"	AL	Plastic	no	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400A3A1AB	006300-007	3/4 NPT	22"	AL	AL	yes	INMETRO	2 lb (0.95 kg)
PIR9400S3P2AB	006300-009	3/4 NPT	22"	SS	Plastic	no	INMETRO	4 lb (1.8 kg)
PIR9400A2A2AW	006300-010	M20	22"	AL	AL	no	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400S2P1AW	006300-011	M20	22"	SS	Plastic	yes	FM/CSA/ATEX/CE/IECEx	4 lb (1.8 kg)
PIR9400S3P1AW	006300-012	3/4 NPT	22"	SS	Plastic	yes	FM/CSA/ATEX/CE/IECEx	4 lb (1.8 kg)
PIR9400A3A1BW	006300-014	3/4 NPT	44"	AL	AL	yes	FM/CSA/ATEX/CE/IECEx	2 lb (0.95 kg)
PIR9400A2A1AR	006300-902	M20	22"	AL	AL	yes	VNIIFTRI	2 lb (0.95 kg)
PIR9400S2P2AR	006300-904	M20	22"	SS	Plastic	no	VNIIFTRI	4 lb (1.8 kg)

Typical PIR9400 Customer Proposal

Qty	Part Number	Description
1	006300-001	Aluminum/Aluminum, 3/4 NPT, 22" leads, w/hydrophobic, worldwide approvals
1	010765-002	FlexVu UD10A5N25W2 Universal Display
1	226365-602	STB7A5NW, AL, 3/4 Sensor Termination Box
5	101197-001	Stop Plug, 3/4 NPT, AL

Alternative Proposal-Without Universal Display

Qty	Part Number	Description
1	006300-001	Aluminum/Aluminum, 3/4 NPT, 22" leads, w/hydrophobic, worldwide approvals
1	006414-020	Point Infrared Termination Box (PIRTB), Aluminum, Tall cover, 3/4 NPT, 5-ports

PointWatch PIR9400 Spare Parts & Accessories

The PIR9400 Sample Draw Cup (Manual 95-8486) provides a sealed metal enclosure enabling use of PointWatch PIR9400 within a gas sample extraction system (not included). Requires removal of standard baffle and some field assembly.
Not compatible with PointWatch Eclipse.

PointWatch Sample Draw Cup

Part Number	Compression Fitting	Material	Ship Weight
006629-002	X	AL	2.0 lb (0.95 kg)
006629-004	X	SS	4.7 lb (2.2 kg)

NOTE: PointWatch is not included.
Field assembly and additional sampling system hardware required

PIR9400 Miscellaneous Parts

Part Number	Description	Ship Weight
009170-001	PIR9400 Cover removal tool	8 oz (0.23 kg)
009192-001	Cover, cal port tethered, clear	8 oz (0.23 kg)
006672-001	PIR9400 Calibration windshield bag	8 oz (0.23 kg)
006876-001	Hydrophobic Screen Kit	8 oz (0.23 kg)
006743-001	Threaded Cal Tubing Adapter (PIR9400A only)	8 oz (0.23 kg)
006680-001	Silicone grease (for PIR9400 threads only)	8 oz (0.23 kg)
006873-002	Plastic weather baffle, (PIR9400S)	8 oz (0.23 kg)
006548-004	Outer weather baffle only (alum)	8 oz (0.23 kg)
006506-004	Slip ring, 316SS	8 oz (0.23 kg)
006506-005	Slip ring, 316SS, Direct Duct	8 oz (0.23 kg)
102740-002	Calibration magnet*	8 oz (0.23 kg)
162552-002	Regulator, 2.5 LPM flow	8 oz (0.23 kg)
SP006412-001	PIRTB replacement terminal board	2 oz (0.06 kg)

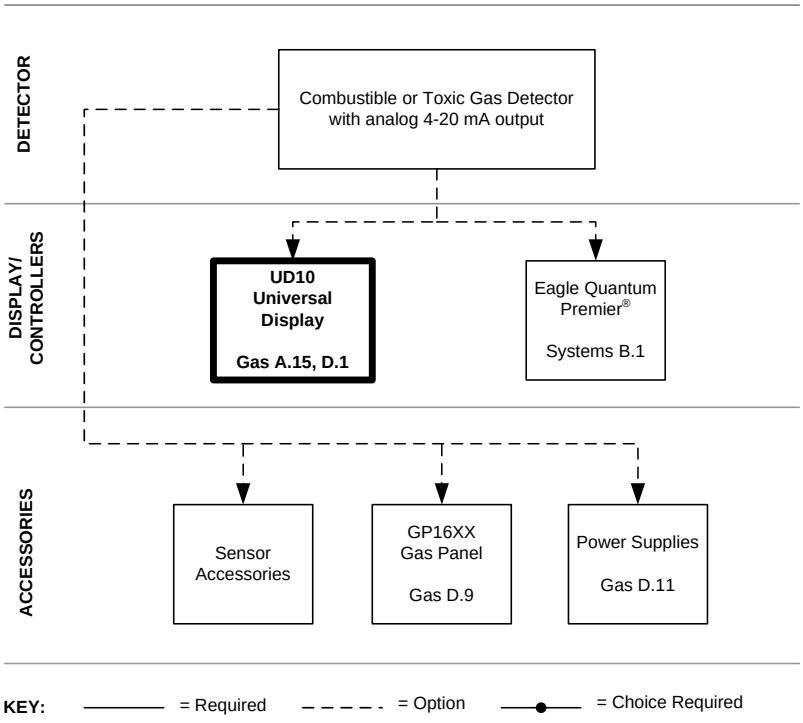
*Calibration magnet is provided on the order with a PIR9400/U9500

NOTES

FlexVu® UD10 Universal Display (for Infrared)

FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with Det-Tronics' infrared gas sensor/transmitters such as PIRECL, PIR9400, PIRDUCT, or OPECL. The display unit is designed and approved as a stand-alone controller when connected to a certified gas detector and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6310/6320, CSA 22.2 #152, ATEX EN60079-29-1
- IECEx, FM, CSA, ATEX, CE hazardous location certifications
- Eagle Quantum Premier compatible
- Universal design supports a variety of Det-Tronics sensors/detectors
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated and backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART
- IP66 rated



FlexVu UD10 Model Matrix

MODEL	DESCRIPTION
UD10	Universal Display Unit

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
5M	5 Port, Metric M25
5N	5 Port, 3/4" NPT

TYPE	OUTPUTS
25	Relay, 4-20mA, RS485, HART
28	EQP / DCU Emulator

TYPE	APPROVAL
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION (Div/Zone)
2	Ex d (Flameproof)

FlexVu UD10 Universal Display - Infrared

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD10A5M25W2	010765-001	AL	M25	X		X	4.2 lb (1.9 kg)
UD10A5N25W2	010765-002	AL	3/4 NPT	X		X	4.2 lb (1.9 kg)
UD10S5M25W2	010765-003	316 SS	M25	X		X	10.5 lb (4.8 kg)
UD10S5N25W2	010765-004	316 SS	3/4 NPT	X		X	10.5 lb (4.8 kg)
UD10A5M28W2	010765-005	AL	M25		X	X	4.2 lb (1.9 kg)
UD10A5N28W2	010765-006	AL	3/4 NPT		X	X	4.2 lb (1.9 kg)
UD10S5M28W2	010765-007	316 SS	M25		X	X	10.5 lb (4.8 kg)
UD10S5N28W2	010765-008	316 SS	3/4 NPT		X	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display - Infrared - Brazil

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	INMETRO (Brazil)	Ship Weight
UD10A5M25B2	010765-081	AL	M25	X		X	4.2 lb (1.9 kg)
UD10A5N25B2	010765-082	AL	3/4 NPT	X		X	4.2 lb (1.9 kg)
UD10S5M25B2	010765-083	316 SS	M25	X		X	10.5 lb (4.8 kg)
UD10S5N25B2	010765-084	316 SS	3/4 NPT	X		X	10.5 lb (4.8 kg)
UD10A5M28B2	010765-085	AL	M25		X	X	4.2 lb (1.9 kg)
UD10A5N28B2	010765-086	AL	3/4 NPT		X	X	4.2 lb (1.9 kg)
UD10S5M28B2	010765-087	316 SS	M25		X	X	10.5 lb (4.8 kg)
UD10S5N28B2	010765-088	316 SS	3/4 NPT		X	X	10.5 lb (4.8 kg)

INFRARED

FlexVu UD10 Universal Display - Infrared - Russia

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	VNIIFTRI (Russia)	Ship Weight
UD10A5M25R2	010765-901	AL	M25	X		X	4.2 lb (1.9 kg)
UD10A5N25R2	010765-902	AL	3/4 NPT	X		X	4.2 lb (1.9 kg)
UD10S5M25R2	010765-903	316 SS	M25	X		X	10.5 lb (4.8 kg)
UD10S5N25R2	010765-904	316 SS	3/4 NPT	X		X	10.5 lb (4.8 kg)
UD10A5M28R2	010765-905	AL	M25		X	X	4.2 lb (1.9 kg)
UD10A5N28R2	010765-906	AL	3/4 NPT		X	X	4.2 lb (1.9 kg)
UD10S5M28R2	010765-907	316 SS	M25		X	X	10.5 lb (4.8 kg)
UD10S5N28R2	010765-908	316 SS	3/4 NPT		X	X	10.5 lb (4.8 kg)

FlexVu UD10 Upgrade Kit - Infrared

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UPGRADE KIT UD10A5M25W2	010970-001	AL	M25	X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N25W2	010970-002	AL	3/4 NPT	X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M25W2	010970-003	316 SS	M25	X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N25W2	010970-004	316 SS	3/4 NPT	X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M28W2	010970-005	AL	M25		X	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N28W2	010970-006	AL	3/4 NPT		X	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M28W2	010970-007	316 SS	M25		X	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N28W2	010970-008	316 SS	3/4 NPT		X	X	8.7 lb (3.9 kg)

FlexVu UD10 Spare Modules

Part Number	Description	Output	Ship Weight
010569-001	UD10 Display Module	Relay/4-20mA	1 lb (0.45 kg)
010535-001	UD10 Display Module	EQP/DCU	1 lb (0.45 kg)

FlexVu UD10 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010268-001	Gas Inspector CD	<1 lb (0.45 kg)
010204-001	W6300G1003 Gas Inspector Connector (includes CD)	1 lb (0.45 kg)
102988-002	Plug, 5.0mm, 6 Position - P2	<1 lb (0.45 kg)
102988-026	Plug, 5.0mm, 3 Position - P1 (J10, CGS)	<1 lb (0.45 kg)
102988-028	Plug, 5.0mm, 5 Position - (J3, CGS)	<1 lb (0.45 kg)
103726-002	Plug, 3.5mm, 3 Position - J2	<1 lb (0.45 kg)
103726-004	Plug, 3.5mm, 5 Position - J3	<1 lb (0.45 kg)
103726-011	Plug, 3.5mm, 12 Position - J4	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

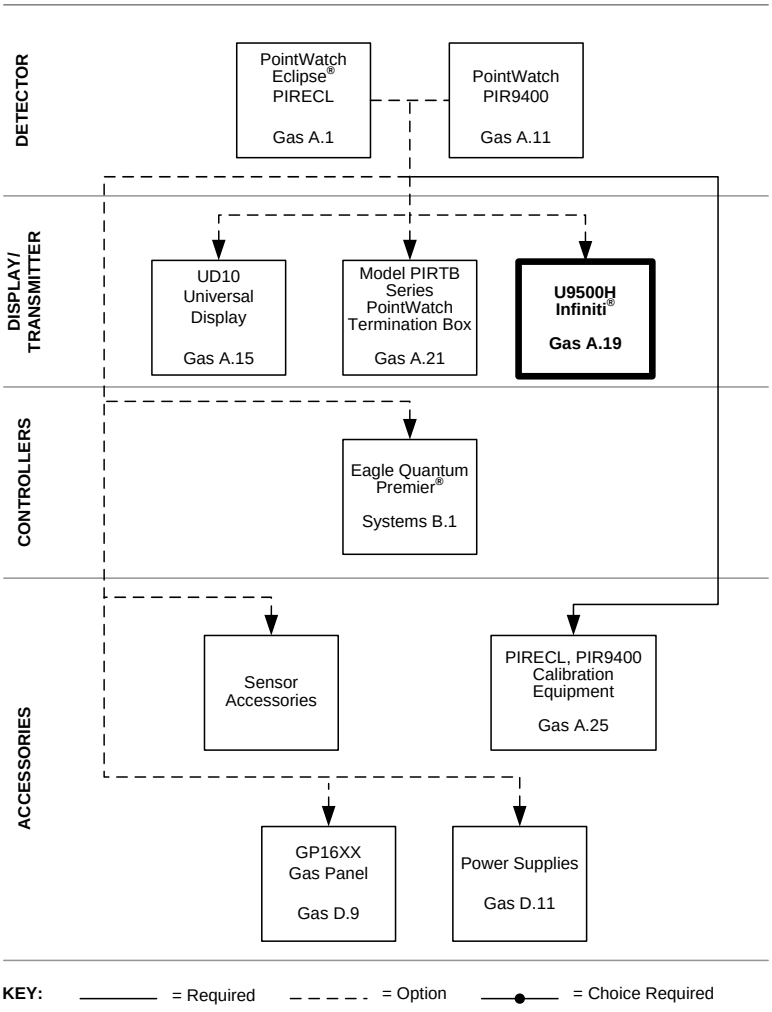
*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

U9500H Infiniti® HC–PointWatch Transmitter

U9500H Infiniti HC–PointWatch Transmitter (Spec Sheet: 90-1099). For use with a single Det-Tronics PointWatch Eclipse or PIR9400 Infrared Hydrocarbon gas detector. The U9500 is approved as a stand-alone combustible gas and low concentration toxic controller, when using the relay contacts.

- Performance certified to ATEX EN60079-29-1, FM 6310/6320, and CSA 22.2 #152
- Linear isolated 4-20 mA output
- Eight character LCD display
- Non-intrusive automatic calibration
- Easy pushbutton configuration
- Base version provides analog output only
- Optional relay package (three alarm, one fault)
- Extensive fault diagnostics
- Stainless steel or aluminum junction box options
- Optional reset/calibration pushbutton is pre-installed on some junction boxes (recommended where magnets are not preferred)



U9500 Infiniti Model Matrix

MODEL	DESCRIPTION		
U9500	Infiniti Gas Transmitter		
	TYPE	**GAS**	
	H60	IR Combustible	
		TYPE	**OUTPUT**
		01 or 02	4-20 mA
		04	Relay and 4-20 mA

U9500H Infiniti PIR9400 Transmitters (U9500 junction box must be ordered separately)

Model	Part Number	Relays	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	Ship Weight
U9500H6002	006265-003		X		1 lb (0.46 kg)
U9500H6004	006265-009	X	X		1 lb (0.46 kg)
U9500H6002-R	006265-903			X	1 lb (0.46 kg)
U9500H6004-R	006265-909	X		X	1 lb (0.46 kg)

Junction Boxes for U9500 Infiniti

Part Number	# of Ports	Thread	Material	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	Ship Weight
006264-029	5	3/4 NPT	AL	X		3.15 lb (1.43 kg)
006264-043	5	3/4 NPT	SS	X		9.5 lb (4.3 kg)
006264-044	5	M25	AL	X		3.15 lb (1.43 kg)
006264-045	5	M25	SS	X		9.5 lb (4.3 kg)
006264-944	5	M25	AL		X	3.15 lb (1.43 kg)
006264-945	5	M25	SS		X	9.5 lb (4.3 kg)
006264-034	5	3/4 NPT - PB*	AL	X		3.15 lb (1.43 kg)
006264-036	5	3/4 NPT - PB*	SS	X		9.5 lb (4.3 kg)

* Explosion-proof pushbutton occupies one of the available conduit entries.

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

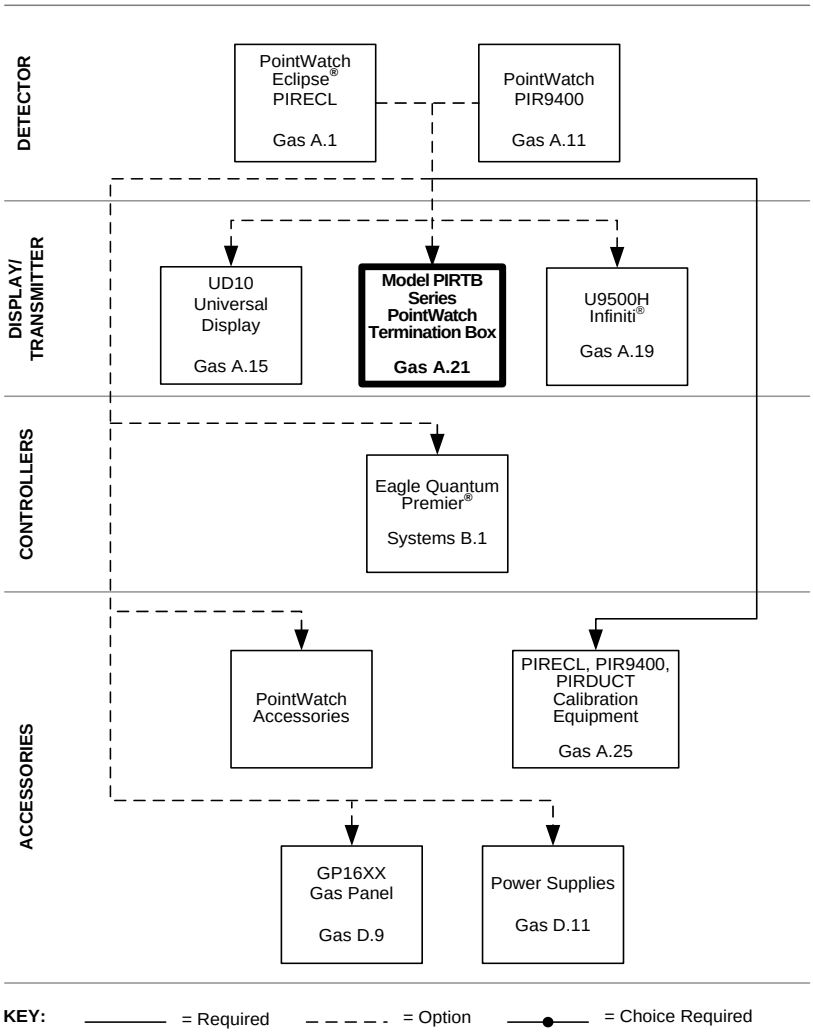
*NEMA 4/IP66 rating requires addition of Teflon tape.

Typical U9500H and PIR9400 Customer Proposal

Qty	Part Number	Description
1	006300-001	AL/AL, 3/4 NPT, 22" leads, w/hydrophobic, worldwide approvals
1	006265-009	Infiniti transmitter for use with PIR9400, with optional alarm relays
1	006264-029	Infiniti Junction box, Aluminum, 5-port, 3/4 NPT threads
2	101197-001	Stop plug, 3/4 NPT, AL

Model PIRTB PointWatch Termination Box

- Use for stand-alone PointWatch
- Required for remote separation from U9500H transmitter
- Use with PIRECL Eclipse or PIR9400 when remote calibration initiation is required
- Magnetic reed switch calibration and LED gives calibration feedback
- Tall cover boxes with window enable one person, non-intrusive calibration
- Short cover boxes without window require two people to accomplish non-intrusive calibration



PIRTB Junction Box Model Matrix (for use with PIRECL and PIR9400)

MODEL	DESCRIPTION
PIRTB	PointWatch Termination Box

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	# OF OPEN PORTS
5	5 Port

TYPE	THREAD TYPE
L	Metric M25
N	3/4" NPT

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx

TYPE	COVER TYPE
1	Short without window
3	Tall with window

TYPE	CABLE ENTRIES
V	Ports 2 thru 6 open

PIRTB Junction Box Model Matrix (for use with PIRECL and PIR9400)

Model	Part Number	Material	Conduit Entry	FM/CSA/ ATEX/CE/ IECEx	Cover	Ports	Ship Weight
PIRTBA5NW1V	006414-016	AL	3/4 NPT	X	Short	5	2 lb (0.95 kg)
PIRTBS5NW1V	006414-017	SS	3/4 NPT	X	Short	5	9 lb (4.1 kg)
PIRTBA5LW1V	006414-018	AL	M25	X	Short	5	2 lb (0.95 kg)
PIRTBS5LW1V	006414-019	SS	M25	X	Short	5	9 lb (4.1 kg)
PIRTBA5NW3V	006414-020	AL	3/4 NPT	X	Tall	5	2.2 lb (1kg)
PIRTBS5NW3V	006414-021	SS	3/4 NPT	X	Tall	5	9.5 lb (4.3 kg)
PIRTBA5LW3V	006414-022	AL	M25	X	Tall	5	2.2 lb (1kg)
PIRTBS5LW3V	006414-023	SS	M25	X	Tall	5	9.5 lb (4.3 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

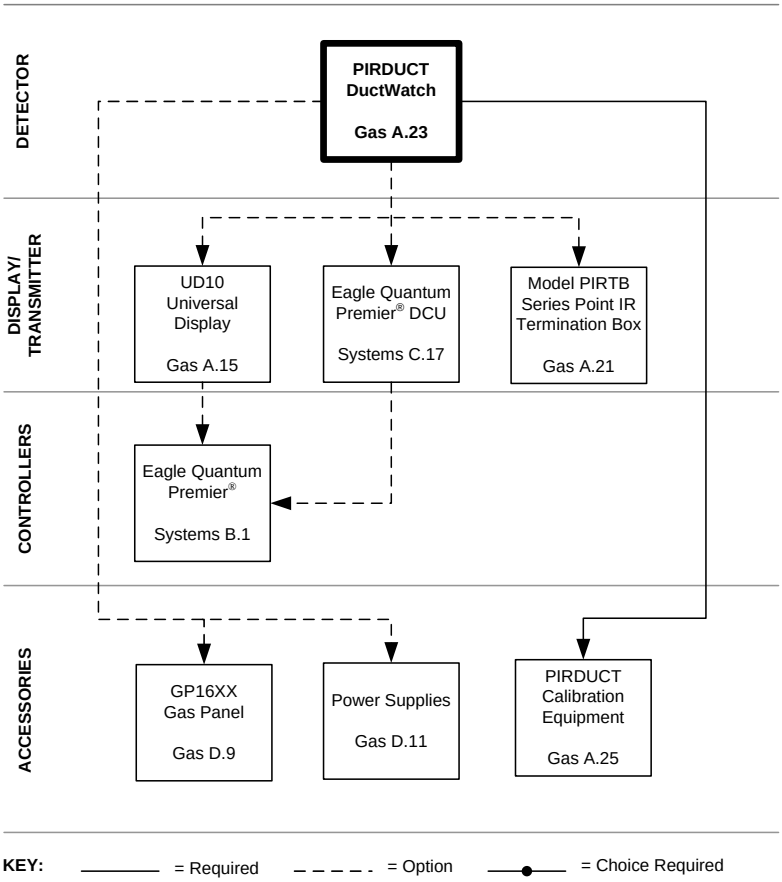
PIRDUCT IR Gas Monitor

The Model **PIRDUCT** DuctWatch (Spec Sheet: 90-1188) is an infrared (IR) based flammable gas detection/monitoring solution ideal for combustion turbine enclosure detection/monitoring and sample air handling ductwork applications. The DuctWatch is easy to install and commission, and does not require expensive extractive sampling system hardware. Providing a full scale measurement range of 0 to 15% LFL (7500 ppm) methane vapor concentration, the DuctWatch delivers a new level of flammable hydrocarbon gas protection for high airflow environments. PIRDUCT is compatible for mounting on any flat mounting surface, and is provided with a solid mounting plate with seal gasket to prevent air leakage. Minimum internal duct width of 3 feet (1 meter) is required for proper instrument clearance and installation. Air movement is required for proper device performance.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to ATEX EN60079-29, FM 6310/6320, and CSA 22.2.

PIRDUCT is available in the following configurations:

- Factory-fit with an aluminum 5-port Det-Tronics PIRTB wiring termination box
- Factory-fit with a Det-Tronics aluminum 2-port Eagle Quantum Premier DCU
- No junction box provided on type “5” models
- Fully compatible with FlexVu UD10 (sold separately), for display readout and calibration capabilities



PIRDUCT Model Matrix

MODEL	DESCRIPTION
PIRDUCT	Point Infrared DuctWatch Gas Monitor

TYPE	THREAD TYPE
A	3/4” NPT
B	M25

TYPE	SIGNAL OUTPUT
2	4-20 mA with Hydrophobic filter

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx

TYPE	WIRING TERMINATION JUNCTION BOX
1	Factory-fit with PIRTBA5NW3V (std 4-20 mA), AL, 3/4”NPT cable entry
2	Factory-fit with PIRTBA5LW3V (std 4-20 mA), AL, M25 cable entry
3	Factory-fit with EQ2253DCU (EQP sys only), AL, 3/4”NPT cable entry
4	Factory-fit with EQ2207DCU (EQP sys only), AL, M25 cable entry
5	No factory-fit wiring j-box provided

PIRDUCT Models

Model	Part Number	Output	w/Hydro Filter	Wiring Enclosure	Entry thread type	# of ports	Approvals	Ship Weight
PIRDUCTB2W2	008945-007	4-20 mA	X	PIRTBA5LW3V	M25	5	FM/CSA/ ATEX/CE/ IECEx	7.5 lb (3.4 kg)
PIRDUCTA2W1	008945-008	4-20 mA	X	PIRTBA5NW3V	3/4 NPT	5		7.5 lb (3.4 kg)
PIRDUCTB2W4	008945-009	EQP only	X	EQ2207DCU	M25	5		7.5 lb (3.4 kg)
PIRDUCTA2W3	008945-010	EQP only	X	EQ2253DCU	3/4 NPT	5		7.5 lb (3.4 kg)
PIRDUCTA2W5	008945-011	4-20 mA	X	none	3/4 NPT	na		7.5 lb (3.4 kg)
PIRDUCTB2W5	008945-012	4-20 mA	X	none	M25	na		7.5 lb (3.4 kg)

PIRDUCT Miscellaneous Accessories

Part Number	Description	Ship Weight
006468-007	7.5% LFL methane gas calibration kit	11.5 lb (5.2 kg)
226166-012	7.5% LFL methane cylinder	1.5 lb (0.7 kg)
006876-002	Hydrophobic Filter Replacement Kit (2 filters)	<1.0 lb (< 0.45 kg)

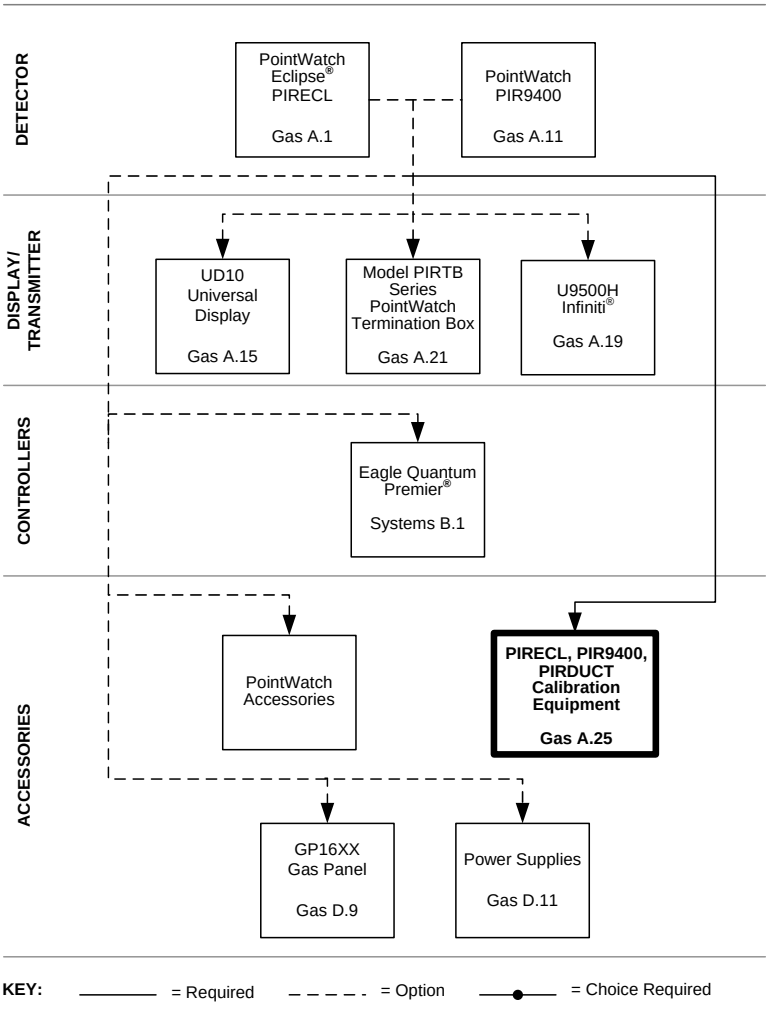
PIRECL, PIR9400, and PIRDUCT Certified Calibration Kits

PointWatch PIR9400, PointWatch Eclipse and PIRDUCT Certified Calibration Kits are high accuracy compressed gas calibration kits provided for field calibration of all PointWatch IR detectors. Each kit includes:

- Two 3.6 ft^3 (103 liters) cylinders of specified gas
- A 2.5 liter/minute regulator and pressure indicator
- 3-foot tube
- Sturdy plastic carrying case

The Windshield Calibration Bag enables calibration to be performed in abnormally high wind conditions. The bag is slipped over the gas detector and secured with a Velcro sealing strap. Gas is applied to the detector through a gas inlet nozzle on the end of the bag.

NOTE: PointWatch PIR9400, and PointWatch Eclipse each require their own unique calibration bag model (not included in Calibration Kit).



PIRECL and PIR9400 Calibration Kits

Part Number	Gas	%LFL	% Vol	Standard	Balance	Ship Weight
006468-006	Butane	50%	0.95	ISO	Air	11.5 lb (5.23 kg)
006468-002	Ethane	50%	1.5	ISO	Air	11.5 lb (5.23 kg)
006468-003	Ethylene	50%	1.35	ISO	Air	11.5 lb (5.23 kg)
006468-007**	Methane	7.5%	0.375	ISO	Air	11.5 lb (5.23 kg)
006468-014	Methane	50%	2.2	IEC	Air	11.5 lb (5.23 kg)
006468-914*	Methane	50%	2.2	IEC	Air	11.5 lb (5.23 kg)
006468-001	Methane	50%	2.5	ISO	Air	11.5 lb (5.23 kg)
006468-906*	Methane	50%	2.5	ISO	Air	11.5 lb (5.23 kg)
006468-015	Propane	50%	0.85	IEC	Air	11.5 lb (5.23 kg)
006468-915*	Propane	50%	0.85	IEC	Air	11.5 lb (5.23 kg)
006468-004	Propane	50%	1.1	ISO	Air	11.5 lb (5.23 kg)
006468-005	Propylene	50%	1	ISO	Air	11.5 lb (5.23 kg)
006468-016	Empty kit - no cal gas					8.5 lb (3.9 kg)

*These items are certified for Russian projects

**PIRDUCT

NOTE: Average lead time is 2-3 weeks

Calibration Kit Replacement Cylinders

Part Number	Gas	%LFL	% Vol	Standard	Balance	Ship Weight
226166-006	Zero Air	N/A	20.9 Oxygen	N/A	Nitrogen	1.5 lb (0.7 kg)
226166-011	Butane	50%	0.95	ISO	Air	1.5 lb (0.7 kg)
226166-002	Ethane	50%	1.5	ISO	Air	1.5 lb (0.7 kg)
226166-902*	Ethane	50%	1.5	ISO	Air	1.5 lb (0.7 kg)
226166-003	Ethylene	50%	1.35	ISO	Air	1.5 lb (0.7 kg)
226166-005	Hydrogen	50%	2.0	ISO	Air	1.5 lb (0.7 kg)
226166-012**	Methane	7.5%	0.38	ISO	Air	1.5 lb (0.7 kg)
226166-007	Methane	20%	1.0	ISO	Air	1.5 lb (0.7 kg)
226166-008	Methane	25%	1.25	ISO	Air	1.5 lb (0.7 kg)
226166-009	Methane	35%	1.75	ISO	Air	1.5 lb (0.7 kg)
226166-014	Methane	50%	2.2	IEC	Air	1.5 lb (0.7 kg)
226166-914*	Methane	50%	2.2	IEC	Air	1.5 lb (0.7 kg)
226166-001	Methane	50%	2.5	ISO	Air	1.5 lb (0.7 kg)
226166-901*	Methane	50%	2.5	ISO	Air	1.5 lb (0.7 kg)
226166-015	Propane	50%	0.85	IEC	Air	1.5 lb (0.7 kg)
226166-915*	Propane	50%	0.85	IEC	Air	1.5 lb (0.7 kg)
226166-004	Propane	50%	1.1	ISO	Air	1.5 lb (0.7 kg)
226166-010	Propylene	50%	1.0	ISO	Air	1.5 lb (0.7 kg)

*These items are certified for Russian projects

**PIRDUCT

Cylinders have an accuracy of +/- 2% with a cylinder size of 6D

NOTE: Average lead time is 2-3 weeks

PIRECL and PIR9400 Calibration Kit Replacement Parts

Part Number	Description	Ship Weight
162552-002	Regulator, 2.5 LPM	8 oz (0.23 kg)
162553-001	Replacement carrying case	8 oz (0.23 kg)
101678-007	3 Foot tubing	8 oz (0.23 kg)

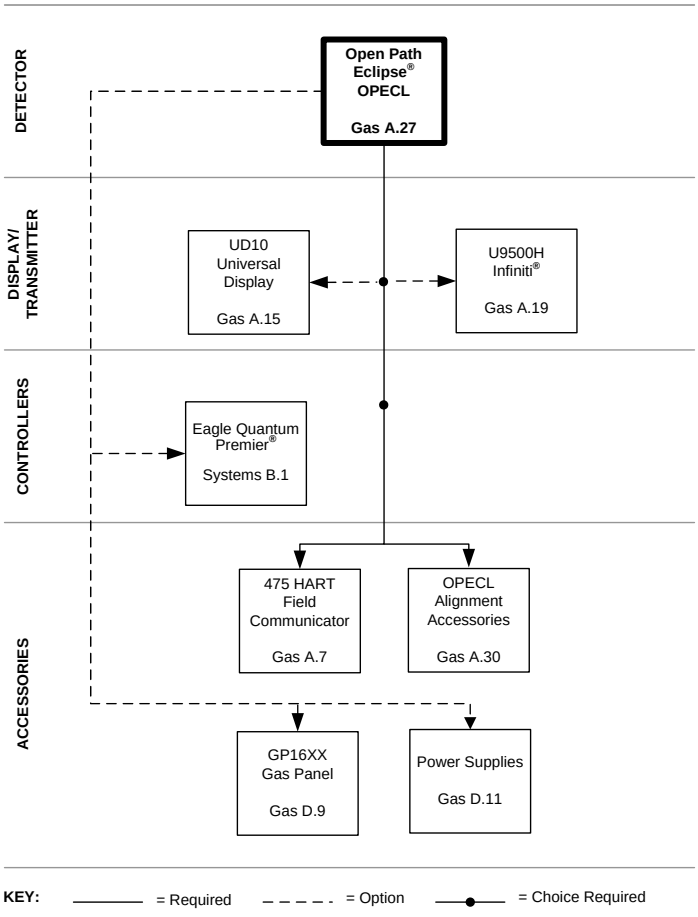
PIR Calibration Bags

Part Number	Description	Ship Weight
006672-002	PIRECL Windshield calibration bag	8 oz (0.23 kg)
006672-001	PIR9400 Windshield calibration bag	8 oz (0.23 kg)

Open Path Eclipse OPECL Infrared Gas Detection System

The **Open Path Eclipse Infrared Gas Detection System** (Spec Sheet: 90-1159) is a stainless steel, IR beam-type hydrocarbon gas detection system. The system consists of two modules (transmitter and receiver) offering:

- Meets life safety global standards when used with the FlexVu UD10, UD10/DCU or EQP Controller
- Compliance to ISA-12.13.04 performance standard
- Performance certified to EN60079-29-4
- **Models available with SIL 2 certification**
- Module separation distance range from 5-120 meters (optical aperture kit supplied with system is required for 5-30 meters)
- Dual xenon flashlamp technology for maximum performance in harsh environments
- Standard 4-20 mA output, HART communications (on receiver), RS485 Modbus
- Optional alarm relays (Ex d only)
- Tri-color LEDs are provided on both modules for visual indication of operating status.
- Mounting hardware and pan-tilt brackets included with both modules
- Built-in locking adjusters deliver fine control of alignment angles
- Telescope alignment tool for accurate alignment
- **Models available with Marine type approvals from DNV and BV**
- Modular design for ease of maintenance
- Eagle Quantum Premier System-compatible version available
- Optional 475 field communicator unit for communication, diagnostic, and set up from point to point



Open Path Eclipse Model Matrix

MODEL	DESCRIPTION
OPECL	Open-Path Eclipse Infrared Gas Detector

TYPE	MATERIAL
S	Stainless Steel

TYPE	CONDUIT ENTRY THREAD TYPE
2M	2 Port, Metric M25
2N	2 Port, 3/4" NPT

TYPE	OUTPUT
00	None (Transmitter Only)
14	Eagle Quantum Premier (EQP) (Receiver or Kit)
18	4-20 mA, RS485, HART (Receiver or Kit)
25	4-20 mA, RS485, HART w/Optional Relay Board (Receiver or Kit) - Ex d only

TYPE	APPROVALS
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

TYPE	CONFIGURATION
S	Transmitter/Receiver/Mounting Hardware
T	Transmitter Module Only
R	Receiver Module Only

OPECL - Complete Open Path Eclipse Systems - SIL 2

Model	Part Number	Threads	Relay Output	Ex de	Ex d	FM/CSA/ ATEX/CE/ IECEx*	SIL 2
OPECLS2N18T1S	011744-250	3/4 NPT		X		X	X
OPECLS2N18T2S	011744-256	3/4 NPT			X	X	X
OPECLS2M18T1S	011744-251	M25		X		X	X
OPECLS2M18T2S	011744-257	M25			X	X	X
OPECLS2N25T2S	011744-252	3/4 NPT	X		X	X	X
OPECLS2M25T2S	011744-253	M25	X		X	X	X
Ship Weight = 75 lb (34 kg)							

*Includes DNV Marine Type Approval

NOTE: All complete kits have a range of 5-120 meters and include a transmitter, reciever, and Mtg Hardware

OPECL - Complete Open Path Eclipse Systems

Model	Part Number	Threads	EQP	Relay Output	Ex de	Ex d	FM/CSA/ ATEX/CE/ IECEx*	VNIIFTRI (Russia)	INMETRO (Brazil)**
OPECLS2N18W1S	011744-050	3/4 NPT			X		X		
OPECLS2N18W2S	011744-056	3/4 NPT				X	X		
OPECLS2M18W1S	011744-051	M25			X		X		
OPECLS2M18W2S	011744-057	M25				X	X		
OPECLS2N25W2S	011744-052	3/4 NPT		X		X	X		
OPECLS2M25W2S	011744-053	M25		X		X	X		
OPECLS2N14W1S	011744-054	3/4 NPT	X		X		X		
OPECLS2N14W2S	011744-058	3/4 NPT	X			X	X		
OPECLS2M14W1S	011744-055	M25	X		X		X		
OPECLS2M14W2S	011744-059	M25	X			X	X		
OPECLS2M18R1S	011744-951	M25			X			X	
OPECLS2M18R2S	011744-957	M25				X		X	
OPECLS2M25R2S	011744-953	M25		X		X		X	
OPECLS2M14R1S	011744-955	M25	X		X			X	
OPECLS2M14R2S	011744-959	M25	X			X		X	
OPECLS2N25B2S	011744-152	3/4 NPT		X		X			X
OPECLS2N18B2S	011744-156	3/4 NPT				X			X
OPECLS2N14B2S	011744-158	3/4 NPT	X			X			X
Ship Weight = 75 lb (34 kg)									

*Includes DNV Marine Type Approval

** Includes BV Marine Type Approval

NOTE: All complete kits have a range of 5-120 meters and include a transmitter, reciever, and Mtg Hardware

INFRARED

OPECL Transmitter Replacement

Model	Part Number	Threads	Ex de	Ex d	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	INMETRO (Brazil)	SIL 2
OPECLS2N00T1T	011392-252	3/4 NPT	X		X			X
OPECLS2M00T1T	011392-253	M25	X		X			X
OPECLS2N00T2T	011392-256	3/4 NPT		X	X			X
OPECLS2M00T2T	011392-257	M25		X	X			X
OPECLS2N00W1T	011392-052	3/4 NPT	X		X			
OPECLS2M00W1T	011392-053	M25	X		X			
OPECLS2N00W2T	011392-056	3/4 NPT		X	X			
OPECLS2M00W2T	011392-057	M25		X	X			
OPECLS2M00R1T	007914-953	M25	X			X		
OPECLS2M00R2T	007914-957	M25		X		X		
OPECLS2N00B2T	011392-156	3/4 NPT		X			X	
Ship Weight = 30 lb (14 kg)								

*Spare transmitters do not include mounting hardware.

OPECL Receiver Replacement

Model	Part Number	Threads	EQP	Relay Output	Ex de	Ex d	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	INMETRO (Brazil)	SIL 2
OPECLS2N18T1R	011393-254	3/4 NPT			X		X			X
OPECLS2N18T2R	011393-272	3/4 NPT				X	X			X
OPECLS2M18T1R	011393-255	M25			X		X			X
OPECLS2M18T2R	011393-273	M25				X	X			X
OPECLS2N25T2R	011393-256	3/4 NPT		X		X	X			X
OPECLS2M25T2R	011393-257	M25		X		X	X			X
OPECLS2N18W1R	011393-054	3/4 NPT			X		X			
OPECLS2N18W2R	011393-072	3/4 NPT				X	X			
OPECLS2M18W1R	011393-055	M25			X		X			
OPECLS2M18W2R	011393-073	M25				X	X			
OPECLS2N25W2R	011393-056	3/4 NPT		X		X	X			
OPECLS2M25W2R	011393-057	M25		X		X	X			
OPECLS2N14W1R	011393-064	3/4 NPT	X		X		X			
OPECLS2N14W2R	011393-068	3/4 NPT	X			X	X			
OPECLS2M14W1R	011393-065	M25	X		X		X			
OPECLS2M14W2R	011393-069	M25	X			X	X			
OPECLS2M18R1R	007915-955	M25			X			X		
OPECLS2M18R2R	007915-973	M25				X		X		
OPECLS2M25R2R	007915-957	M25		X		X		X		
OPECLS2M14R1R	007915-965	M25	X		X			X		
OPECLS2M14R2R	007915-969	M25	X			X		X		
OPECLS2N25B2R	011393-156	3/4 NPT		X		X			X	
OPECLS2N14B2R	011393-168	3/4 NPT	X			X			X	
OPECLS2N18B2R	011393-172	3/4 NPT				X			X	
Shipping Weight = 30 lb (14 kg)										

*Spare receivers do not include mounting hardware.

OPECL Spare Modules

Part Number	Description
011405-201	Spare electronics/lamp module for OPECL transmitter, SIL
011405-001	Spare electronics/lamp module for OPECL transmitter
008925-902	Spare electronics/lamp module for OPECL transmitter, Russia
011406-201	Spare electronics module for OPECL receiver, Relay 4-20, SIL
011406-001	Spare electronics module for OPECL receiver, Relay 4-20
011406-002	Spare electronics module for OPECL receiver, LON
008926-902	Spare electronics module for OPECL receiver, Relay 4-20, Russia
008926-903	Spare electronics module for OPECL receiver, LON, Russia

OPECL Accessories

The **Model 475 HART Field Communicator** is available from Detector Electronics Corporation under agreement with Emerson Process Management. The intrinsically safe 475 Field Communicator enables connection to the OPECL receiver via the onboard HART port connection. Features include a full color LCD display, 4x battery life and half the start up time from previous releases.

The **Remote HART Port Kit and Remote HART cable kit** (Manual: 95-8553) are used with the Model OPECL Open Path Eclipse IR gas detector to provide access to the onboard, intrinsically-safe HART port for a distance up to 20 meters. Cable set is 20 meter long, 2-core, shielded 20 awg conductors with overall PVC-jacket, and is IEC332 approved.

475 HART Communicator

Part Number	Description	Ship Weight
103922-001*	475 HART Field Communicator	7.5 lb (3.4 kg)
103922-002*	475 HART & Foundation Fieldbus Field Communicator	7.5 lb (3.4 kg)

*Discount does not apply.

Remote HART Replicator Kits for use with OPECL

Part Number	Description	Ship Weight
000118-010	Remote HART Port Kit, includes 20 meter prefab cable set	7.5 lb (3.4 kg)
000118-020*	Remote HART Cable Kit, includes 20 meter prefab cable set	7.5 lb (3.4 kg)

*Kit requires the use of a Communicator-to-Cable Connector (p/n 000118-021) for connection to the HART field communicator.

Spare Parts for HART Port Replicator Kit

Part Number	Description	Ship Weight
000118-011	Cordset, 20 meters intrinsically safe cable with prefab connectors	6 lb (2.7 kg)
000118-012	Stainless steel adapter for HART connector	<1 lb (<0.45 kg)
000118-013	HART port connector box, IP67 rated, w/stainless connectors	<1 lb (<0.45 kg)
000118-016	SS Cap, Male	<1 lb (<0.45 kg)
000118-021*	Extension cordset, HART 475 to 000118-011	1 lb (0.45 kg)

*Qty 1 required per each 475 Communicator.

OPECL Miscellaneous Accessories

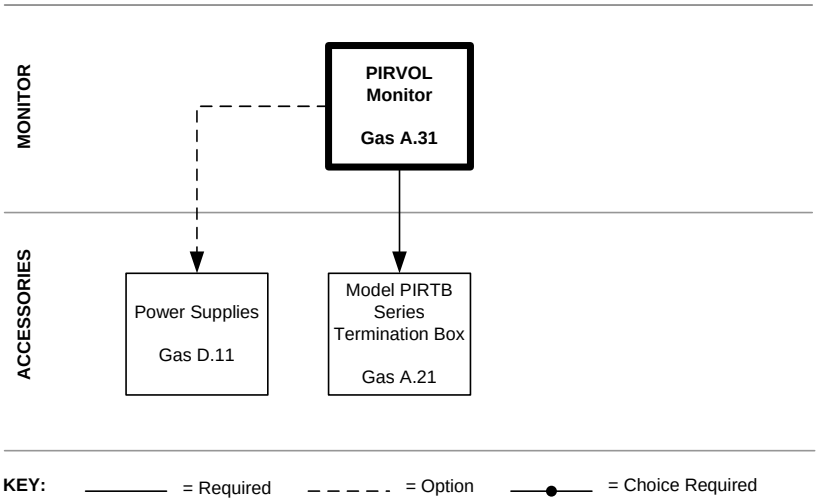
Part Number	Description
007902-002	System Test Film, 0.5-1.1 LFL-meter signal output
007902-003	System Test Film, 1.5-2.1 LFL-meter signal output
009761-001	Thermal Shield for one module (two required per complete OPECL system)
008987-001	Aperture Kit, OPECL, SS
009296-001	Aperture Kit, OPECL, Plastic
009104-001	OPECL Alignment Telescope
009186-001	Spare Pan-Tilt Mounting Kit (for one OPECL module only)
009246-001	Low Range OPECL Gas Test Cell
009246-002	High Range OPECL Gas Test Cell
009762-002	50% Beam Block Tool
103578-001	Antisieze Lubricant Packet

NOTE: OPECL alignment requires the use of the FlexVu model UD10 or HART handheld communicator

PIRVOL Infrared Hydrocarbon Gas Process Monitor

PIRVOL Infrared Hydrocarbon Gas Process Monitor (Spec Sheet: 90-1137) is a point-type, hazardous location rated infrared gas process monitor designed for use in extractive vapor sampling applications. All PIRVOL models provide a continuous 4-20 milliampere signal output that is proportional to a 0-90% for VR and 0-100% for LT and HV, by volume hydrocarbon vapor concentration. Each unit is provided with a sealed, aluminum vapor sampling enclosure fitted with brass compression tubing fittings (0.25 inch o.d. tubing) that are used to attach vapor sample stream inlet and exhaust lines. The PIRVOL-LT model is optimized for natural gas well-logging applications where accurate measurement of light hydrocarbon vapors such as methane and ethane is desired. The PIRVOL-VR model is optimized for gasoline vapor recovery applications where an accurate measurement of heavy hydrocarbon gases is required. The PIRVOL-HV model is optimized for natural gas well-logging applications where accurate measurement of heavy hydrocarbon vapors such as propane is desired.

NOTE: External vapor sampling conditioning and control equipment is generally required for proper operation of the PIRVOL gas monitors.



PIRVOL Model Matrix

MODEL	DESCRIPTION
PIRVOL	Point Infrared Volumetric Gas Process Monitor

TYPE	Application
LT	Light Hydrocarbon
HV	Heavy Hydrocarbon
VR	Vapor Recovery

TYPE	Material
A	Aluminum
S	Stainless Steel

TYPE	Thread Type
2	M20
3	3/4" NPT

TYPE	Sampling Cup
A	with Sampling Cup
B	without Sampling Cup (for replacement only)

TYPE	APPROVALS
C	CSA
E	ATEX/CE

PIRVOL Model Listings

PIRVOL Light Hydrocarbon Measurement Models (0-100%)

Model	Part Number	Description	Shipping Weight
PIRVOLLTA3AC	009884-001	AL, 3/4" NPT, with cup	2.0 lb (0.95 kg)
PIRVOLLTA2AC	009884-003	AL, 20 mm, with cup	2.0 lb (0.95 kg)
PIRVOLLTS3AC	009884-002	SS, 3/4" NPT, with cup	4.0 lb (2.0 kg)
PIRVOLLTS2AC	009884-004	SS, 20 mm, with cup	4.0 lb (2.0 kg)

PIRVOL Heavy Hydrocarbon Measurement Models (0-100%)

Model	Part Number	Description	Shipping Weight
PIRVOLHVA3AC	009885-001	AL, 3/4" NPT, with cup	2.0 lb (0.95 kg)
PIRVOLHVA2AC	009885-003	AL, 20 mm, with cup	2.0 lb (0.95 kg)
PIRVOLHVS3AC	009885-002	SS, 3/4" NPT, with cup	4.0 lb (2.0 kg)
PIRVOLHVS2AC	009885-004	SS, 20 mm, with cup	4.0 lb (2.0 kg)

PIRVOL Vapor Recovery Application Models (0-90%)

Model	Part Number	Description	Shipping Weight
PIRVOLVRA3AC	007129-001	AL, 3/4" NPT, with cup	2.0 lb (0.95 kg)
PIRVOLVRA2AC	007129-003	AL, 20 mm, with cup	2.0 lb (0.95 kg)
PIRVOLVRS3AC	007129-002	SS, 3/4" NPT, with cup	4.0 lb (2.0 kg)
PIRVOLVRS2AC	007129-004	SS, 20 mm, with cup	4.0 lb (2.0 kg)

PIRVOL Cover and Module Assemblies Only–No cup included

Model	Part Number	Description	Shipping Weight
PIRVOLLTA3BC	009884-005	AL, 3/4" NPT, without sampling cup	2.0 lb (0.95 kg)
PIRVOLLTA2BC	009884-007	AL, 20 mm, without sampling cup	2.0 lb (0.95 kg)
PIRVOLLTS3BC	009884-006	SS, 3/4" NPT, without sampling cup	4.0 lb (2.0 kg)
PIRVOLLTS2BC	009884-008	SS, 20 mm, without sampling cup	4.0 lb (2.0 kg)
PIRVOLHVA3BC	009885-005	AL, 3/4" NPT, without sampling cup	2.0 lb (0.95 kg)
PIRVOLHVA2BC	009885-007	AL, 20 mm, without sampling cup	2.0 lb (0.95 kg)
PIRVOLHVS3BC	009885-006	SS, 3/4" NPT, without sampling cup	4.0 lb (2.0 kg)
PIRVOLHVS2BC	009885-008	SS, 20 mm, without sampling cup	4.0 lb (2.0 kg)
PIRVOLVRA3BC	007129-005	AL, 3/4" NPT, without sampling cup	2.0 lb (0.95 kg)
PIRVOLVRA2BC	007129-007	AL, 20 mm, without sampling cup	2.0 lb (0.95 kg)
PIRVOLVRS3BC	007129-006	SS, 3/4" NPT, without sampling cup	4.0 lb (2.0 kg)
PIRVOLVRS2BC	007129-008	SS, 20 mm, without sampling cup	4.0 lb (2.0 kg)

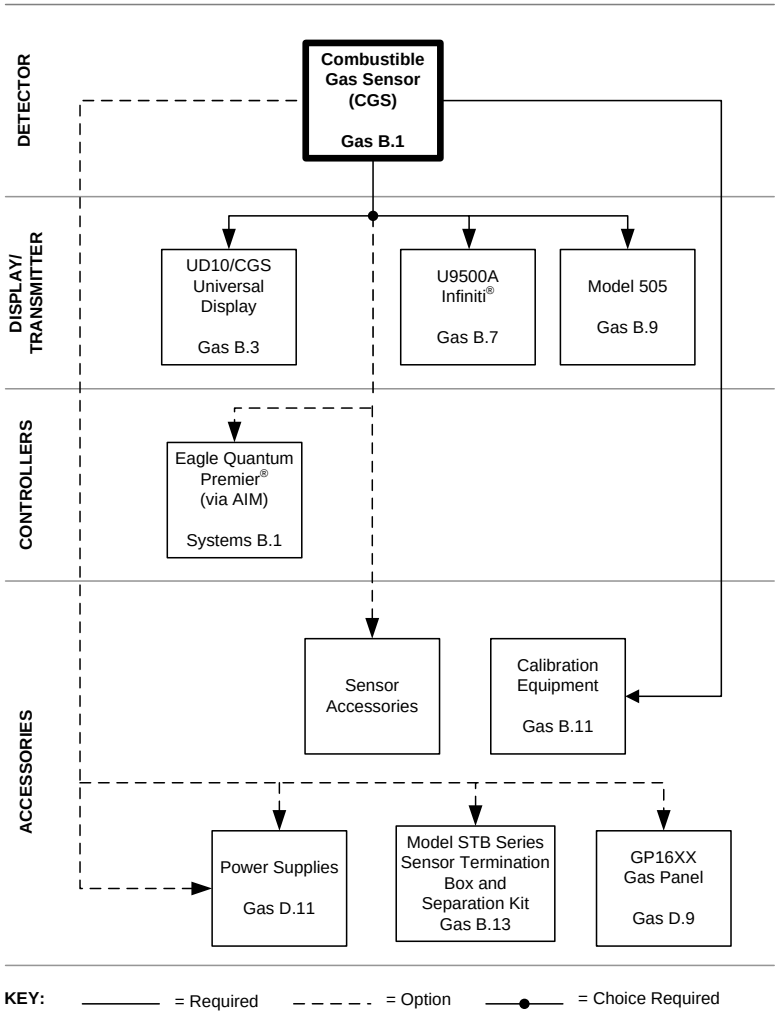
PIRVOL Spare Parts

Part Number	Description	Shipping Weight
007128-001	Aluminum sample draw cup with O-rings and fittings	1.0 lb (0.45 kg)
007128-003	Stainless Steel sample draw cup with O-rings and fittings	2.0 lb (0.95 kg)
007128-002	O-ring kit (2 ea. O-rings)	<1.0 lb (<0.45 kg)
006680-001	Silicon Grease	<1.0 lb (<0.45 kg)
006297-003	Hydrophobic screen for PIRVOL	<1.0 lb (<0.45 kg)

Combustible Gas Sensor (CGS)

Combustible Gas Sensor (CGS) (Spec Sheet: 90-1041). Stainless steel catalytic sensor that provides an accurate measurement of combustible gas concentration in the % LFL range. Requires FlexVu UD10, Model 505, U9500A or DCUEX transmitter.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6310/6320, CSA 22.2 #154, and ATEX EN60079-29-1
- Performance certified to IEC60079-29-1 when connected to the FlexVu UD10, UD10/DCU
- Constant current or constant voltage options available
- Poison resistant construction
- 3/4" NPT or 20 mm thread option
- Wire lead options of 6" or 30"
- Sensor Separation Termination Box (STB) option available
- Variety of special accessories available
- FlexVu UD10 universal display provides full digital readout, calibration and user interface
- Performance approved from –40°C to 75°C for life safety applications
- Hazardous Location approved from –55°C to 125°C for process control applications



Combustible Gas Sensor for Models 505, 500, and K-Series Transmitters

Model	Part Number	Replaces old catalytic sensor p/n	Threads	Lead Length	FM/CSA/ ATEX/CE	Russian
CGSS1A6V2R1X	006824-002	225006-002, 225957-001, 226530-001, 226531-001, 226931-001, 226931-002, 226999-002, 226999-004, 223106-002	3/4 NPT	6 in	X	
CGSS1A3V2R1X	006824-006	225006-005, 226530-004, 226531-002, 226931-003, 226931-004	3/4 NPT	30 in	X	
CGSS1C3V2R1X	006824-008		20 mm	30 in	X	
CGSS1C6V2R1X	006824-004	226999-010, 226999-013, 226999-018, 226999-019	20 mm	6 in	X	
CGSS1C6V2R1R	006824-904		20 mm	6 in		X
Shipping Weight = 1 lb. (0.45 kg)						

NOTES: CGS sensors always require a transmitter (sold separately).
Constant voltage

Combustible Gas Sensor for UD10, DCUEX, U9500A, U8700, 400, 405, 810, 820, and 880 Transmitters

Model	Part Number	Replaces old catalytic sensor p/n	Threads	Lead Length	FM/CSA/ ATEX/CE	Russian	Brazil
CGSS1A6C2R1X	006824-001	225006-004, 225957-002, 226530-003, 226531-003, 226931-005, 226931-006, 226999-011, 226999-012	3/4 NPT	6 in	X		
CGSS1A6C2R1B	006824-101		3/4 NPT	6 in			X
CGSS1A3C2R1X	006824-005	225006-003, 226530-005, 226531-004, 226931-007, 226931-008	3/4 NPT	30 in	X		
CGSS1C3C2R1X	006824-007	225006-003, 226530-005, 226531-004, 226931-007, 226931-008	20 mm	30 in	X		
CGSS1C6C2R1X	006824-003	226999-008, 226999-020, 226999-014, 226999-021	20 mm	6 in	X		
CGSS1C6C2R1R	006824-903		20 mm	6 in		X	
Shipping Weight = 1 lb. (0.45 kg)							

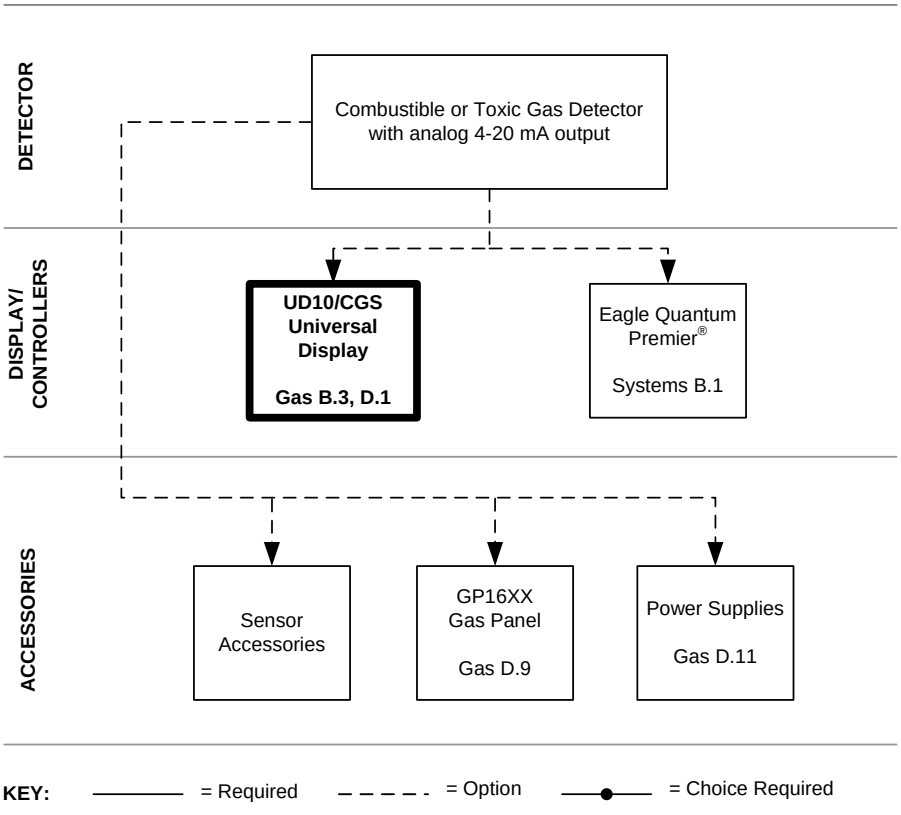
NOTES: CGS sensors always require a transmitter (sold separately).
Constant current

NOTES

FlexVu® UD10 Universal Display (for Catalytic)

FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with Det-Tronics' catalytic gas sensor/transmitters such as Model 505 or CGS. The display unit is designed and approved as a stand-alone device and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6310/6320, CSA 22.2 #152, ATEX EN60079-29-1, and IEC60079-29-1
- Certified as a stand-alone combustible gas controller/detector when used with the CGS sensor.
- IECEx, FM, CSA, ATEX, CE hazardous location certifications
- Eagle Quantum Premier compatible models available
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated and backlit LCD display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART
- IP66 rated



FlexVu UD10 Model Matrix - CGS

MODEL	DESCRIPTION
UD10	Universal Display Unit

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
5M	5 Port, Metric M25
5N	5 Port, 3/4" NPT

TYPE	OUTPUTS
25	Relay, 4-20mA, RS485, HART
28	EQP / DCU Emulator

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION (Div/Zone)
2	Ex d (Flameproof)

TYPE	OPTIONAL CONDITIONING BOARD
C	CGS

FlexVu UD10 Universal Display - CGS

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD10A5M25W2C	010254-001	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25W2C	010254-002	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25W2C	010254-003	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25W2C	010254-004	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28W2C	010254-005	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28W2C	010254-006	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28W2C	010254-007	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28W2C	010254-008	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display - CGS - Brazil

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	INMETRO (Brazil)	Ship Weight
UD10A5M25B2C	010254-081	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25B2C	010254-082	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25B2C	010254-083	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25B2C	010254-084	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28B2C	010254-085	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28B2C	010254-086	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28B2C	010254-087	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28B2C	010254-088	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

CATALYTIC

FlexVu UD10 Universal Display - CGS - Russia

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	VNIIFTRI (Russia)	Ship Weight
UD10A5M25R2C	010254-901	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25R2C	010254-902	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25R2C	010254-903	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25R2C	010254-904	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28R2C	010254-905	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28R2C	010254-906	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28R2C	010254-907	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28R2C	010254-908	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display Upgrade Kit - CGS

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UPGRADE KIT UD10A5M25W2C	010971-001	AL	M25	X		CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N25W2C	010971-002	AL	3/4 NPT	X		CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M25W2C	010971-003	316 SS	M25	X		CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N25W2C	010971-004	316 SS	3/4 NPT	X		CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M28W2C	010971-005	AL	M25		X	CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N28W2C	010971-006	AL	3/4 NPT		X	CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M28W2C	010971-007	316 SS	M25		X	CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N28W2C	010971-008	316 SS	3/4 NPT		X	CGS	X	8.7 lb (3.9 kg)

FlexVu UD10 Spare Modules

Part Number	Description	Output	Ship Weight
010569-001	UD10 Display Module	Relay/4-20mA	1 lb (0.45 kg)
010535-001	UD10 Display Module	EQP/DCU	1 lb (0.45 kg)

FlexVu UD10 Miscellaneous Spare Parts

Part Number	Description	Ship Weight
010973-001	UD10/CGS REPLACEMENT BOARD	<1 lb (<0.45 kg)

FlexVu UD10 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010268-001	Gas Inspector CD	<1 lb (0.45 kg)
010204-001	W6300G1003 Gas Inspector Connector (includes CD)	1 lb (0.45 kg)
102988-002	Plug, 5.0mm, 6 Position - P2	<1 lb (0.45 kg)
102988-026	Plug, 5.0mm, 3 Position - P1 (J10, CGS)	<1 lb (0.45 kg)
102988-028	Plug, 5.0mm, 5 Position - (J3, CGS)	<1 lb (0.45 kg)
103726-002	Plug, 3.5mm, 3 Position - J2	<1 lb (0.45 kg)
103726-004	Plug, 3.5mm, 5 Position - J3	<1 lb (0.45 kg)
103726-011	Plug, 3.5mm, 12 Position - J4	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

Typical UD10/CGS Customer Proposal

Qty	Part Number	Description
1	006824-001	Catalytic Combustible Gas Sensor (CGS), 3/4" NPT, CC
1	010254-002	UD10A5N25W2C Universal Display, AL, 3/4" NPT
2	101197-001	Stop plug, 3/4 NPT, AL

Option

Qty	Part Number	Description
1	226365-131	STB1A2NW Sensor Separation Termination Box

Accessories

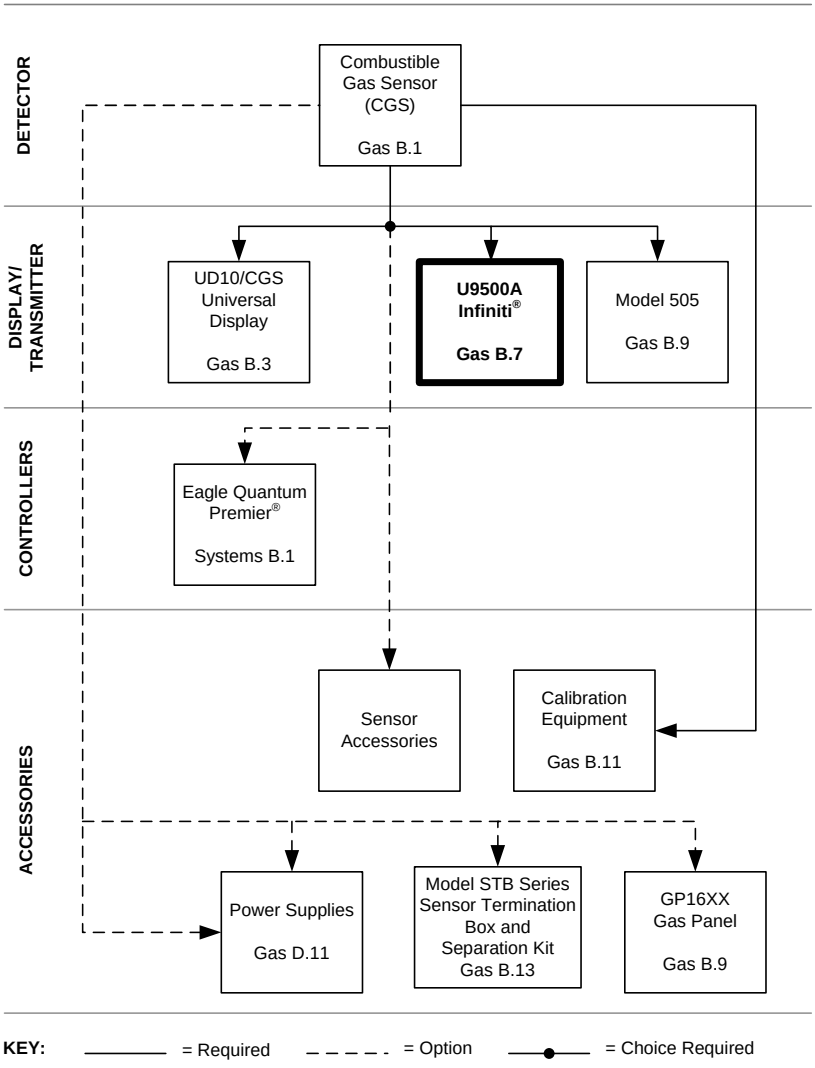
Qty	Part Number	Description
1	225130-001	Methane Gas Calibration Kit, 50% LFL methane
1	226166-001	Spare 103 L gas cylinder, 50% LFL methane

NOTES

U9500A Infiniti® Combustible Transmitters (sensor and junction box ordered separately)

U9500A Infiniti Combustible Transmitters (Manual: 95-8444). For use with CGS, the Infiniti provides an analog signal output and onboard readout of detected gas level. A number of optional features are also available. The U9500 is certified as a stand-alone gas controller for combustible and low concentration gas when used with the CGS. It performs the life safety functions when the CGS is connected, according to the standards.

- Certified as a stand-alone combustible gas controller/detector when used with the CGS sensor.
- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6310/6320, CSA 22.2 #154 and ATEX EN60079-29-1
- Linear isolated 4-20 mA output
- Eight character LCD display
- Non-intrusive automatic calibration
- Sensor sensitivity check
- Base version provides analog output only
- Optional relay package (three alarm, one fault)
- Extensive fault diagnostics
- Sensor separation capability
- Optional reset/calibration pushbutton is pre-installed on some junction boxes (recommended where magnets are not preferred)



U9500 Infiniti Model Matrix

MODEL	DESCRIPTION	
U9500	Infiniti Gas Transmitter	
	TYPE	GAS
	A10	Catalytic Combustible
	TYPE	OUTPUT
	01 or 02	4-20 mA
	04	Relay and 4-20 mA

U9500A Infiniti Combustible Gas Transmitters (U9500 junction box must be ordered separately)

Model	Part Number	Relays	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	Ship Weight
U9500A1001	006265-001		X		1 lb (0.46 kg)
U9500A1004	006265-007	X	X		1 lb (0.46 kg)
U9500A1001-R	006265-901			X	1 lb (0.46 kg)
U9500A1004-R	006265-907	X		X	1 lb (0.46 kg)

Junction Boxes for U9500 Infiniti

Part Number	# of Ports	Thread	Material	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	Ship Weight
006264-029	5	3/4 NPT	AL	X		3.15 lb (1.43 kg)
006264-043	5	3/4 NPT	SS	X		9.5 lb (4.3 kg)
006264-044	5	M25	AL	X		3.15 lb (1.43 kg)
006264-045	5	M25	SS	X		9.5 lb (4.3 kg)
006264-944	5	M25	AL		X	3.15 lb (1.43 kg)
006264-945	5	M25	SS		X	9.5 lb (4.3 kg)
006264-034	5	3/4 NPT - PB*	AL	X		3.15 lb (1.43 kg)
006264-036	5	3/4 NPT - PB*	SS	X		9.5 lb (4.3 kg)

* Explosion-proof pushbutton occupies one of the available conduit entries.

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

Typical U9500A Customer Proposal

Qty	Part Number	Description
1	006824-001	Catalytic Combustible Gas Sensor (CGS), 3/4" NPT, CC
1	006265-007	Infiniti transmitter for CGS w/ optional alarm relay outputs
1	006264-029	Infiniti Junction box, Aluminum, 5-port, 3/4 NPT threads
2	101197-001	Stop plug, 3/4 NPT, AL

Option

Qty	Part Number	Description
1	226365-132	STB2A2NW Sensor Separation Termination Box

Accessories

Qty	Part Number	Description
1	225130-001	Methane Gas Calibration Kit, 50% LFL methane
1	226166-001	Spare 103 L gas cylinder, 50% LFL methane

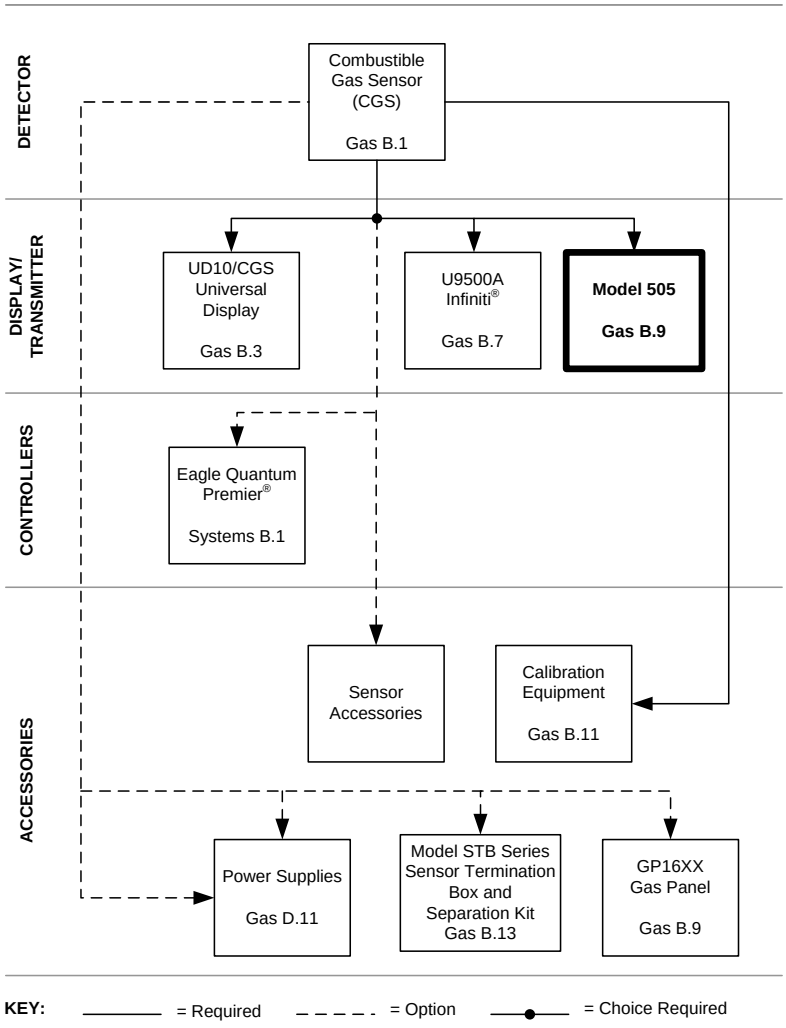
Model 505 Combustible Transmitter (includes junction box, sensor ordered separately)

Model 505 Combustible Transmitter (Spec Sheet: 90-1114). Designed for use with CGS sensor, the 505 provides an analog signal output representing detected gas concentration. The 505 is always used with a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standards when connected to a stand-alone gas controller
- Performance certified to ATEX EN60079-29
- 4-20 mA output
- Sensor sensitivity check function
- One person calibration
- Includes a variety of j-box options

Model 505 Retrofit Kits are available to upgrade an existing K-Series or Model 500 transmitter to the Model 505 transmitter using existing junction boxes and field wiring. The kit consists of:

- A transmitter board
- A label with calibration instructions for the junction box cover
- Instruction manual
- Junction box not included.



Model 505 Model Matrix

MODEL	DESCRIPTION
505	Catalytic Combustible Gas Transmitter

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	CONDUIT ENTRIES AND ORIENTATION
2	2-ports, ST-straight-through configuration (180 degree orientation)
3	2-ports, L-configuration (90 degree orientation)
4	3-ports, T-configuration
5	5-ports

TYPE	THREAD TYPE
A	3/4" NPT
C	Metric M20/M25

TYPE	OUTPUT
2	4-20 mA

TYPE	SIGNAL LOOP IMPEDANCE
A	0-125 ohms (replaces K series)
B	100-500 ohms (replaces Model 500)

TYPE	CLASSIFICATION
1	Explosion-proof

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)

Model 505 Combustible Transmitter and Junction Box

Model	Part Number	Replaces	Material	Conduit Entry*	Ports**	Ohm Output	FM/CSA/ ATEX/CE/ IECEx	INMETRO (Brazil)
505A2A2A1W	006748-001	226585-001, 226555-113	AL	3/4 NPT	2 (ST)	125	X	
505A3A2A1W	006748-002	226585-001, 226555-101	AL	3/4 NPT	2 (L)	125	X	
505A2A2A1B	006748-201		AL	3/4 NPT	2 (ST)	125		X
505A3A2A1B	006748-202		AL	3/4 NPT	2 (L)	125		X
505A2C2A1W	006748-003		AL	M20	2 (ST)	125	X	
505A3C2A1W	006748-004	226585-001, 226555-107	AL	M20/M25	2 (L)	125	X	
505A2A2B1W	006748-005	226673-001, 226555-113	AL	3/4 NPT	2 (ST)	500	X	
505A3A2B1W	006748-006	226673-001, 226555-101	AL	3/4 NPT	2 (L)	500	X	
505A2C2B1W	006748-007		AL	M20	2 (ST)	500	X	
505A3C2B1W	006748-008	226673-001, 226555-107	AL	M20/M25	2 (L)	500	X	
505S3A2A1W	006748-009	226585-001, 226555-111	SS	3/4 NPT	2 (L)	125	X	
505S3C2A1W	006748-010	226585-001, 226555-112	SS	M20	2 (L)	125	X	
505S3A2B1W	006748-011	226673-001, 226555-111	SS	3/4 NPT	2 (L)	500	X	
505S3C2B1W	006748-012	226673-001, 226555-112	SS	M20	2 (L)	500	X	
505A4A2A1W	006748-013		AL	3/4 NPT	3 (T)	125	X	
505A4C2A1W	006748-014		AL	M20	3 (T)	125	X	
Ship Weight: Aluminum = 3.8 lb (1.7 kg) Stainless Steel = 8.7 lb (4 kg)								

* If 2 numbers are listed, the first number is sensor entry, and second number is for field cable entry(ies)

** "L" designates 90 degree conduit entry orientation. "ST" designates straight-thru or 180 degree orientation.

Model 505 Spare Parts

Part Number	Description	Output Load	Ship Weight
006817-001	505 pc board	125 ohms	8 oz (0.23 kg)
006817-002	505 pc board	500 ohms	8 oz (0.23 kg)
102883-001	505 Sensor Wiring Terminal Block	n/a	8 oz (0.23 kg)

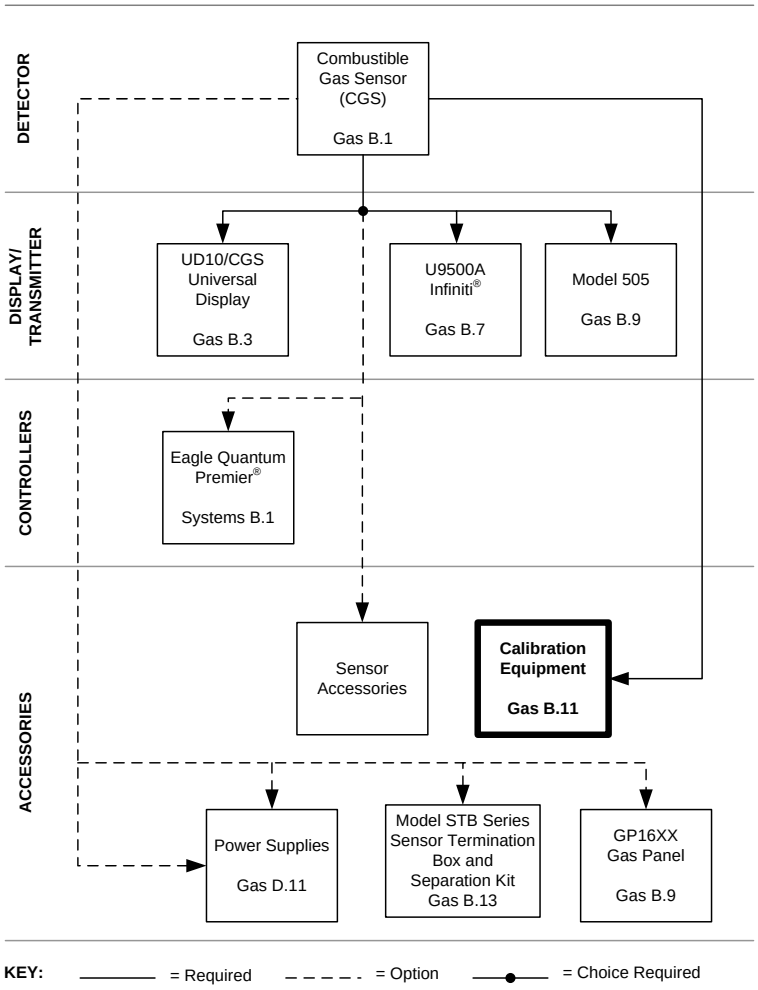
Model 505 Retrofit Kits

Part Number	For Use With	Ship Weight
006818-001	K series-125 ohms	8 oz (0.23 kg)
006818-002	500 model-500 ohms	8 oz (0.23 kg)

Combustible Gas Certified Calibration Kits

Combustible Gas Certified Calibration Kits (Spec Sheet: 90-1059) for combustible gas sensors. Kits include sturdy plastic carrying case containing:

- Two 3.6 ft^3 (103 liters) cylinders of specified compressed gas
- Regulator/shutoff valve with gauge, 3-foot tubing and stainless steel CGS calibration cup
- Regulator provides fixed flow rate of 1 liter per minute designed for CGS sensors
- 3-foot tube
- Sturdy plastic carrying case



Combustible Gas Certified Calibration Kits Model Listing and Accessories

Calibration Kits for Catalytic Sensor

Part Number	Gas	LFL	% Vol	Standard	Balance	Ship Weight
225130-002	Ethane	50%	1.5	ISO	Air	11.5 lb (5.23 kg)
225130-902*	Ethane	50%	1.5	ISO	Air	11.5 lb (5.23 kg)
225130-003	Ethylene	50%	1.35	ISO	Air	11.5 lb (5.23 kg)
225130-005	Hydrogen	50%	2.0	ISO	Air	11.5 lb (5.23 kg)
225130-006	Methane	20%	1.0	ISO	Air	11.5 lb (5.23 kg)
225130-007	Methane	25%	1.25	ISO	Air	11.5 lb (5.23 kg)
225130-008	Methane	35%	1.75	ISO	Air	11.5 lb (5.23 kg)
225130-014	Methane	50%	2.2	IEC	Air	11.5 lb (5.23 kg)
225130-914*	Methane	50%	2.2	IEC	Air	11.5 lb (5.23 kg)
225130-001	Methane	50%	2.5	ISO	Air	11.5 lb (5.23 kg)
225130-901*	Methane	50%	2.5	ISO	Air	11.5 lb (5.23 kg)
225130-015	Propane	50%	0.85	IEC	Air	11.5 lb (5.23 kg)
225130-915*	Propane	50%	0.85	IEC	Air	11.5 lb (5.23 kg)
225130-004	Propane	50%	1.1	ISO	Air	11.5 lb (5.23 kg)
225130-009	Empty kit–no cal gas					10 lb (4.6 kg)

*These items are certified for Russian projects.

NOTE: Average lead time is 2-3 weeks

Replacement Gas Cylinders for all Combustible Gas Calibration Kits

Part Number	Gas	%LFL	% Vol	Standard	Balance	Ship Weight
226166-006	Zero Air	N/A	20.9	N/A	Nitrogen	1.5 lb (0.7 kg)
226166-002	Ethane	50%	1.5	ISO	Air	1.5 lb (0.7 kg)
226166-902*	Ethane	50%	1.5	ISO	Air	1.5 lb (0.7 kg)
226166-003	Ethylene	50%	1.35	ISO	Air	1.5 lb (0.7 kg)
226166-005	Hydrogen	50%	2.0	ISO	Air	1.5 lb (0.7 kg)
226166-007	Methane	20%	1.0	ISO	Air	1.5 lb (0.7 kg)
226166-008	Methane	25%	1.25	ISO	Air	1.5 lb (0.7 kg)
226166-009	Methane	35%	1.75	ISO	Air	1.5 lb (0.7 kg)
226166-014	Methane	50%	2.2	IEC	Air	1.5 lb (0.7 kg)
226166-914*	Methane	50%	2.2	IEC	Air	1.5 lb (0.7 kg)
226166-001	Methane	50%	2.5	ISO	Air	1.5 lb (0.7 kg)
226166-901*	Methane	50%	2.5	ISO	Air	1.5 lb (0.7 kg)
226166-015	Propane	50%	0.85	IEC	Air	1.5 lb (0.7 kg)
226166-915*	Propane	50%	0.85	IEC	Air	1.5 lb (0.7 kg)
226166-004	Propane	50%	1.1	ISO	Air	1.5 lb (0.7 kg)
226166-010	Propylene	50%	1.0	ISO	Air	1.5 lb (0.7 kg)

*These items are certified for Russian projects.

NOTE: Average lead time is 2-3 weeks

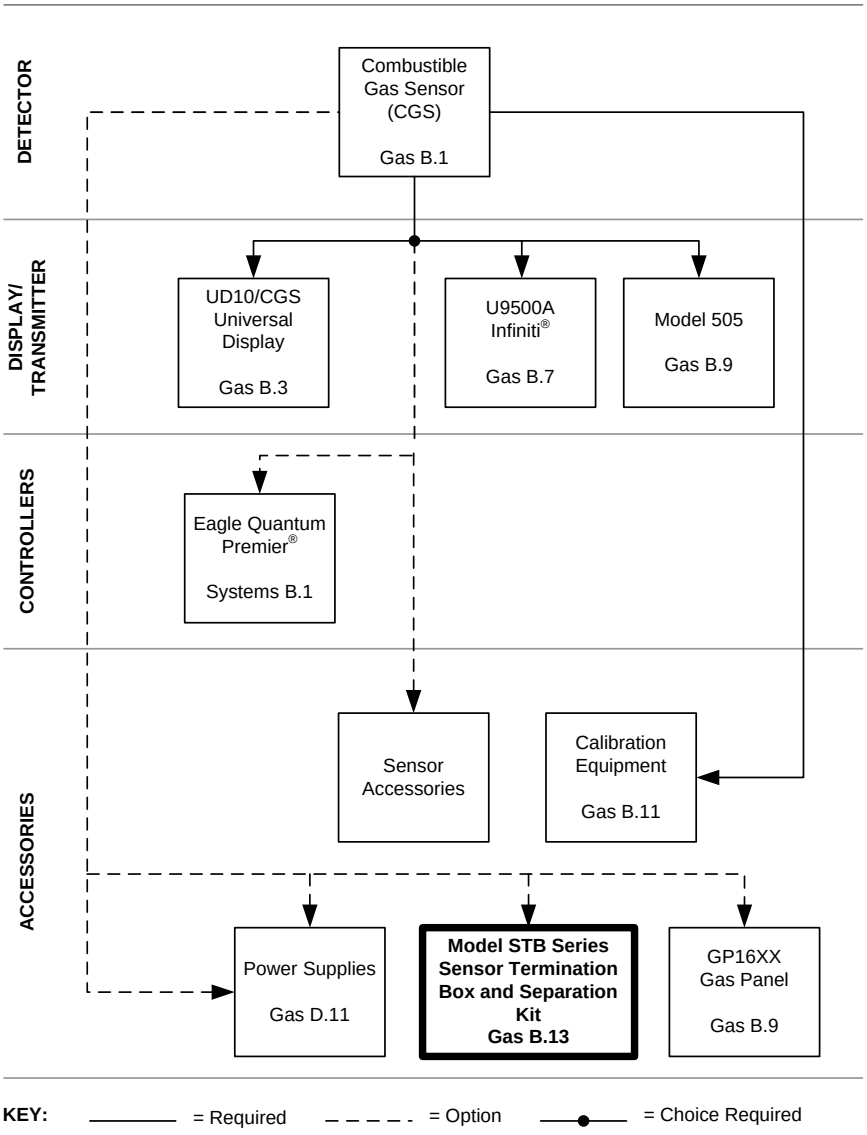
Calibration Kit Replacement Parts

Part Number	Description	Ship Weight
004976-001	Standard calibration cup, SS	8 oz (0.23 kg)
101678-007	3 Foot tubing	8 oz (0.23 kg)
162552-001	1 LPM Regulator for CGS sensors	8 oz (0.23 kg)
162553-001	Carrying Case	8 oz (0.23 kg)

Model STB Sensor Termination Box and Separation Kit

Model STB Sensor Termination Box and Separation Kit includes a junction box, proper connector board required hardware.

- Enables remote installation of sensor for optimum gas detection while offering easy calibration access to transmitter
- One sensor separation kit per sensor is required
- Optional remote calibration cups must be ordered separately (see CGS Accessories)
- Model 505 Transmitter Sensor separation wiring terminal block (part number 102883-001) is sold separately
- Temperature approved models from –55°C to 125°C for process control applications



STB Model Matrix

MODEL	DESCRIPTION
STB	Sensor Termination Box

TYPE	COMPATIBILITY
1	CGS for FlexVu Model UD10 or Model 505 Transmitter
2	CGS for U9500A Transmitter or DCUEX
5	12 terminal

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	# OF PORTS, THREAD TYPE
2M	2 PORT, M20/M25 at 90 degree orientation
2N	2 PORT, 3/4" NPT at 90 degree orientation
2S	2 PORT, M20 at 180 degrees vertical
2U	2 PORT, 3/4" NPT at 180 degree vertical
2X	2 PORT, M20 at 90 degree orientation
2Y	2 PORT, M25 at 90 degree orientation
3N	3 PORT, 3/4" NPT
3Y	3 PORT, M25
5Y	5 PORT, M25
5N	5 PORT, 3/4" NPT
6Y	6 PORT, M25
6N	6 PORT, 3/4" NPT

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
R	VNIIFTRI (RUSSIA)

Model STB Sensor Termination Boxes / Separation Kits

Model	Part Number	Use With	Material	Ports*	Threads**	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)
STB1A2MW	226365-119	UD10/Model 505	AL	2 (L)	M20/M25	X	
STB1A2NW	226365-131	UD10/Model 505	AL	2 (L)	3/4 NPT	X	
STB1A2SW	226365-123	UD10/Model 505	AL	2 (ST)	M20	X	
STB1A2UW	226365-137	UD10/Model 505	AL	2 (ST)	3/4 NPT	X	
STB1S2NW	226365-140	UD10/Model 505	SS	2 (L)	3/4 NPT	X	
STB1S2XW	226365-121	UD10/Model 505	SS	2 (L)	M20	X	
STB2A2MR	226365-927	U9500A/DCUEX	AL	2 (L)	M20/M25		X
STB2A2MW	226365-127	U9500A/DCUEX	AL	2 (L)	M20/M25	X	
STB2A2NW	226365-132	U9500A/DCUEX	AL	2 (L)	3/4 NPT	X	
STB2A2UW	226365-136	U9500A/DCUEX	AL	2 (ST)	3/4 NPT	X	
STB2A5NW	226365-144	U9500A/DCUEX	AL	5	3/4 NPT	X	
STB2S2MW	226365-135	U9500A/DCUEX	SS	2 (L)	M20/M25	X	
STB2S2NW	226365-142	U9500A/DCUEX	SS	2 (L)	3/4 NPT	X	
N/A	006470-001	Harness for use with CGS and U9500A (included with STB2)					
STB5A6YR	226365-928	12 terminal	AL	6	M25		X
STB5S5YR	226365-929	12 terminal	SS	5	M25		X
STB5A2NW	226365-520	12 terminal	AL	2 (L)	3/4 NPT	X	
STB5A2YW	226365-510	12 terminal	AL	2 (L)	M25	X	
STB5A3NW	226365-521	12 terminal	AL	3 (T)	3/4 NPT	X	
STB5A3YW	226365-511	12 terminal	AL	3 (T)	M25	X	
STB5A5NW	226365-522	12 terminal	AL	5	3/4 NPT	X	
STB5A5YW	226365-512	12 terminal	AL	5	M25	X	
STB5A6NW	226365-523	12 terminal	AL	6	3/4 NPT	X	
STB5A6YW	226365-513	12 terminal	AL	6	M25	X	
STB5S2NW	226365-540	12 terminal	SS	2 (L)	3/4 NPT	X	
STB5S2YW	226365-530	12 terminal	SS	2 (L)	M25	X	
STB5S3NW	226365-541	12 terminal	SS	3 (T)	3/4 NPT	X	
STB5S3YW	226365-531	12 terminal	SS	3 (T)	M25	X	
STB5S5NW	226365-542	12 terminal	SS	5	3/4 NPT	X	
STB5S5YW	226365-532	12 terminal	SS	5	M25	X	
Ship Weight: Aluminum = 2.2lb (1.0kg) Stainless Steel = 3.0lb (1.4kg)							

* "L" designates 90 degree conduit entry orientation, "ST" designates straight-thru orientation, "T" designates 3-port orientation.

** If two numbers are listed, the first number is for detector entry and the second number is for field cabling.

NOTE: Type 5 models approved from -55°C to +125°C for process control applications.

Duct Mount and Sample Draw Assemblies for CGS

Direct Duct Mount Assembly (Spec Sheet: 90-1046). For mounting combustible sensors to air handling duct work. The Direct Duct Mount CGS assembly enables combustible gas detection in air handling, heating, ventilating, and air conditioning ducts. Designed for flat surface mounting only.

- Seal gaskets provided to prevent leakage
- Circular duct wall cutout required
- Positive pressure ducts only
- Calibration gas inlet enables in-situ calibration
- Flexible conduit/cabling recommended to enable sensor removal from assembly

Combustible Model Q811 Duct Mount Enclosure (Manual: 95-8459)
The Q811 provides combustible gas detection in air handling, heating, ventilating, and air conditioning ducts.

- Designed for flat surface mounting only
- Stainless steel NEMA 4X enclosure
- Includes catalytic bead sensor
- 316 Stainless steel sample inlet tube spans the duct's cross section
- 1 foot tube returns the sample
- Requires a 600–4000 fpm velocity

Sample Draw Cup Assembly for CGS
The Sample Draw cup assembly for CGS provides a sealed enclosure with compression fittings to enable the CGS to be used as part of an extractive gas sampling system.

- Aluminum enclosure with seals provides airtight flow chamber
- Brass compression fittings accept 1/4" OD tubing
- Threaded cover enables sensor removal
- Sampling system hardware required for proper operation

Direct Duct Mount Assemblies for CGS

Part Number	Material	Ship Weight
226846-001	AL	6 oz (0.17 kg)
226846-008	SS	1 lb (0.46 kg)

Model Q811 CGS Duct Mount Enclosure

Part Number	Material	Ship Weight	Thread	Sensor
000811-009	SS	10 lb (4.5 kg)	M20	CC
000811-101	SS	10 lb (4.5 kg)	3/4"	CV

NOTE: 1 inlet and 1 return tube included at no extra cost.
Specify length of inlet tube at time of order (1, 3, 6, 10 or 13 ft).
Includes pre-installed CGS catalytic sensor, no transmitter is included

Model Q811 Sample Tubes

Part Number	Material	Ship Weight	Length
000214-281	316 SS	8 oz (0.23 kg)	1 ft
000214-282	316 SS	1 lb (0.45 kg)	3 ft
000214-283	316 SS	3 lb (1.35 kg)	6 ft
000214-284	316 SS	6 lb (2.4 kg)	10 ft
000214-285	316 SS	9 lb (4.0 kg)	13 ft
000214-280*	316 SS	8 oz (0.23 kg)	1 ft

*Return tube.

Sample Draw Cup Assembly for CGS

Part Number	Material	Ship Weight
009171-001	AL	1 lb (0.45 kg)

CGS Accessories: Rain Shields, Splash Guards, Dust Covers, Remote Calibration Cups

Rain Shields (Spec Sheet: 90-1046) protect combustible sensors from rain and snow.

Splash Guards (Spec Sheet: 90-1046) protect combustible sensors from ingress due to rain or splashing water.

Dust Covers (Spec Sheet: 90-1046) are recommended to protect sensors in windy, dusty, and oily environments. Porex and stainless steel filters available.

Remote Calibration cups provide the means to apply calibration to a CGS gas sensor from a remote location. Tubing not included. Options include barbed fitting or ¼" compression fitting.

NOTE: Only one accessory recommended to be fitted per catalytic sensor.

Rain Shields

Part Number	Material	Ship Weight
226349-001	AL	6 oz (0.17 kg)

Splash Guard

Part Number	Material	Ship Weight
006491-001	AL	2 lb (0.95 kg)

Dust Covers

Part Number	Material	Ship Weight
225312-001	SS	2 oz (0.06 kg)
226190-001	Porex*	2 oz (0.06 kg)

*Porex not recommended for outdoors or temperatures above 75°C.

Remote Calibration Cups

Part Number	Use	Filter Material	Tube Fitting Type	Ship Weight
225777-001	Indoor	Porex*	Barbed	0.5 lb (0.14 kg)
004996-001	Indoor	Porex*	Compression	0.5 lb (0.14 kg)
006618-001	Outdoor	SS Screen	Barbed	0.5 lb (0.14 kg)
006618-002	Outdoor	SS Screen	Compression	0.5 lb (0.14 kg)

*Porex not recommended for outdoors or temperatures above 75°C.

GTS Toxic Gas Sensor Module (GT3000 Series)

GTS Toxic Gas Sensor Module (Spec Sheet: 90-1199) housings are incorporated into the GTX toxic gas transmitter. The electrochemical cell is embedded in the module.

- Performance approved models
- Sensor modules are available in a variety of gas types and concentration ranges
- Hot-swappable capabilities with the GTX transmitter
- Easy install and removal with the GTX transmitter
- Intrinsically safe (IS) design
- **SIL models available with 0-100 ppm Hydrogen Sulfide and Oxygen sensors**
- **DNV models available with Hydrogen Sulfide, Oxygen, and Carbon Monoxide sensors**
- Suitable for outdoor applications requiring IP66 rating
- Electrochemical sensor cell for increased accuracy, stability, and reliability
- Highly specific response reduces the chance of false alarms resulting from the presence of other gases
- Temperature compensated to ensure consistent performance over entire operating temperature range
- Hydrophobic filter easily replaced without opening the device or use of tools
- EMI/RFI hardened
- Event and calibration logs are stored in non-volatile memory and are accessible using a UD10/UD20, HART device, or AMS software.
- Real-time clock with battery back-up

GTS Model Matrix

MODEL	DESCRIPTION		
GTS	Toxic Gas Sensor Module		
	TYPE	**GAS / RANGE**	
	H2S	**Hydrogen Sulfide**	
		20P	0 - 20 PPM
		50P	0 - 50 PPM
		100P	0 - 100 PPM (SIL 2 Capable)
	CL2	**Chlorine**	
		10P	0 - 10 PPM
	NH3	**Ammonia**	
		100P	0 - 100 PPM
		500P	0 - 500 PPM
	H2	**Hydrogen**	
		1000P	0 - 1000 PPM
	O2	**Oxygen**	
		25V	0 - 25 % by Vol (SIL 2 Capable)
	CO	**Carbon Monoxide**	
		100P	0 - 100 PPM
		500P	0 - 500 PPM
	SO2	**Sulfur Dioxide**	
		20P	0 - 20 PPM
		100P	0 - 100 PPM
	NO2	**Nitrogen Dioxide**	
		20P	0 - 20 PPM

TYPE	APPROVALS
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
S	SIL
C	CSA
B	INMETRO (BRAZIL)
D	DNV
R	VNIIFTRI (RUSSIA)

NOTE: Type "APPROVALS" can use one or more letters.

GTS Toxic Gas Sensor Module

Model Number	Part Number	Toxic Gas	ppm Range	% by Volume	Approvals	SIL 2
GTSH2S20PW	009471-031	Hydrogen Sulfide	0 - 20		FM/CSA/ATEX/CE	
GTSH2S50PW	009471-032	Hydrogen Sulfide	0 - 50		FM/CSA/ATEX/CE	
GTSH2S100PT	009471-003	Hydrogen Sulfide	0 - 100		FM/CSA/ATEX/CE	X
GTSCL210PW	009471-004	Chlorine	0 - 10		FM/CSA/ATEX/CE	
GTSNH3100PW	009471-005	Ammonia	0 - 100		FM/CSA/ATEX/CE	
GTSNH3500PC	009471-006	Ammonia	0 - 500		CSA	
GTSH21000PC	009471-008	Hydrogen	0 - 1000		CSA	
GTSO225VT	009471-009	Oxygen		0 - 25%	FM/CSA/ATEX/CE	X
GTSCO100PW	009471-010	Carbon Monoxide	0 - 100		FM/CSA/ATEX/CE	
GTSCO500PW	009471-011	Carbon Monoxide	0 - 500		FM/CSA/ATEX/CE	
GTSSO220PW	009471-013	Sulfur Dioxide	0 - 20		FM/CSA/ATEX/CE	
GTSSO2100PW	009471-014	Sulfur Dioxide	0 - 100		FM/CSA/ATEX/CE	
GTSNO220PC	009471-016	Nitrogen Dioxide	0 - 20		CSA	
Ship Weight: <1lb (<0.45kg)						

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

GTS Toxic Gas Sensor Module - DNV

Model Number	Part Number	Toxic Gas	ppm Range	% by Volume	Approvals	SIL 2
GTSH2S20PTWD	009471-531	Hydrogen Sulfide	0 - 20		DNV/FM/CSA/ATEX/CE	
GTSH2S50PTWD	009471-532	Hydrogen Sulfide	0 - 50		DNV/FM/CSA/ATEX/CE	
GTSH2S100PTD	009471-503	Hydrogen Sulfide	0 - 100		DNV/FM/CSA/ATEX/CE	X
GTSO225VTD	009471-509	Oxygen		0 - 25%	DNV/FM/CSA/ATEX/CE*	X
GTSCO100PWD	009471-510	Carbon Monoxide	0 - 100		DNV/FM/CSA/ATEX/CE	
GTSCO500PWD	009471-511	Carbon Monoxide	0 - 500		DNV/FM/CSA/ATEX/CE	
Ship Weight: <1lb (<0.45kg)						

*MED (B & D)

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

GTS Toxic Gas Sensor Module - INMETRO (Brazil)

Model Number	Part Number	Toxic Gas	ppm Range	% by Volume	Approvals	SIL 2
GTSH2S20PB	009471-111	Hydrogen Sulfide	0 - 20		INMETRO	
GTSH2S50PB	009471-112	Hydrogen Sulfide	0 - 50		INMETRO	
GTSH2S100PSB	009471-083	Hydrogen Sulfide	0 - 100		INMETRO	X
GTSCL210PB	009471-084	Chlorine	0 - 10		INMETRO	
GTSNH3100PB	009471-085	Ammonia	0 - 100		INMETRO	
GTSNH3500PB	009471-086	Ammonia	0 - 500		INMETRO	
GTSH21000PB	009471-088	Hydrogen	0 - 1000		INMETRO	
GTSO225VSB	009471-089	Oxygen		0 - 25%	INMETRO	X
GTSCO100PB	009471-090	Carbon Monoxide	0 - 100		INMETRO	
GTSCO500PB	009471-091	Carbon Monoxide	0 - 500		INMETRO	
GTSSO220PB	009471-093	Sulfur Dioxide	0 - 20		INMETRO	
GTSSO2100PB	009471-094	Sulfur Dioxide	0 - 100		INMETRO	
Ship Weight: <1lb (<0.45kg)						

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

GTS Toxic Gas Sensor Module - VNIIFTRI (Russia)

Model Number	Part Number	Toxic Gas	ppm Range	% by Volume	Approvals
GTSH2S20PR	009471-901	Hydrogen Sulfide	0 - 20		VNIIFTRI
GTSH2S50PR	009471-902	Hydrogen Sulfide	0 - 50		VNIIFTRI
GTSH2S100PR	009471-903	Hydrogen Sulfide	0 - 100		VNIIFTRI
GTSCL210PR	009471-904	Chlorine	0 - 10		VNIIFTRI
GTSNH3100PR	009471-905	Ammonia	0 - 100		VNIIFTRI
GTSNH3500PR	009471-906	Ammonia	0 - 500		VNIIFTRI
GTSH21000PR	009471-908	Hydrogen	0 - 1000		VNIIFTRI
GTSO225VR	009471-909	Oxygen		0 - 25%	VNIIFTRI
GTSCO100PR	009471-910	Carbon Monoxide	0 - 100		VNIIFTRI
GTSCO500PR	009471-911	Carbon Monoxide	0 - 500		VNIIFTRI
GTSSO220PR	009471-913	Sulfur Dioxide	0 - 20		VNIIFTRI
GTSSO2100PR	009471-914	Sulfur Dioxide	0 - 100		VNIIFTRI
Ship Weight: <1lb (<0.45kg)					

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

TOXICS

FM Performance Approved Electrochemical Gas Sensors

Gas	Range	Response Time*	Accuracy of Reading (Whichever is Greater)	Operating Temperature Range	Zero Drift	Performance Approved Standard
Hydrogen Sulfide (H_2S)	0-20 ppm	T50 = 10 Sec. T90 = 23 Sec.	±2 ppm or ±10% of Reading	–40°C to +50°C	± 1 ppm/Mo.	ISA 92.00.01
Hydrogen Sulfide (H_2S)	0-50 ppm	T50 = 10 Sec. T90 = 23 Sec.	±2 ppm or ±10% of Reading	–40°C to +50°C	± 1 ppm/Mo.	ISA 92.00.01
Hydrogen Sulfide (H_2S)	0-100 ppm	T50 = 12 Sec. T90 = 28 Sec.	±2 ppm or ±10% of Reading	–40°C to +50°C	± 2 ppm/Mo.	ISA 92.0.01
Ammonia (NH_3)	0-100 ppm**	T50 = 24 Sec. T90 = 65 Sec.	±4 ppm or ±10% of Reading	–20°C to +40°C	± 2 ppm/Mo.	FM6340
Ammonia (NH_3)	0-500 ppm**	T50 = 30 Sec. T90 = 120 Sec.	±4 ppm or ±10% of Reading	–20°C to +40°C	± 10 ppm/Mo.	N/A†
Oxygen (O_2)	0-25% V/V***	T20 = 7 Sec. T90 = 30 Sec.	< 0.5% V/V	–20°C to +50°C	< 2 %/Mo.	BS EN 50104
Carbon Monoxide (CO)	0-100 ppm	T50 = 15 Sec. T90 = 40 Sec.	±5 ppm or ±10% of Reading	–20°C to +50°C	± 2 ppm/Mo.	ISA 92.00.01
Carbon Monoxide (CO)	0-500 ppm	T50 = 12 Sec. T90 = 25 Sec.	±5 ppm or ±10% of Reading	–20°C to +50°C	± 9 ppm/Mo.	ISA 92.00.01
Sulfur Dioxide (SO_2)	0-20 ppm	T50 = 12 Sec. T90 = 30 Sec.	±0.6 ppm or ±10% of Reading	–20°C to +50°C	± 0.4 ppm/Mo.	ISA 92.00.01
Sulfur Dioxide (SO_2)	0-100 ppm	T50 = 15 Sec. T90 = 35 Sec.	±0.6 ppm or ±10% of Reading	–20°C to +50°C	± 0.4 ppm/Mo.	ISA 92.00.01
Chlorine (Cl_2)	0-10 ppm	T50 = ≤14 Sec. T90 = ≤34 Sec.	±0.6 ppm or ±10% of Reading	–20°C to +50°C	< 0.2 ppm/Mo.	FM6340
Hydrogen (H_2)	0-1000 ppm	T50 = 8 Sec. T90 = 60 Sec.	±50 ppm or ±10% of Reading	–20°C to +40°C	± 20 ppm/Mo.	N/A†
Nitrogen Dioxide (NO_2)	0-20 ppm	T50 = 7 Sec. T90 = 31 Sec.	±2 ppm or ±10% of Reading	–20°C to +40°C	± 0.1 ppm/Mo.	N/A†

* Time to reach percentage of final reading when gas concentration equal to full scale is applied to sensor.

** Background concentrations of ammonia may shorten lifetime of sensor.

*** Sensor approved for oxygen depletion (< 21% V/V) only.

† Det-Tronics verified to CSA Exd

GT3000 Spares and Accessories

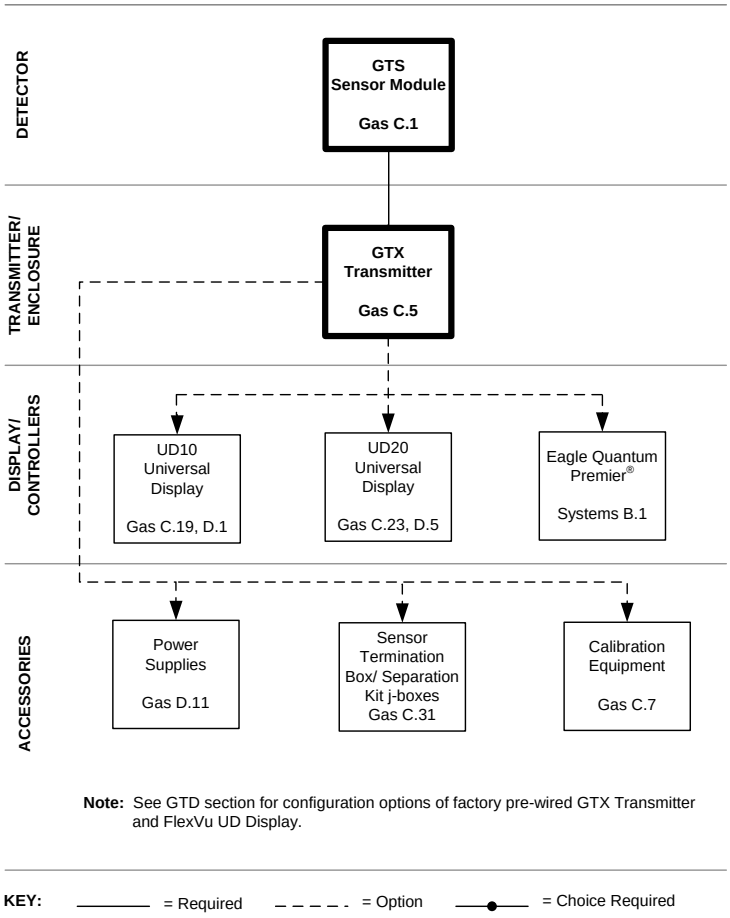
Part Number	Description
009640-001	GTS Replacement Filter
009737-001	GTS Calibration cup
010780-003	GT3000 Remote Calibration Adaptor
000912-005	Q912 Duct Mount Empty 3/4"
000912-006	Q912 Duct Mount Empty M25
009700-001	Magnetic Tool

NOTES

GTX Toxic Gas Transmitter (GT3000 Series)

GTX Toxic Gas Transmitter (Spec Sheet: 90-1199). Stainless steel, toxic gas transmitter that provides an accurate measurement of toxic gasses.

- 316 Stainless Steel
- Approved as a stand-alone device when combined with a GTS toxic gas sensor
- 4-20 mA output with HART
- Intrinsically safe (IS) or explosion proof design
- IP66 rated
- **SIL 2 capable sensors are Hydrogen Sulfide and Oxygen**
- SIL 2 compatible FlexVu Universal Display is UD20 (rated SIL non interfering)
- Performance approved and verified
- Self-contained transmitter circuitry
- Event and calibration logs are stored in non-volatile memory and are accessible using a UD10/ UD20, HART device, or AMS software.
- Real-time clock with battery back-up
- Magnetic switch and LEDs for user interface
- 2-wire loop powered



Note: See GTD section for configuration options of factory pre-wired GTX Transmitter and FlexVu UD Display.

GTX Model Matrix

MODEL	DESCRIPTION
GTX	Toxic Gas Transmitter

TYPE	MATERIAL
S	Stainless Steel (316)

TYPE	THREAD TYPE
N	3/4" NPT
M	Metric M25

TYPE	OUTPUTS
26	4-20 mA w/HART (3.5 mA fault)
29	4-20 mA w/HART (2.45 mA fault)

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	GOST-R (RUSSIA)

TYPE	CLASSIFICATION (Division/Zone)
4	Intrinsically Safe
5	Explosion Proof

NOTE: Approvals Type "W" and "B" are SIL 2 Capable when used with an O_2 or 0-100ppm H_2S GTS sensor module.

GTX Toxic Gas Transmitter (for use with FlexVu model UD10/20 and GDTB)

Model	Part Number	Material	Threads	IS	Ex Proof	FM/CSA/ ATEX/CE	INMETRO (Brazil)	Ship Weight
GTXSN26W4	009480-001	316 SS	3/4 NPT	X		X		2.0 lb (0.95 kg)
GTXSM26W4	009480-002	316 SS	M25	X		X		2.0 lb (0.95 kg)
GTXSN26W5	009480-003	316 SS	3/4 NPT		X	X		2.0 lb (0.95 kg)
GTXSM26W5	009480-004	316 SS	M25		X	X		2.0 lb (0.95 kg)
GTXSN26B5	009480-083	316 SS	3/4 NPT		X		X	2.0 lb (0.95 kg)
GTXSM26B5	009480-084	316 SS	M25		X		X	2.0 lb (0.95 kg)

GTX Toxic Gas Transmitter (for use with U9500, DCU, and R8471)

Model	Part Number	Material	Threads	IS	Ex Proof	FM/CSA/ ATEX/CE	INMETRO (Brazil)	Ship Weight
GTXSN29W4	012006-001	316 SS	3/4 NPT	X		X		2.0 lb (0.95 kg)
GTXSM29W4	012006-002	316 SS	M25	X		X		2.0 lb (0.95 kg)
GTXSN29W5	012006-003	316 SS	3/4 NPT		X	X		2.0 lb (0.95 kg)
GTXSM29W5	012006-004	316 SS	M25		X	X		2.0 lb (0.95 kg)
GTXSN29B5	012006-083	316 SS	3/4 NPT		X		X	2.0 lb (0.95 kg)
GTXSM29B5	012006-084	316 SS	M25		X		X	2.0 lb (0.95 kg)

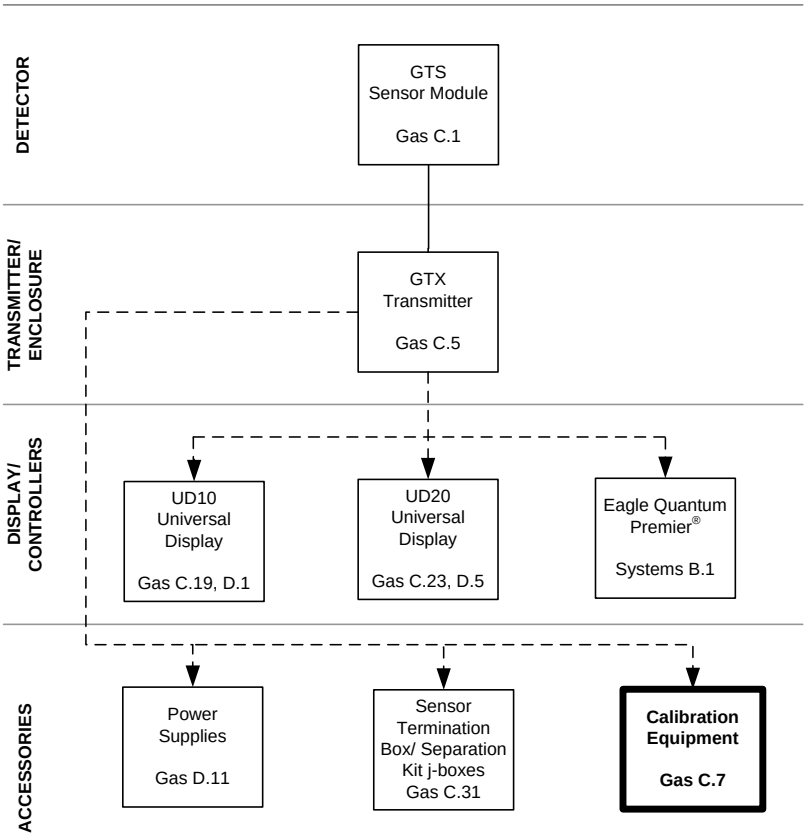
GTX Toxic Gas Transmitter (for use with FlexVu model UD10/20 and GDTB) - Russia

Model	Part Number	Material	Threads	IS	Ex Proof	GOST-R (Russia)	Ship Weight
GTXSN26R4	009480-901	316 SS	3/4 NPT	X		X	2.0 lb (0.95 kg)
GTXSM26R4	009480-902	316 SS	M25	X		X	2.0 lb (0.95 kg)
GTXSN26R5	009480-903	316 SS	3/4 NPT		X	X	2.0 lb (0.95 kg)
GTXSM26R5	009480-904	316 SS	M25		X	X	2.0 lb (0.95 kg)

GT3000 Certified Calibration Kits

GT3000 Certified Calibration Kits (Manual: 95-8643) consists of a sturdy carrying case containing:

- Two cylinders of specified gas
- A 1 liter/minute regulator and pressure indicator
- 3-foot tube
- GT3000 Calibration Cup



Note: See GTD section for configuration options of factory pre-wired GTX Transmitter and FlexVu UD Display.

GT3000 Calibration Gas Kits

Part Number	Concentration	Gas	Balance	Ship Weight
010274-001	10 ppm	Hydrogen Sulfide	Nitrogen	11.5 lb (5.23 kg)
010274-002	25 ppm	Hydrogen Sulfide	Nitrogen	11.5 lb (5.23 kg)
010274-003*	50 ppm	Hydrogen Sulfide	Nitrogen	11.5 lb (5.23 kg)
010274-004	5 ppm	Chlorine	Nitrogen	11.5 lb (5.23 kg)
010274-005	50 ppm	Ammonia	Nitrogen	11.5 lb (5.23 kg)
010274-006	250 ppm	Ammonia	Nitrogen	11.5 lb (5.23 kg)
010274-008	500 ppm	Hydrogen	Air	11.5 lb (5.23 kg)
010274-009	20.90%	Oxygen	Nitrogen	11.5 lb (5.23 kg)
010274-010	50 ppm	Carbon Monoxide	Air	11.5 lb (5.23 kg)
010274-011	250 ppm	Carbon Monoxide	Air	11.5 lb (5.23 kg)
010274-013	10 ppm	Sulfur Dioxide	Nitrogen	11.5 lb (5.23 kg)
010274-014	50 ppm	Sulfur Dioxide	Nitrogen	11.5 lb (5.23 kg)
010274-016	10 ppm	Nitrogen Dioxide	Air	11.5 lb (5.23 kg)

*Do not use for NTMOS

NOTE: Average lead time is 2-3 weeks.

GT3000 Calibration Gas Kits

Part Number	Concentration	Gas	Balance	Ship Weight
226166-006	N/A	Zero Air	Nitrogen	1.5 lb (0.7 kg)
227117-011	10 ppm	Hydrogen Sulfide	Nitrogen	1.5 lb (0.7 kg)
227117-012	25 ppm	Hydrogen Sulfide	Nitrogen	1.5 lb (0.7 kg)
227117-001*	50 ppm	Hydrogen Sulfide	Nitrogen	1.5 lb (0.7 kg)
227117-006	5 ppm	Chlorine	Nitrogen	1.5 lb (0.7 kg)
227117-013	50 ppm	Ammonia	Nitrogen	1.5 lb (0.7 kg)
227117-019	250 ppm	Ammonia	Nitrogen	1.5 lb (0.7 kg)
227117-018	500 ppm	Hydrogen	Air	1.5 lb (0.7 kg)
226166-006	20.90%	Oxygen	Nitrogen	1.5 lb (0.7 kg)
227117-003	50 ppm	Carbon Monoxide	Air	1.5 lb (0.7 kg)
227117-004	250 ppm	Carbon Monoxide	Air	1.5 lb (0.7 kg)
227117-016	10 ppm	Sulfur Dioxide	Nitrogen	1.5 lb (0.7 kg)
227117-008	50 ppm	Sulfur Dioxide	Nitrogen	1.5 lb (0.7 kg)
227117-010	10 ppm	Nitrogen Dioxide	Air	1.5 lb (0.7 kg)

*Do not use for NTMOS

NOTE: Average lead time is 2-3 weeks.

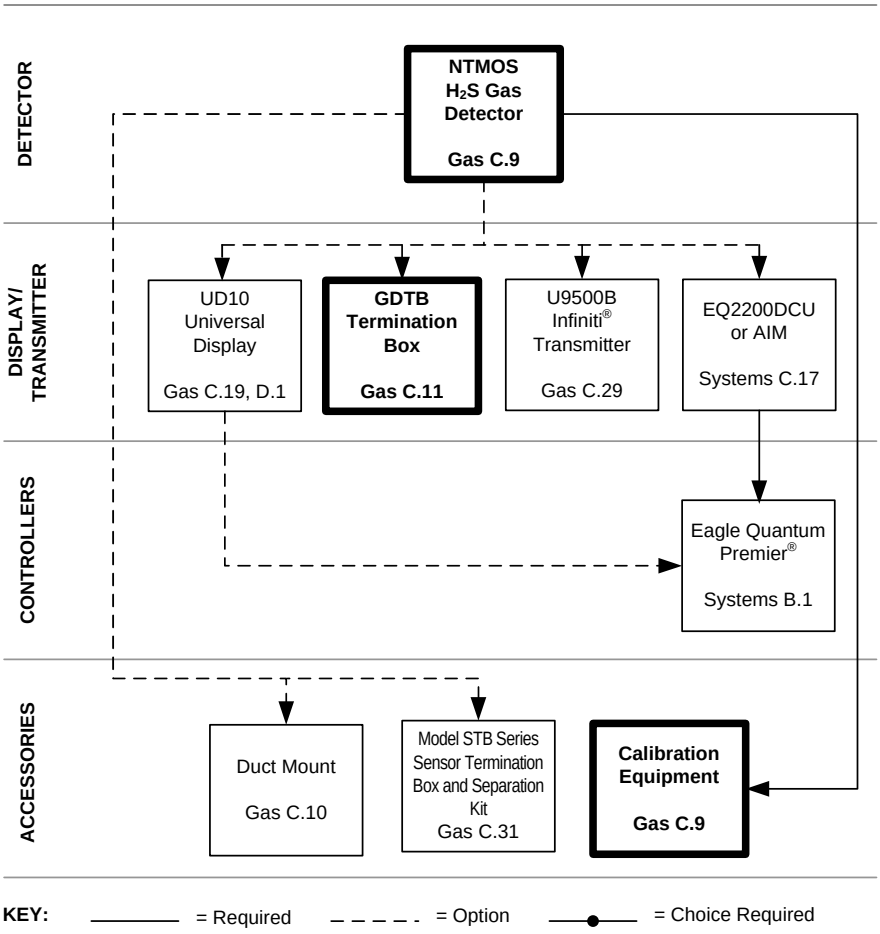
GT3000 Calibration Kit Replacement Parts

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
009737-001	GT3000 Calibration Cup	8 oz (0.23 kg)
010780-003	GT3000 Remote Calibration Adaptor	<1 lb (0.45 kg)
101678-007	3 Foot tubing	8 oz (0.23 kg)
162552-001	Regulator, 1 LPM	8 oz (0.23 kg)
162553-001	Carrying Case	8 oz (0.23 kg)

NTM Nanotechnology MOS H_2S Gas Detector

Model NTM Nanotechnology MOS H_2S Gas Detector (Spec Sheet: 90-1195). Stainless steel, nanotechnology MOS detector that provides an accurate measurement of Hydrogen Sulfide (H_2S) gas.

- 4-20 mA output
- Approved as a stand-alone detector when connected to the GDTB
- Compliance to ANSI/ISA-12.13.01-2000 performance standards
- Fast speed of response
- Approved as a low concentration ppm toxic gas system when used with the FlexVu UD10, U9500, or UD10/DCU, EQ2200DCU and EQ3710 Analog Input Module (AIM) for use with EQP
- IP66/IP67 rated



NTM Model Matrix

MODEL	DESCRIPTION				
NTM	Nanotechnology MOS H2S Gas Detector				
	TYPE	MATERIAL			
	S	Stainless Steel			
		TYPE	THREAD TYPE		
		N	3/4" NPT		
		M	Metric M25		
			TYPE	MEASUREMENT OPTIONS	
			10	0-100 ppm	
				TYPE	APPROVALS
				W	FM/CSA/ATEX/CE
				B	INMETRO (BRAZIL)
				R	VNIIFTRI (RUSSIA)

NTM Gas Sensors

Model	Part Number	Thread	ppm	FM/CSA/ ATEX/CE/ IECEx	INMETRO (Brazil)	VNIFFTRI (Russia)	Ship Weight
NTMSN10W	010986-001	3/4 NPT	0-100	X			1 lb (0.45 kg)
NTMSM10W	010986-002	M25	0-100	X			1 lb (0.45 kg)
NTMSN10B	010986-501	3/4 NPT	0-100		X		1 lb (0.45 kg)
NTMSM10B	010986-502	M25	0-100		X		1 lb (0.45 kg)
NTMSN10R	010986-901	3/4 NPT	0-100			X	1 lb (0.45 kg)
NTMSM10R	010986-902	M25	0-100			X	1 lb (0.45 kg)

NTMOS Accessories

Part Number	Description	Ship Weight
010272-001	NTMOS Calibration Kit - for 100ppm sensor	11.5 lb (5.23 kg)
010272-901	NTMOS Calibration Kit - for 100ppm sensor, Russian	11.5 lb (5.23 kg)
010525-001	Humidification tube cage assembly	1 lb (0.45 kg)
101678-007	3 foot tubing	<1 lb (<0.45 kg)
162552-003	Regulator, 0.5 LPM	<1 lb (<0.45 kg)
005964-001	Calibration Cup with o-ring	<1 lb (<0.45 kg)
162553-001	Carrying Case for Calibration Kit	<1 lb (<0.45 kg)
227117-014	Cylinder, 50ppm H2S, (balance - air)	1.5 lb (0.7 kg)
227117-914	Cylinder, 50ppm H2S, (balance - air), Russian	1.5 lb (0.7 kg)
007098-005	Ampoule Calibration Kit - 50 ppm H2S	2 lb (0.95 kg)
225741-001	H2S Ampoule, 50 ppm	<1 lb (<0.45 kg)
007067-001	Mixer for H2S Ampoule	1 lb (0.45 kg)
009700-001	Magnetic Tool	<1 lb (<0.45 kg)
010850-001	Hydrophobic Filter	<1 lb (<0.45 kg)
010851-001	Replacement Impact Guard	<1 lb (<0.45 kg)
011364-001	Replacement O-ring Kit (2 provided)	<1 lb (<0.45 kg)
400527-003	Set Screw M4X4, SS	<1 lb (<0.45 kg)
000912-005	Q912 Duct Mount Empty, 3/4"	10.5 lb (4.8 kg)
000912-006	Q912 Duct Mount Empty, M25	10.5 lb (4.8 kg)

NTM Gas Detector Termination Box (GDTB)

Gas Detector Termination Box (Manual: 95-8644-2.1). Recommended for installations where an approved stand-alone 4-20 mA sensor is not connected directly to a transmitter/control device. The GDTB contains a circuit board with the required connectors for proper field wiring.

- Used for stand-alone calibration requirements
- Provides local calibration capability
- Required for remote separation from U9500 Infiniti or R8471B
- Magnetic reed switch calibration and LED gives calibration feedback
- Tall and short cover models are available
- IP66 rated

GDTB Model Matrix

MODEL	DESCRIPTION
GDTB	Toxic Gas Detector Termination Box

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel

TYPE	# OF OPEN PORTS
5	5 Port

TYPE	THREAD TYPE
L	Metric M25
N	3/4" NPT

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
R	VNIIFTRI (RUSSIA)

TYPE	COVER TYPE
1	Short without window
3	Tall with window

TYPE	CABLE ENTRIES
V	Ports 2 thru 6 open

GDTB Termination Box

Model	Part Number	Material	Thread	FM/CSA/ ATEX/CE/ IECEx	VNIIFTRI (Russia)	Cover	Ship Weight
GDTBA5NW1V	009957-001	AL	3/4 NPT	X		Short	2 lb (0.95 kg)
GDTBS5NW1V	009958-001	SS	3/4 NPT	X		Short	9 lb (4.1 kg)
GDTBA5NW3V	009959-001	AL	3/4 NPT	X		Tall	2.2 lb (1kg)
GDTBS5NW3V	009960-001	SS	3/4 NPT	X		Tall	9.5 lb (4.3 kg)
GDTBA5LW1V	009957-002	AL	M25	X		Short	2 lb (0.95 kg)
GDTBS5LW1V	009958-002	SS	M25	X		Short	9 lb (4.1 kg)
GDTBA5LW3V	009959-002	AL	M25	X		Tall	2.2 lb (1kg)
GDTBS5LW3V	009960-002	SS	M25	X		Tall	9.5 lb (4.3 kg)
GDTBA5NR1V	009957-901	AL	3/4 NPT		X	Short	2 lb (0.95 kg)
GDTBS5NR1V	009958-901	SS	3/4 NPT		X	Short	9 lb (4.1 kg)
GDTBA5NR3V	009959-901	AL	3/4 NPT		X	Tall	2.2 lb (1kg)
GDTBS5NR3V	009960-901	SS	3/4 NPT		X	Tall	9.5 lb (4.3 kg)
GDTBA5LR1V	009957-902	AL	M25		X	Short	2 lb (0.95 kg)
GDTBS5LR1V	009958-902	SS	M25		X	Short	9 lb (4.1 kg)
GDTBA5LR3V	009959-902	AL	M25		X	Tall	2.2 lb (1kg)
GDTBS5LR3V	009960-902	SS	M25		X	Tall	9.5 lb (4.3 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

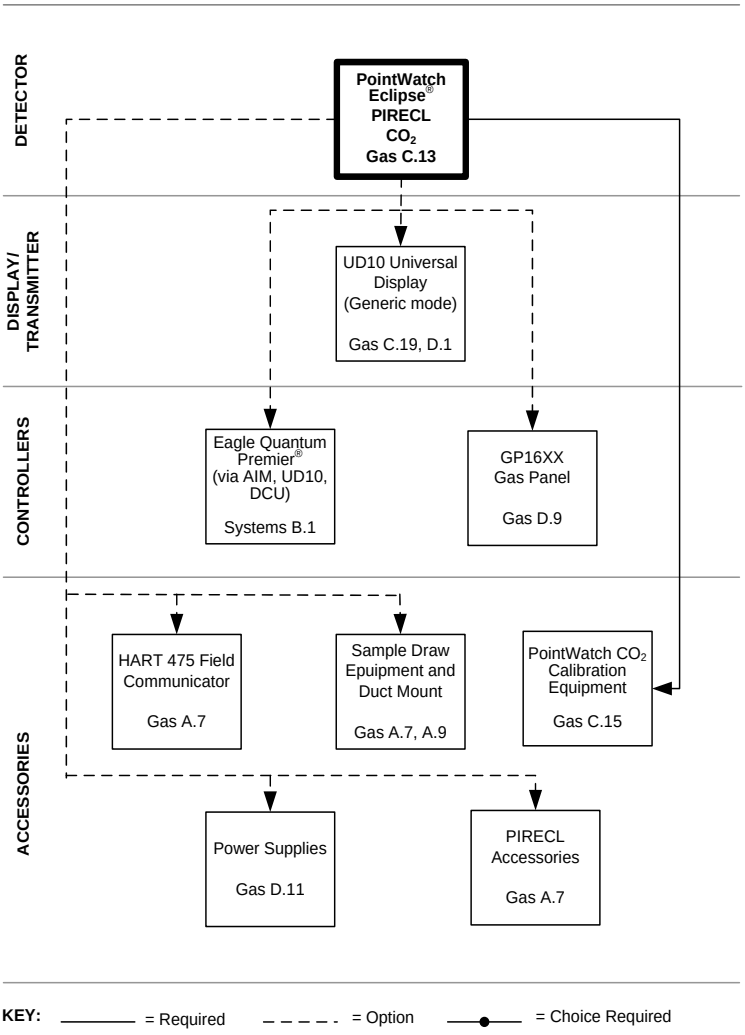
*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

PointWatch Eclipse® PIRECL Infrared Carbon Dioxide (CO_2) Gas Detector

The **PointWatch Eclipse PIRECL Carbon Dioxide Detector** (Spec Sheet: 90-1207) is our rugged stainless steel, point infrared gas detector providing detection of carbon dioxide. Standard signal outputs include isolated 4-20 mA output, HART communication protocol, and RS-485 serial communication supporting Modbus. An optional 2-alarm and 1-fault relay package is available. A tri-color LED provides visual display of operating status. The weather baffle provides excellent optics protection with an easy twist-lock removal. Additional features include:

- Internal wiring compartment saves money and time
- Heated optics
- Non-intrusive calibration
- Handheld communicator capability
- Ex d, e, ib protection designs
- CSA, ATEX, CE, IECEx hazardous location certifications
- Remote calibration capability using PIRTB
- 0-2%/volume full scale range



PIRECL CO_2 Model Matrix

MODEL	DESCRIPTION
PIRECL	PointWatch Eclipse Point Infrared CO_2 Gas Detector

TYPE	THREAD TYPE
A	3/4" NPT
B	Metric M25

TYPE	OUTPUT AND MEASUREMENT OPTIONS
3	4-20 mA with HART Protocol & RS-485: CO_2 0-2%/vol Full Scale Range

TYPE	OPTIONAL OUTPUTS
A	HART Communication Port
B	HART Communication Port and Relay Board **Ex d only**
D	No Optional Outputs
E	Relay Board **Ex d only**

TYPE	WEATHER PROTECTION
1	Weather Baffle with Hydrophobic filter

TYPE	APPROVALS
C	CSA/IECEx
E	ATEX/CE/IECEx

TYPE	CLASSIFICATION
1	Division/Zone Ex d e
2	Division/Zone Ex d

PointWatch Eclipse PIRECL Infrared CO_2 Gas Detector - CSA

Model	Part number	Entry thread type	Output	HART Port	Relays	Weather protection	Ex d e	Ex d	CSA/CE/ IECEx
PIRECLA3A1C1	011904-001	3/4 NPT	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLA3A1C2	011904-041	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA3B1C2	011904-005	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLB3A1C1	011904-002	M25	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLB3A1C2	011904-045	M25	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLB3B1C2	011904-006	M25	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA3D1C1	011906-001	3/4 NPT	4-20 mA		No	w/ hydrophobic	X		X
PIRECLA3D1C2	011906-041	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
PIRECLA3E1C2	011906-005	3/4 NPT	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLB3D1C1	011906-002	M25	4-20 mA		No	w/ hydrophobic	X		X
PIRECLB3D1C2	011906-045	M25	4-20 mA		No	w/ hydrophobic		X	X
PIRECLB3E1C2	011906-006	M25	4-20 mA		Yes	w/ hydrophobic		X	X
Ship Weight: 11.5 lb (5.2 kg)									

PointWatch Eclipse PIRECL Infrared CO_2 Gas Detector - ATEX

Model	Part number	Entry thread type	Output	HART Port	Relays	Weather protection	Ex d e	Ex d	ATEX/CE/ IECEx
PIRECLA3A1E1	011904-501	3/4 NPT	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLA3A1E2	011904-541	3/4 NPT	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLA3B1E2	011904-505	3/4 NPT	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLB3A1E1	011904-502	M25	4-20 mA	X	No	w/ hydrophobic	X		X
PIRECLB3A1E2	011904-545	M25	4-20 mA	X	No	w/ hydrophobic		X	X
PIRECLB3B1E2	011904-506	M25	4-20 mA	X	Yes	w/ hydrophobic		X	X
PIRECLA3D1E1	011906-501	3/4 NPT	4-20 mA		No	w/ hydrophobic	X		X
PIRECLA3D1E2	011906-541	3/4 NPT	4-20 mA		No	w/ hydrophobic		X	X
PIRECLA3E1E2	011906-505	3/4 NPT	4-20 mA		Yes	w/ hydrophobic		X	X
PIRECLB3D1E1	011906-502	M25	4-20 mA		No	w/ hydrophobic	X		X
PIRECLB3D1E2	011906-545	M25	4-20 mA		No	w/ hydrophobic		X	X
PIRECLB3E1E2	011906-506	M25	4-20 mA		Yes	w/ hydrophobic		X	X
Ship Weight: 11.5 lb (5.2 kg)									

TOXICS

PIRECL CO_2 Calibration Kit

Part Number	Gas	Symbol	% Vol	PPM	Balance	Volume (liters)	Ship Weight
006468-017	Carbon Dioxide	CO2	1	10000	N2	103	11.5 lb (5.23 kg)
	Nitrogen	N2	100	Pure	N/A	103	

PIRECL CO_2 Kit Replacement Cylinders

Part Number	Gas	Symbol	% Vol	PPM	Balance	Volume (liters)	Ship Weight
227117-020	Carbon Dioxide	CO2	1	10000	N2	103	1 lb (0.45 kg)
227117-022	Nitrogen	N2	100	Pure	N/A	103	1 lb (0.45 kg)

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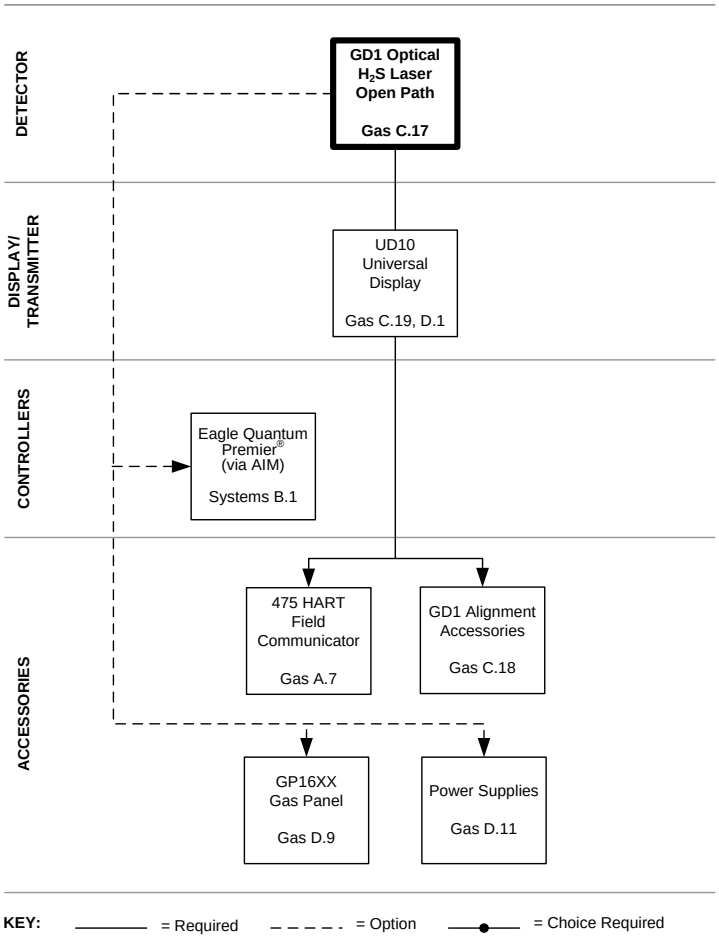
GD1 Toxic Open Path H_2S Gas Detector (by Simtronics)

The **GD1 Laser Open Path Gas Detector** sets a new standard for toxic gas detection. Using a tunable laser diode the GD1 delivers enhanced coverage and fail safe detection. The performance improvement marks a major step for safety systems and life cycle cost savings. The GD1 has been designed with features that provide an effective response to the detection of gas hazards in a wide range of industrial environments from offshore production facilities to wastewater treatment plants. At the heart of the detector is a tunable laser diode that eliminates environmental effects from sun, rain and fog. The laser scans single absorption lines where there is no interference from other gases. The laser operates in the near infrared wavelength region, and is invisible to the naked eye. The GD1 laser is eye safe, and does not present any danger even if looked straight into. Unlike traditional methods for detecting H2S (MOS or EC cell) the GD1 needs no recalibration and can replace multiple standard detectors to cover the same risk. The complete optomechanical design and construction is so stable that an ultrafast speed of response can be achieved whilst providing unparalleled service life and detector stability, thus saving on maintenance and service costs.

- First Ex d NIR Laser open path detector for H_2S
- 5 year warranty
- Large area covered with a single unit - path length: 5-50 M
- No cross interference
- Low detection levels, suitable for personnel safety
- Negligible affects from atmospheric changes (fog, etc.)
- No zero-point drift, no calibration
- No undisclosed failures
- Calibrated range: 0-200 ppm/M



GD1 - Complete System

Model	Part Number	Threads	4-20 HART	Ex d	Ex e	ATEX/CE IECEx	Shipping Weight
GD1-L0P-31KH-0XH-A0	011992-001	M20	source	TX/RX	J-box	X	52 lb (24 kg)
GD1-L0P-31KH-0XJ-A0	011992-002	M20	sink	TX/RX	J-box	X	52 lb (24 kg)

Includes transmitter, receiver, brackets, mounting plate and junction boxes.

GD1 - Transmitter Module

Model	Part Number	Threads	4-20 HART	Ex d	Ex e	ATEX/CE IECEx	Shipping Weight
GD1-L0T-31KH-0XH-A0	011993-001	M20	source	TX	J-box	X	26 lb (12 kg)
GD1-L0T-31KH-0XJ-A0	011993-002	M20	sink	TX	J-box	X	26 lb (12 kg)

Includes transmitter, mounting plate, and junction box.

GD1 - Receiver Module

Model	Part Number	Threads	4-20 HART	Ex d	Ex e	ATEX/CE IECEx	Shipping Weight
GD1-L0R-31KH-0XH-A0	011994-001	M20	source	RX	J-box	X	26 lb (12 kg)
GD1-L0R-31KH-0XJ-A0	011994-002	M20	sink	RX	J-box	X	26 lb (12 kg)

Includes receiver, mounting plate, and junction box.

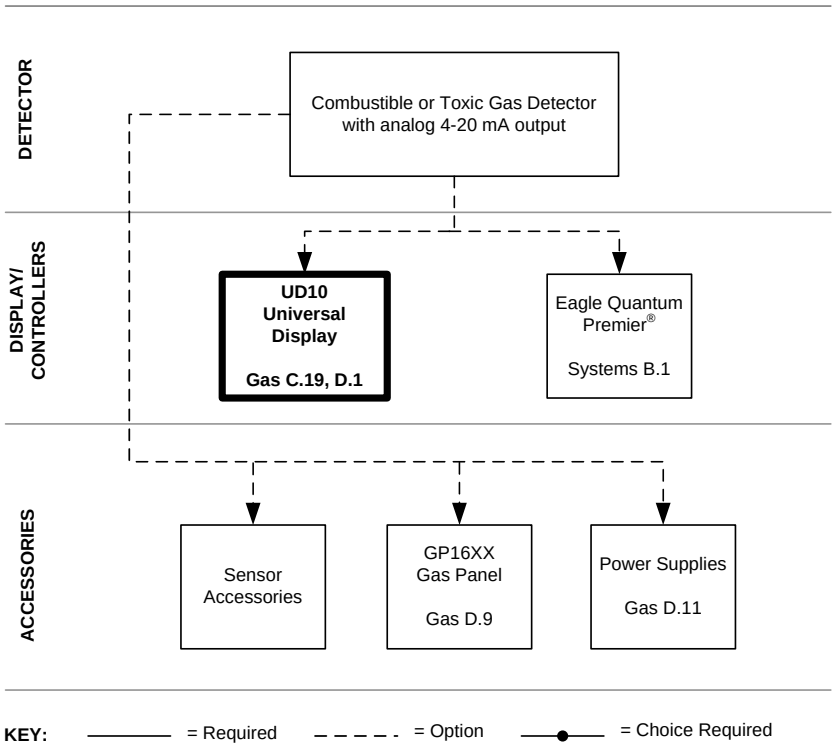
GD1 - Accessories

Model	Part Number	Description	Shipping Weight
GD1-X00-TT01	011995-001	Alignment kit: laser pointer, carry case	
GD1-X00-TT02	011996-001	Gas test cell with carry case	
GD1-X00-TB01	011997-001	Bracket/Multiposition installation plate (SS316)	
GD1-J00-TC01	011998-001	Junction box RX	
GD1-J00-TC02	011999-001	Junction box TX	
N/A	103922-001	HART 475 Field Communicator	7.5 lb (3.4 kg)

FlexVu® UD10 Universal Display (for Toxics)

FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with Det-Tronics' toxic gas sensor/transmitters such as GT3000, NTMOS or C706x. The display unit is designed and approved as a stand-alone controller and performs all the functions of a gas controller.

- Compliance to ISA-92.0.01 Part 1 peformance standard, and EN50104 for oxygen depletion
- IECEx, FM, CSA, ATEX, CE hazardous location certifications
- Eagle Quantum Premier compatible
- Universal design supports a variety of Det-Tronics' sensors/detectors
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART
- IP66 rated



FlexVu UD10 Model Matrix

MODEL	DESCRIPTION
UD10	Universal Display Unit

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
5M	5 Port, Metric M25
5N	5 Port, 3/4" NPT

TYPE	OUTPUTS
25	Relay, 4-20mA, RS485, HART
28	EQP / DCU Emulator

TYPE	APPROVAL
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION (Div/Zone)
2	Ex d (Flameproof)

TYPE	OPTIONAL CONDITIONING BOARD
N	NTMOS

FlexVu UD10 Universal Display - Toxics

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD10A5M25W2	010765-001	AL	M25	X			X	4.2 lb (1.9 kg)
UD10A5N25W2	010765-002	AL	3/4 NPT	X			X	4.2 lb (1.9 kg)
UD10S5M25W2	010765-003	316 SS	M25	X			X	10.5 lb (4.8 kg)
UD10S5N25W2	010765-004	316 SS	3/4 NPT	X			X	10.5 lb (4.8 kg)
UD10A5M28W2	010765-005	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28W2	010765-006	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28W2	010765-007	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28W2	010765-008	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M25W2N	010252-001	AL	M25	X		NTMOS	X	4.2 lb (1.9 kg)
UD10A5N25W2N	010252-002	AL	3/4 NPT	X		NTMOS	X	4.2 lb (1.9 kg)
UD10S5M25W2N	010252-003	316 SS	M25	X		NTMOS	X	10.5 lb (4.8 kg)
UD10S5N25W2N	010252-004	316 SS	3/4 NPT	X		NTMOS	X	10.5 lb (4.8 kg)

TOXICS

FlexVu UD10 Universal Display - Toxics - Brazil

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	INMETRO (Brazil)	Ship Weight
UD10A5M25B2	010765-081	AL	M25	X		X	4.2 lb (1.9 kg)
UD10A5N25B2	010765-082	AL	3/4 NPT	X		X	4.2 lb (1.9 kg)
UD10S5M25B2	010765-083	316 SS	M25	X		X	10.5 lb (4.8 kg)
UD10S5N25B2	010765-084	316 SS	3/4 NPT	X		X	10.5 lb (4.8 kg)
UD10A5M28B2	010765-085	AL	M25		X	X	4.2 lb (1.9 kg)
UD10A5N28B2	010765-086	AL	3/4 NPT		X	X	4.2 lb (1.9 kg)
UD10S5M28B2	010765-087	316 SS	M25		X	X	10.5 lb (4.8 kg)
UD10S5N28B2	010765-088	316 SS	3/4 NPT		X	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display - Toxics - Russia

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	VNIIFTRI (Russia)	Ship Weight
UD10A5M25R2	010765-901	AL	M25	X			X	4.2 lb (1.9 kg)
UD10A5N25R2	010765-902	AL	3/4 NPT	X			X	4.2 lb (1.9 kg)
UD10S5M25R2	010765-903	316 SS	M25	X			X	10.5 lb (4.8 kg)
UD10S5N25R2	010765-904	316 SS	3/4 NPT	X			X	10.5 lb (4.8 kg)
UD10A5M28R2	010765-905	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28R2	010765-906	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28R2	010765-907	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28R2	010765-908	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M25R2N	010252-901	AL	M25	X		NTMOS	X	4.2 lb (1.9 kg)
UD10A5N25R2N	010252-902	AL	3/4 NPT	X		NTMOS	X	4.2 lb (1.9 kg)
UD10S5M25R2N	010252-903	316 SS	M25	X		NTMOS	X	10.5 lb (4.8 kg)
UD10S5N25R2N	010252-904	316 SS	3/4 NPT	X		NTMOS	X	10.5 lb (4.8 kg)

FlexVu UD10 Upgrade Kit - Toxics

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UPGRADE KIT UD10A5M25W2	010970-001	AL	M25	X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N25W2	010970-002	AL	3/4 NPT	X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M25W2	010970-003	316 SS	M25	X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N25W2	010970-004	316 SS	3/4 NPT	X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M28W2	010970-005	AL	M25		X	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N28W2	010970-006	AL	3/4 NPT		X	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M28W2	010970-007	316 SS	M25		X	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N28W2	010970-008	316 SS	3/4 NPT		X	X	8.7 lb (3.9 kg)

FlexVu UD10 Spare Modules

Part Number	Description	Output	Ship Weight
010569-001	UD10 Display Module	Relay/4-20mA	1 lb (0.45 kg)
010535-001	UD10 Display Module	EQP/DCU	1 lb (0.45 kg)

FlexVu UD10 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010268-001	Gas Inspector CD	<1 lb (0.45 kg)
010204-001	W6300G1003 Gas Inspector Connector (includes CD)	1 lb (0.45 kg)
102988-002	Plug, 5.0mm, 6 Position - P2	<1 lb (0.45 kg)
102988-026	Plug, 5.0mm, 3 Position - P1 (J10, CGS)	<1 lb (0.45 kg)
102988-028	Plug, 5.0mm, 5 Position - (J3, CGS)	<1 lb (0.45 kg)
103726-002	Plug, 3.5mm, 3 Position - J2	<1 lb (0.45 kg)
103726-004	Plug, 3.5mm, 5 Position - J3	<1 lb (0.45 kg)
103726-011	Plug, 3.5mm, 12 Position - J4	<1 lb (0.45 kg)

FlexVu UD10 Miscellaneous Spare Parts

Part Number	Description	Ship Weight
011919-001	UD10/NTMOS REPLACEMENT BOARD	<1 lb (<0.45 kg)

Stop Plugs and Reducers

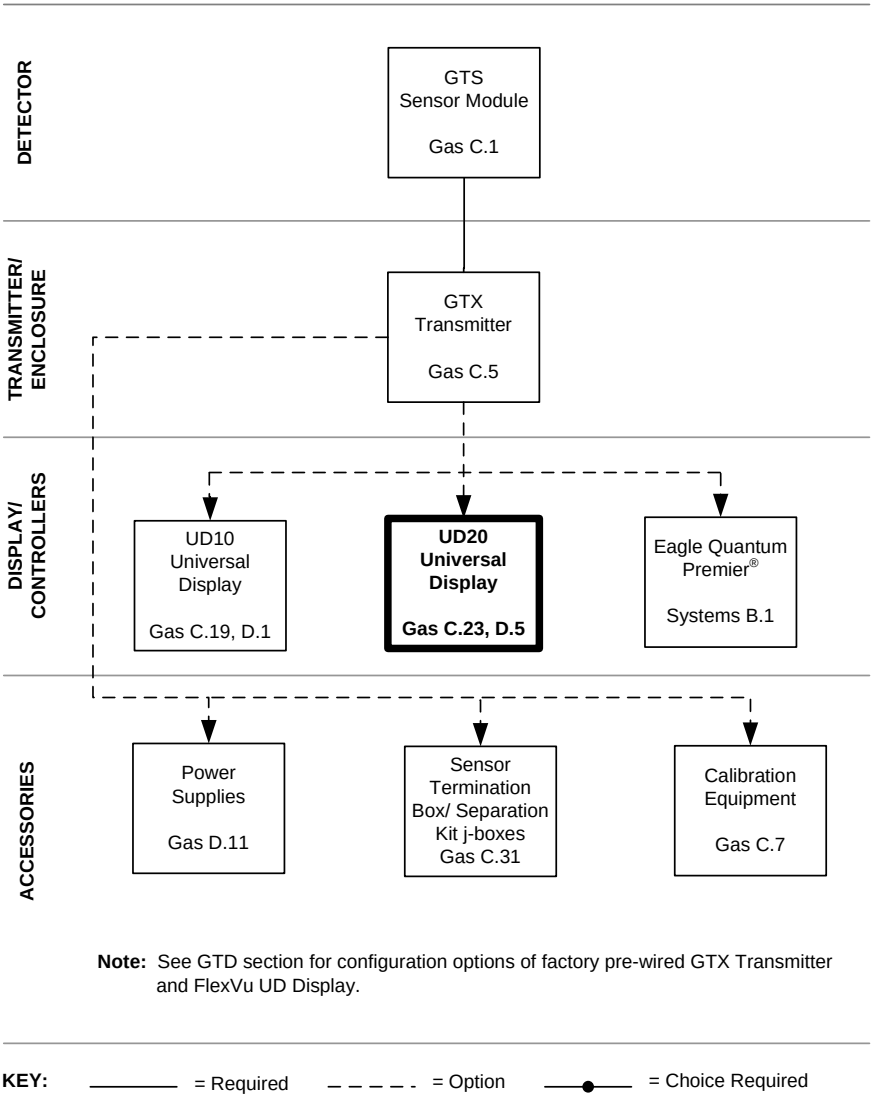
Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

FlexVu® UD20 Universal Display

FlexVu UD20 Universal Display (Spec Sheet: 90-1201 - Explosion Proof Model, 90-1205 - Intrinsically Safe Model) supports the GT3000 Series toxic gas detectors.

- Compliance to ANSI/ISA-60079-11 and ISA-92.0.01 Part 1 peformance standard
- LCD display
- Non-intrusive automatic calibration
- Non-intrusive menu system
- Linear 4-20 mA output with HART
- Explosion proof design
- IP66 rated
- 2 wire loop powered
- Non interfering with GT3000 SIL model



Note: See GTD section for configuration options of factory pre-wired GTX Transmitter and FlexVu UD Display.

FlexVu UD20 Model Matrix

MODEL	DESCRIPTION				
UD20	Universal Display Unit				
	TYPE	MATERIAL			
	A	Aluminum			
	S	Stainless Steel (316)			
		TYPE	THREAD TYPE		
		5M	5 Port, Metric M25		
		5N	5 Port, 3/4" NPT		
			TYPE	OUTPUTS	
			26	Pass-Through 4-20mA, HART	
				TYPE	APPROVALS
				W	FM/CSA/ATEX/CE/IECEx
				B	INMETRO (BRAZIL)
				R	VNIIFTRI (RUSSIA)
					TYPE	CLASSIFICATION (Div/Zone)
					2	Ex d (Flameproof)

FlexVu UD20 Universal Display

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD20A5M26W2	009791-001	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26W2	009791-002	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26W2	009791-003	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26W2	009791-004	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

FlexVu UD20 Universal Display - Brazil

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	INMETRO (Brazil)	Ship Weight
UD20A5M26B2	009791-081	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26B2	009791-082	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26B2	009791-083	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26B2	009791-084	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

FlexVu UD20 Universal Display - Russia

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	VNIIFTRI (Russia)	Ship Weight
UD20A5M26R2	009791-901	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26R2	009791-902	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26R2	009791-903	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26R2	009791-904	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

TOXICS

FlexVu UD20 Spares

Part Number	Description	Pass-Through 4-20 / HART	Ship Weight
009793-002	UD20 Display Module	X	1 lb (0.45 kg)

FlexVu UD20 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010253-001	Kit, 250Ω Terminating Resistor	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

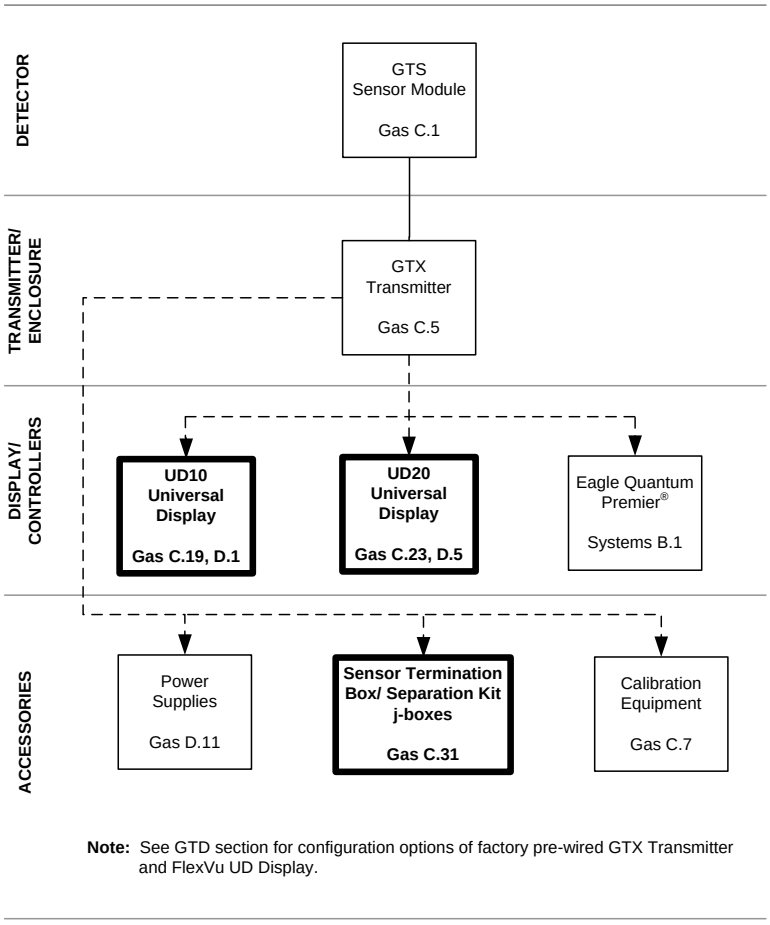
*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

GTD Toxic Gas Detector Assembly (GT3000 Series Toxic Gas Transmitter with FlexVu Universal Display or Separation J-Box)

GTD Toxic Gas Detector Assembly incorporates a GT3000 series toxic transmitter (GTX) with a FlexVu universal display (UD) or junction box (STB). The GTS toxic gas sensor module is sold separately.

- Non-intrusive automatic calibration
- Non-intrusive menu system
- Linear 4-20 mA output with HART
- Permits easy installation for heavy or light toxic gas with the STB preconnection
- Explosion proof design
- Optional relay and RS485 package
- IP66 rated



Note: See GTD section for configuration options of factory pre-wired GTX Transmitter and FlexVu UD Display.

GTD Model Matrix

MODEL	DESCRIPTION					
GTD	Toxic Gas Detector Assembly					
	TYPE	ASSEMBLY COMBINATION				
	1	GTX Transmitter and UD10 Display				
	2	GTX Transmitter and UD20 Display				
	3	GTX Transmitter and STB Termination Box				
		TYPE	HOUSING MATERIAL			
		A	Aluminum			
		S	Stainless Steel			
			TYPE	THREAD TYPE		
			M	Metric M25		
			N	3/4" NPT		
				TYPE	OUTPUTS	
				25	Relay, 4-20mA, RS485, HART (UD10 Only)	
				26	4-20mA, HART (STB)	
					TYPE	APPROVAL
					W	FM/CSA/ATEX/CE/IECEx
						TYPE / CLASSIFICATION (Div/Zone)
						2 / Ex d (Flameproof)

GTX/UD Display Assembly

Model	Part Number	Material	Threads	4-20 HART	Relay 4-20 RS485 HART	Ex d	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
GTD1AM25W2	009736-001	AL	M25		X	X	X	6.5 lb (3 kg)
GTD1AN25W2	009736-002	AL	3/4 NPT		X	X	X	6.5 lb (3 kg)
GTD1SM25W2	009736-003	316 SS	M25		X	X	X	12.5 lb (6 kg)
GTD1SN25W2	009736-004	316 SS	3/4 NPT		X	X	X	12.5 lb (6 kg)
GTD2AM26W2	009736-005	AL	M25	X		X	X	6.5 lb (3 kg)
GTD2AN26W2	009736-006	AL	3/4 NPT	X		X	X	6.5 lb (3 kg)
GTD2SM26W2	009736-007	316 SS	M25	X		X	X	12.5 lb (6 kg)
GTD2SN26W2	009736-008	316 SS	3/4 NPT	X		X	X	12.5 lb (6 kg)

GTX/STB Assembly

Model	Part Number	Material	Threads	Ex d	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
GTD3AM26W2	009643-001	AL	M25	X	X	4.5 lb (2.1 kg)
GTD3AN26W2	009643-002	AL	3/4 NPT	X	X	4.5 lb (2.1 kg)
GTD3SM26W2	009643-003	316 SS	M25	X	X	5.5 lb(2.5 kg)
GTD3SN26W2	009643-004	316 SS	3/4 NPT	X	X	5.5 lb(2.5 kg)

Stop Plugs and Reducers

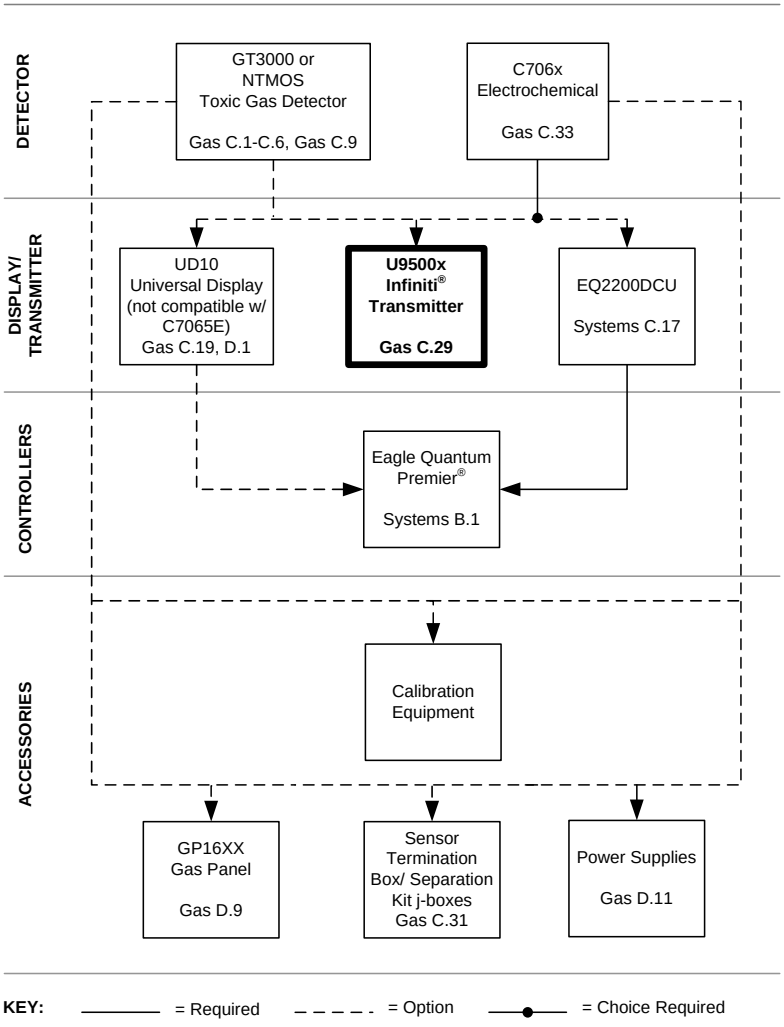
Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

U9500 Infiniti® Transmitter

U9500 Infiniti Transmitter (Spec Sheet: 90-1099). For use with a single NTMOS, low fault current GT3000, or C706x electrochemical toxic gas detector.

- Linear isolated 4-20 mA output
- Eight character LCD display
- Non-intrusive automatic calibration
- Easy push button configuration
- Base version provides analog output only
- Optional relay package (three alarm, one fault)
- Extensive fault diagnostics
- Stainless steel or aluminum junction box option
- Optional reset/calibration pushbutton is pre-installed on some junction boxes (recommended where magnets are not preferred)



U9500 Infiniti Model Matrix

MODEL	DESCRIPTION	
U9500	Infiniti Gas Transmitter	
	TYPE	**GAS**
	B20	H2S - Hydrogen Sulfide
	C30	O2 - Oxygen
	D40	CL2 - Chlorine
	E50	CO - Carbon Monoxide
	F60	SO2 - Sulfur Dioxide
	G60	NO2 - Nitrogen Dioxide
	TYPE	**OUTPUT**
	01 or 02	4-20 mA
	04	Relay and 4-20 mA

U9500 Infiniti Toxic Transmitter and Junction Boxes (must be ordered separately)

Model	Part Number	Used with sensor type:	Relay	FM/CSA/ ATEX/CE	CSA/ ATEX/CE	Ship Weight
U9500B2002	006265-002	NTMOS or C7064E - H2S		X		1 lb (0.46 kg)
U9500B2004	006265-008	NTMOS or C7064E - H2S	X	X		1 lb (0.46 kg)
U9500D4002	006265-004	C7067E - CL2			X	1 lb (0.46 kg)
U9500D4004	006265-010	C7067E - CL2	X		X	1 lb (0.46 kg)
U9500E5002	006265-005	C7066E - CO			X	1 lb (0.46 kg)
U9500E5004	006265-011	C7066E - CO	X		X	1 lb (0.46 kg)
U9500F6002	006265-015	C7068E - SO2			X	1 lb (0.46 kg)
U9500F6004	006265-016	C7068E - SO2	X		X	1 lb (0.46 kg)
U9500C3002	006265-006	C7065E - O2			X	1 lb (0.46 kg)
U9500C3004	006265-012	C7065E - O2	X		X	1 lb (0.46 kg)

Junction Boxes for U9500 Infiniti

Part Number	# of Ports	Thread	Material	FM/CSA/ ATEX/CE/ IECEx	Russian	Ship Weight
006264-029	5	3/4 NPT	AL	X		3.15 lb (1.43 kg)
006264-043	5	3/4 NPT	SS	X		9.5 lb (4.3 kg)
006264-044	5	M25	AL	X		3.15 lb (1.43 kg)
006264-045	5	M25	SS	X		9.5 lb (4.3 kg)
006264-944	5	M25	AL		X	3.15 lb (1.43 kg)
006264-945	5	M25	SS		X	9.5 lb (4.3 kg)
006264-034	5	3/4 NPT - PB*	AL	X		3.15 lb (1.43 kg)
006264-036	5	3/4 NPT - PB*	SS	X		9.5 lb (4.3 kg)

* Explosion-proof pushbutton occupies one of the available conduit entries.

Stop Plugs and Reducers

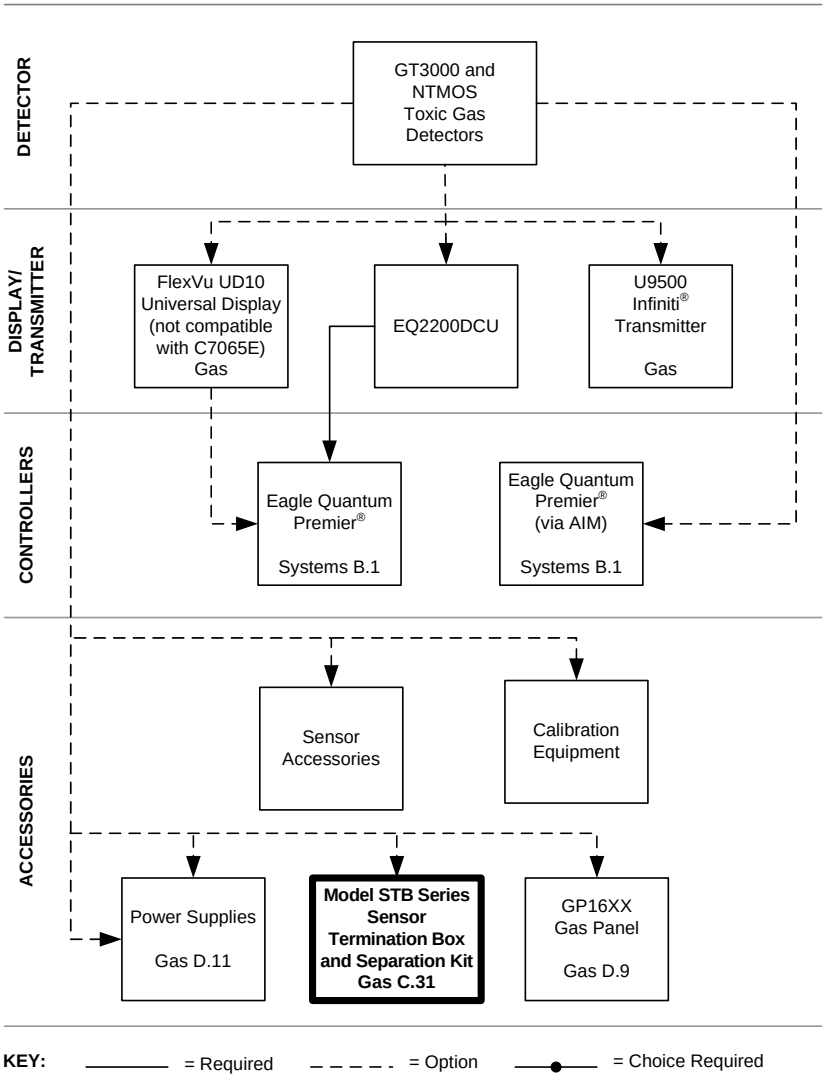
Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

Model STB Sensor Termination Box and Separation Kit

Model STB Series Sensor Termination Box and Separation Kit (Manual: 95-8655) includes a junction box, proper connector board, required hardware to enable proper mounting, and wiring of models GT3000, NTMOS, and C706x series detectors, or any 4-20 mA device.

- Enables remote installation of sensor for optimum gas detection while offering easy calibration access to FlexVu UD10, GDTB (NTMOS), or U9500 Infiniti
- One Sensor Termination Box per sensor is required



STB Model Matrix

MODEL	DESCRIPTION
STB	Sensor Termination Box

TYPE	COMPATIBILITY
3	Model C706x electrochmical gas sensor/transmitter
7	GT3000 and NTMOS Toxic Gas Detectors

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	# OF PORTS, THREAD TYPE
2M	2 PORT, M20/25 at 90 degree orientation
2N	2 PORT, 3/4" NPT at 90 degree orientation
5Y	5 PORT, M25
5N	5 PORT, 3/4" NPT

TYPE	APPROVALS
W	FM/CSA/ATEX/CE/IECEx
R	VNIIFTRI (RUSSIA)

Model STB Sensor Termination Boxes / Separation Kits

Model	Part Number	Use With	Material	Ports*	Threads**	FM/CSA/ ATEX/CE/ IECEx	Russia	Ship Weight
STB7A5YW	226365-601	GT3000/NTMOS	AL	5	M25	X		2.2 lb (1.0 kg)
STB7A5NW	226365-602	GT3000/NTMOS	AL	5	3/4 NPT	X		2.2 lb (1.0 kg)
STB7S5YW	226365-603	GT3000/NTMOS	SS	5	M25	X		3.0 lb (1.4 kg)
STB7S5NW	226365-604	GT3000/NTMOS	SS	5	3/4 NPT	X		3.0 lb (1.4 kg)
STB3A2NW	226365-133	C706x toxics	AL	2 (L)	3/4 NPT	X		2.2 lb (1.0 kg)
STB3S5YW	226365-143	C706x toxics	SS	5	M25	X		3.0 lb (1.4 kg)
STB3A2MW	226365-138	C706x toxics	AL	2 (L)	M20/M25	X		2.2 lb (1.0 kg)
STB3A2MR	226365-911	C706x toxics	AL	2 (L)	M20/M25		X	2.2 lb (1.0 kg)

* "L" designates 90 degree conduit entry orientation, "ST" designates straight-thru orientation, "T" designates 3-port orientation

** If two numbers are listed, the first number is for detector entry and the second number is for field cabling

TOXICS

Spare and Replacement Parts

Electrochemical Sensor Cell

Part Number	Toxic Gas	Measurement Range (PPM)	FM/CSA/ ATEX/CE
005434-003*	Hydrogen Sulfide	0-20	X
005434-004*	Hydrogen Sulfide	0-50	X
005434-002	Hydrogen Sulfide	0-100	X
005932-001	Chlorine	0-10	
005744-001	Carbon Monoxide	0-100	
005744-002	Carbon Monoxide	0-500	
005744-003	Carbon Monoxide	0-1000	
006400-001	Sulfur Dioxide	0-100	
005724-001	Oxygen	0-25% v/v	

Recommended for use with C7064E housings installed with U9500B Infiniti Transmitter only.
Shipping weight for sensor cells is 2 oz. (.1 kg)

NOTES

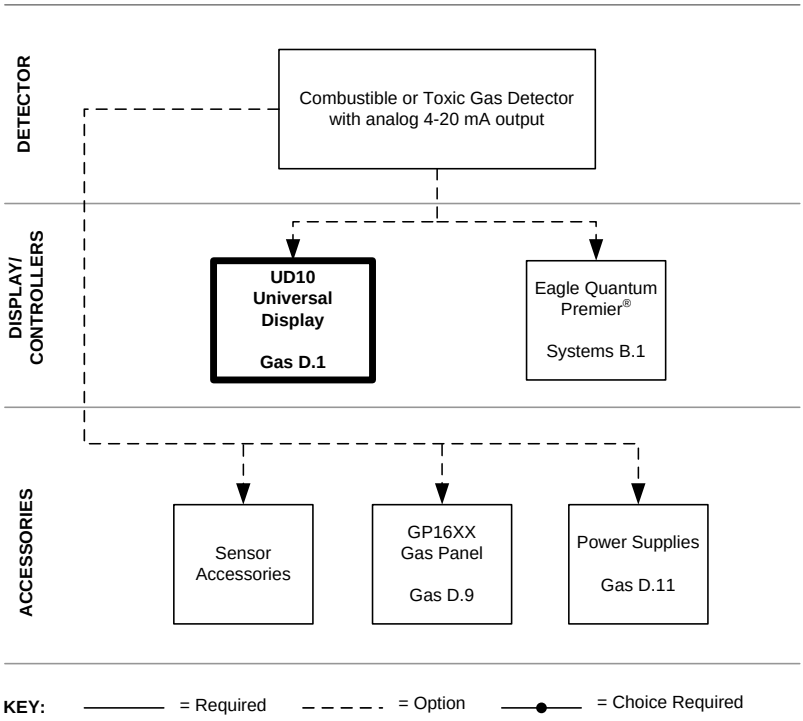
NOTES

DISPLAYS AND CONTROLLERS

FlexVu® UD10 Universal Display

FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications that require a gas detector with digital read-out of detected gas levels. The FlexVu UD10 Universal Display Unit is designed for use with Det-Tronics' gas sensor/transmitters. The display unit is designed and approved as a stand-alone device and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Compliance to ISA-92.0.01 Part 1 performance standard, and EN50104 for oxygen depletion
- Performance certified to FM 6310/6320, CSA 22.2 #152, ATEX EN60079-29-1, and IEC60079-29-1
- Approved as a stand-alone combustible gas and low concentration toxic controller, when using the relay contacts
- IECEx, FM, CSA, ATEX, CE hazardous location certifications
- Eagle Quantum Premier compatible
- Universal design supports a variety of Det-Tronics' sensors/detectors
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated and backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART
- IP66 rated



FlexVu UD10 Model Matrix

MODEL	DESCRIPTION
UD10	Universal Display Unit

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
5M	5 Port, Metric M25
5N	5 Port, 3/4" NPT

TYPE	OUTPUTS
25	Relay, 4-20mA, RS485, HART
28	EQP / DCU Emulator

TYPE	APPROVAL
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION (Div/Zone)
2	Ex d (Flameproof)

TYPE	OPTIONAL CONDITIONING BOARD
C	CGS
N	NTMOS

FlexVu UD10 Universal Display

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD10A5M25W2	010765-001	AL	M25	X			X	4.2 lb (1.9 kg)
UD10A5N25W2	010765-002	AL	3/4 NPT	X			X	4.2 lb (1.9 kg)
UD10S5M25W2	010765-003	316 SS	M25	X			X	10.5 lb (4.8 kg)
UD10S5N25W2	010765-004	316 SS	3/4 NPT	X			X	10.5 lb (4.8 kg)
UD10A5M28W2	010765-005	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28W2	010765-006	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28W2	010765-007	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28W2	010765-008	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M25W2C	010254-001	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25W2C	010254-002	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25W2C	010254-003	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25W2C	010254-004	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28W2C	010254-005	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28W2C	010254-006	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28W2C	010254-007	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28W2C	010254-008	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)
UD10A5M25W2N	010252-001	AL	M25	X		NTMOS	X	4.2 lb (1.9 kg)
UD10A5N25W2N	010252-002	AL	3/4 NPT	X		NTMOS	X	4.2 lb (1.9 kg)
UD10S5M25W2N	010252-003	316 SS	M25	X		NTMOS	X	10.5 lb (4.8 kg)
UD10S5N25W2N	010252-004	316 SS	3/4 NPT	X		NTMOS	X	10.5 lb (4.8 kg)

DISPLAYS AND CONTROLLERS

FlexVu UD10 Universal Display - Brazil

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	INMETRO (Brazil)	Ship Weight
UD10A5M25B2	010765-081	AL	M25	X			X	4.2 lb (1.9 kg)
UD10A5N25B2	010765-082	AL	3/4 NPT	X			X	4.2 lb (1.9 kg)
UD10S5M25B2	010765-083	316 SS	M25	X			X	10.5 lb (4.8 kg)
UD10S5N25B2	010765-084	316 SS	3/4 NPT	X			X	10.5 lb (4.8 kg)
UD10A5M28B2	010765-085	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28B2	010765-086	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28B2	010765-087	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28B2	010765-088	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M25B2C	010254-081	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25B2C	010254-082	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25B2C	010254-083	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25B2C	010254-084	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28B2C	010254-085	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28B2C	010254-086	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28B2C	010254-087	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28B2C	010254-088	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display - Russia

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	VNIIFTRI (Russia)	Ship Weight
UD10A5M25R2	010765-901	AL	M25	X			X	4.2 lb (1.9 kg)
UD10A5N25R2	010765-902	AL	3/4 NPT	X			X	4.2 lb (1.9 kg)
UD10S5M25R2	010765-903	316 SS	M25	X			X	10.5 lb (4.8 kg)
UD10S5N25R2	010765-904	316 SS	3/4 NPT	X			X	10.5 lb (4.8 kg)
UD10A5M28R2	010765-905	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28R2	010765-906	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28R2	010765-907	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28R2	010765-908	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M25R2C	010254-901	AL	M25	X		CGS	X	4.2 lb (1.9 kg)
UD10A5N25R2C	010254-902	AL	3/4 NPT	X		CGS	X	4.2 lb (1.9 kg)
UD10S5M25R2C	010254-903	316 SS	M25	X		CGS	X	10.5 lb (4.8 kg)
UD10S5N25R2C	010254-904	316 SS	3/4 NPT	X		CGS	X	10.5 lb (4.8 kg)
UD10A5M28R2C	010254-905	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28R2C	010254-906	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28R2C	010254-907	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28R2C	010254-908	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)
UD10A5M25R2N	010252-901	AL	M25	X		NTMOS	X	4.2 lb (1.9 kg)
UD10A5N25R2N	010252-902	AL	3/4 NPT	X		NTMOS	X	4.2 lb (1.9 kg)
UD10S5M25R2N	010252-903	316 SS	M25	X		NTMOS	X	10.5 lb (4.8 kg)
UD10S5N25R2N	010252-904	316 SS	3/4 NPT	X		NTMOS	X	10.5 lb (4.8 kg)

FlexVu UD10 Upgrade Kit

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UPGRADE KIT UD10A5M25W2	010970-001	AL	M25	X			X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N25W2	010970-002	AL	3/4 NPT	X			X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M25W2	010970-003	316 SS	M25	X			X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N25W2	010970-004	316 SS	3/4 NPT	X			X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M28W2	010970-005	AL	M25		X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N28W2	010970-006	AL	3/4 NPT		X		X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M28W2	010970-007	316 SS	M25		X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N28W2	010970-008	316 SS	3/4 NPT		X		X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M25W2C	010971-001	AL	M25	X		CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N25W2C	010971-002	AL	3/4 NPT	X		CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M25W2C	010971-003	316 SS	M25	X		CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N25W2C	010971-004	316 SS	3/4 NPT	X		CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10A5M28W2C	010971-005	AL	M25		X	CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10A5N28W2C	010971-006	AL	3/4 NPT		X	CGS	X	3.5 lb (1.6 kg)
UPGRADE KIT UD10S5M28W2C	010971-007	316 SS	M25		X	CGS	X	8.7 lb (3.9 kg)
UPGRADE KIT UD10S5N28W2C	010971-008	316 SS	3/4 NPT		X	CGS	X	8.7 lb (3.9 kg)

FlexVu UD10 Spare Modules

Part Number	Description	Output	Ship Weight
010569-001	UD10 Display Module	Relay/4-20mA	1 lb (0.45 kg)
010535-001	UD10 Display Module	EQP/DCU	1 lb (0.45 kg)

FlexVu UD10 Miscellaneous Spare Parts

Part Number	Description	Ship Weight
010973-001	UD10/CGS REPLACEMENT BOARD	<1 lb (<0.45 kg)
011919-001	UD10/NTMOS REPLACEMENT BOARD	<1 lb (<0.45 kg)

FlexVu UD10 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010268-001	Gas Inspector CD	<1 lb (0.45 kg)
010204-001	W6300G1003 Gas Inspector Connector (includes CD)	1 lb (0.45 kg)
102988-002	Plug, 5.0mm, 6 Position - P2	<1 lb (0.45 kg)
102988-026	Plug, 5.0mm, 3 Position - P1 (J10, CGS)	<1 lb (0.45 kg)
102988-028	Plug, 5.0mm, 5 Position - (J3, CGS)	<1 lb (0.45 kg)
103726-002	Plug, 3.5mm, 3 Position - J2	<1 lb (0.45 kg)
103726-004	Plug, 3.5mm, 5 Position - J3	<1 lb (0.45 kg)
103726-011	Plug, 3.5mm, 12 Position - J4	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

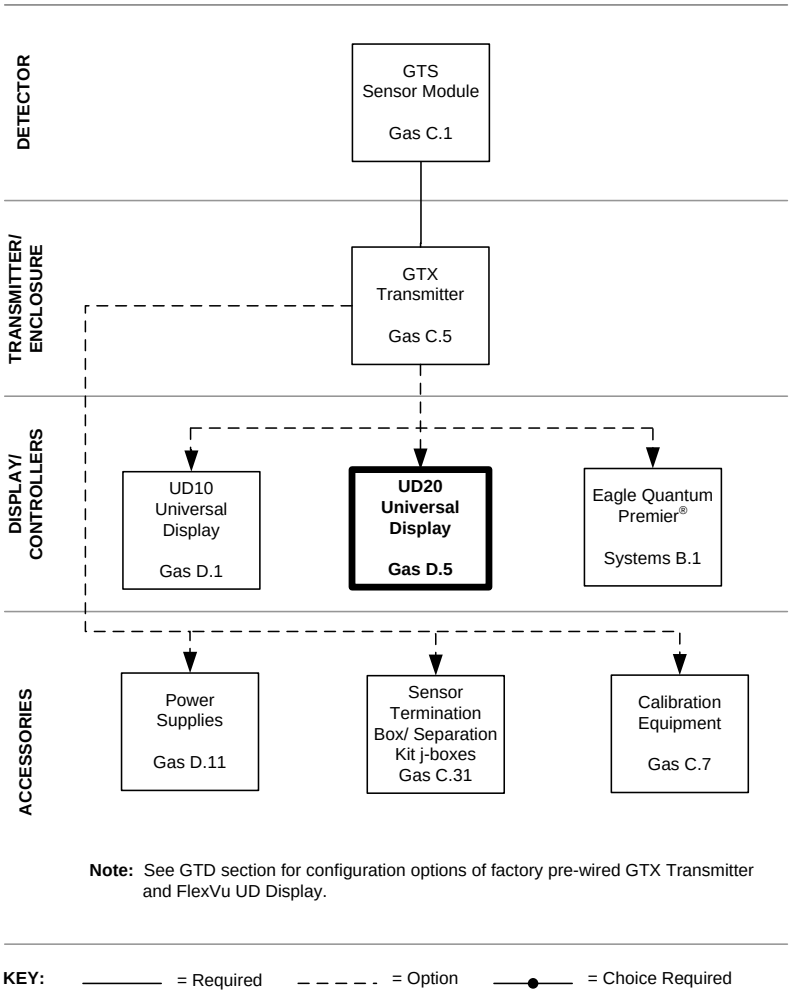
*NEMA 4/IP66 rating requires addition of Teflon tape.

DISPLAYS AND CONTROLLERS

FlexVu® UD20 Universal Display

FlexVu UD20 Universal Display (Spec Sheet: 90-1201) supports the GT3000 Series toxic gas detectors.

- LCD display
- Non-intrusive automatic calibration
- Non-intrusive menu system
- Linear 4-20 mA output with HART
- Explosion proof design
- IP66 rated
- 2 wire loop powered
- SIL non interfering



Note: See GTD section for configuration options of factory pre-wired GTX Transmitter and FlexVu UD Display.

KEY: = Required = Option = Choice Required

FlexVu UD20 Model Matrix

MODEL	DESCRIPTION				
UD20	Universal Display Unit				
	TYPE	**MATERIAL**			
	A	Aluminum			
	S	Stainless Steel (316)			
		TYPE	**THREAD TYPE**		
		5M	5 Port, Metric M25		
		5N	5 Port, 3/4" NPT		
			TYPE	**OUTPUTS**	
			26	Pass-Through 4-20mA, HART	
				TYPE	**APPROVALS**
				W	FM/CSA/ATEX/CE/IECEx
				B	INMETRO (BRAZIL)
				R	VNIIFTRI (RUSSIA)
					TYPE / **CLASSIFICATION (Div/Zone)**
					2 / Ex d (Flameproof)

FlexVu UD20 Universal Display

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD20A5M26W2	009791-001	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26W2	009791-002	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26W2	009791-003	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26W2	009791-004	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

FlexVu UD20 Universal Display - Brazil

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	INMETRO (Brazil)	Ship Weight
UD20A5M26B2	009791-081	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26B2	009791-082	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26B2	009791-083	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26B2	009791-084	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

FlexVu UD20 Universal Display - Russia

Model	Part Number	Material	Threads	Pass-Through 4-20 HART	Ex d	VNIIFTRI (Russia)	Ship Weight
UD20A5M26R2	009791-901	AL	M25	X	X	X	4.2 lb (1.9 kg)
UD20A5N26R2	009791-902	AL	3/4 NPT	X	X	X	4.2 lb (1.9 kg)
UD20S5M26R2	009791-903	316 SS	M25	X	X	X	10.5 lb (4.8 kg)
UD20S5N26R2	009791-904	316 SS	3/4 NPT	X	X	X	10.5 lb (4.8 kg)

DISPLAYS AND CONTROLLERS

FlexVu UD20 Spares

Part Number	Description	Pass-Through 4-20 / HART	Ship Weight
009793-002	UD20 Display Module	X	1 lb (0.45 kg)

FlexVu UD20 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010253-001	Kit, 250Ω Terminating Resistor	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

DISPLAYS AND CONTROLLERS

Model GP16XX Gas Panel

Model GP16XX Gas Panel (Spec Sheet: 90-1210) is an economical system package, designed for selected gas detection applications.

- Stand-alone controller approved to ANSI/ISA12 and 92, FM 3610-6, CSA 22.2, EN60079-29-1.
- Utilizes Eagle Quantum Premier (EQP)
- 16 gas detection points available
- Flexible device communication protocol (LON and/or 4-20 mA)
- User friendly HMI touch screen
- User configurable
- User defined alarm set-points
- Sounder on panel
- 24.0in (60.96mm) x 24.0in (60.96mm) x 6.4in (16.2mm)
- Common relay outputs available from controller

Model GP16XX Gas Panel

Model	# AIM Modules	FM/CSA/ ATEX/CE	Ship Weight
GP1600	0	X	26.5 lb (12.0 kg)
GP1610	1	X	27.5 lb (12.5 kg)
GP1620	2	X	28.5 lb (13.0 kg)

MODEL GP16XX INCLUDES

Below is a list of system components that are included or optional in the Model GP16XX Gas Panel system:

- EQP Controller – 16 node (included)
- EQ3710 AIM – Analog Input Module (optional, up to qty 2)
- EQ2220 GFM – Ground Fault Monitor (included)
- Power Supply – 24 Vdc, 10A (included)

EQP SYSTEM COMPONENTS

Below is a list of field devices compatible with the Model GP16XX Gas Panel system:

- PIRECL – PointWatch Eclipse
- UD10/DCU – FlexVu Universal Display
- EQ22XX DCU – Digital Communication Unit
- EQ22XX DCUEX – Digital Communication Unit
- Any 4-20 mA Device (via Analog Input Module)

GP16XX Configuration Worksheet

DET-TRONICS
A UTC Fire & Security Company

DETECTOR ELECTRONICS CORPORATION
6901 West 110th Street
Minneapolis, MN 55438

MODEL GP16XX GAS PANEL CONFIGURATION WORKSHEET

Date:	
Customer:	
PO#:	

HARDWARE:

Maximum number of field devices is 16 (i.e. the total of B & C cannot exceed 16)

A	Number of Analog Input Modules – AIM (Maximum of 2)	
B	Number of 4-20 mA Field Devices (Maximum 8 per AIM)	
C	Number of LON Field Devices	

SOFTWARE:

Record detector model, gas range, low alarm, and high alarm set-points in the table below.

FACTORY DEFAULT: Range = 0-100 Low Alarm = 20 High Alarm = 40

NOTE: If factory defaults are acceptable rather than specified values check here ☐

CHANNEL	DETECTOR MODEL or PART #	RANGE (0-xxxx)	LOW ALARM SET POINT	HIGH ALARM SET POINT
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

08/11 Rev A

DISPLAYS AND CONTROLLERS

Power Supplies

EQP21XXPS Power Supplies can be used as singular or duplex. The power supply is available in a DIN rail mount or panel mount configuration for ease of mounting. Power supplies should be sized to approximately 50% of the normal requirement or to local code requirements.

EQP21XX Power Supply

Model	Part Number	Description	Ship Weight
EQP2120PS-B	010988-001*	EQP2120PS-B 20A 120/220V PANEL	3.7 lb (1.7 kg)
EQP2120PS	010988-002	EQP2120PS 20A 120/220V DIN	3.7 lb (1.7 kg)
EQP2110PS-P	010985-001*	EQP2110PS-P 10A 120/220V, PANEL	2.9 lb (1.3 kg)
EQP2110PS	010985-002	EQP2110PS 10A 120/220V, DIN	2.9 lb (1.3 kg)

*For FM/USCG approved system

NOTES

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OVERVIEW

Eagle Quantum Premier® System

The Eagle Quantum Premier System (Spec Sheet 90-1150) combines “fire detection and extinguishing agent release” and “hazardous gas monitoring” in one complete package. The system is intended for use in hazardous locations and is designed to meet the requirements of approval agencies from around the world. The system is Factory Mutual approved to 6310/6320 and compliant to ANSI/ISA 12.13.1 and CSA 22.2 #154. It is also ATEX certified to EN60079-29-1 for combustible gas.

The system consists of a controller and a number of addressable microprocessor-based field devices. The controller coordinates system device configuration, monitoring, annunciation, and control, while the field devices communicate their status and alarm conditions to the controller.

The controller communicates with the field devices through a digital communications link referred to as the LON communications loop. As the name infers, the network topology is laid out as a loop that begins and ends at the controller. All of the field devices are connected into the communication loop. The communication loop is a specialized design to meet the requirements of a Signaling Line Circuit (SLC).

The LON communication loop offers several key advantages:

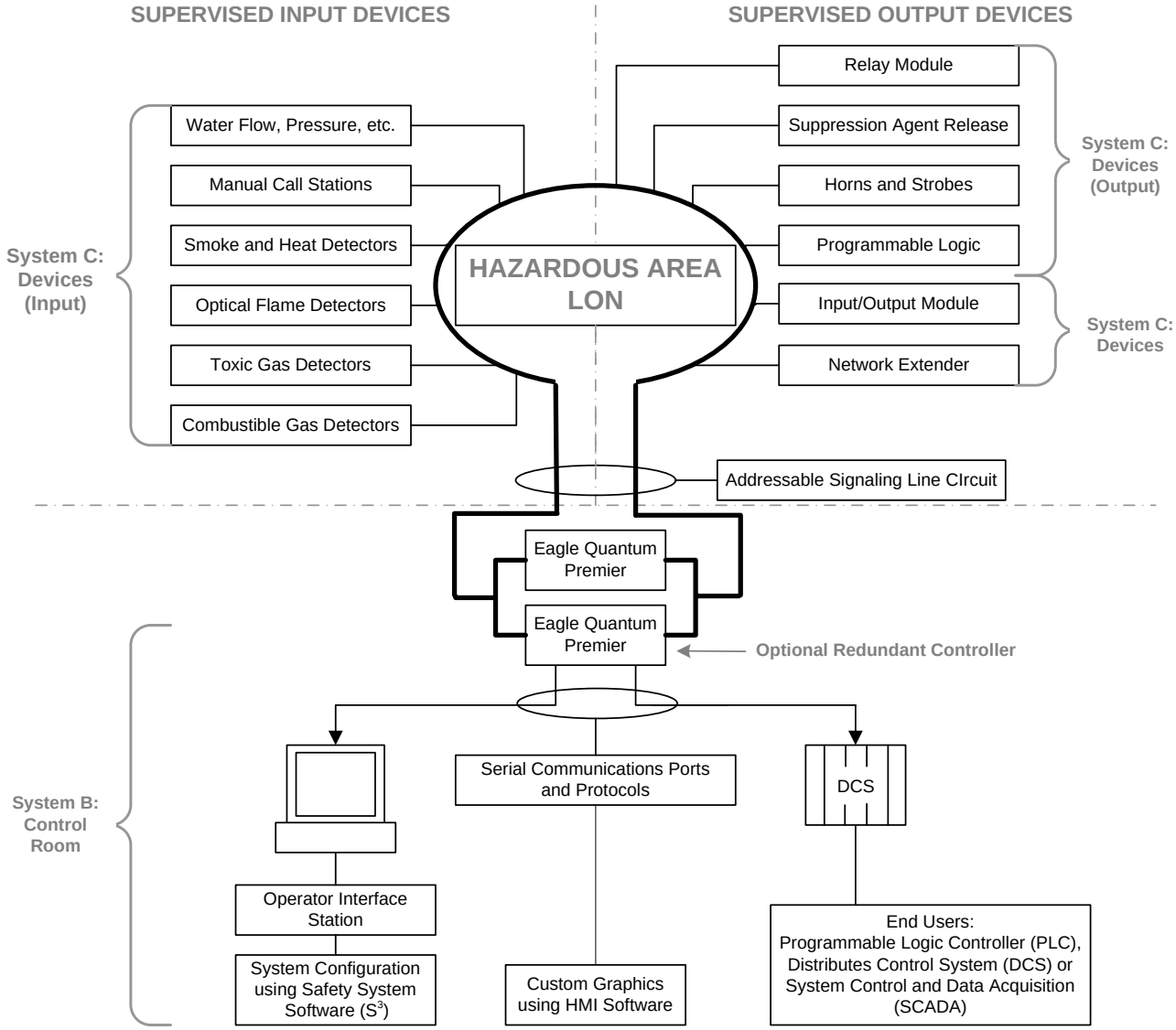
- ANSI/NFPA Class A, Style 7 performance of SLC
- Peer-to-peer communications
- Expandability

The controller continuously executes the user logic programs that are programmed into the controller. The user logic programs are set up in the same fashion as IEC 61131-3 programmable logic programmed into programmable logic controllers (PLCs). Function block diagram logic gates are tied together with inputs, outputs, and other logic gates to perform a specific task. A number of tasks can be tied together to perform a system function.

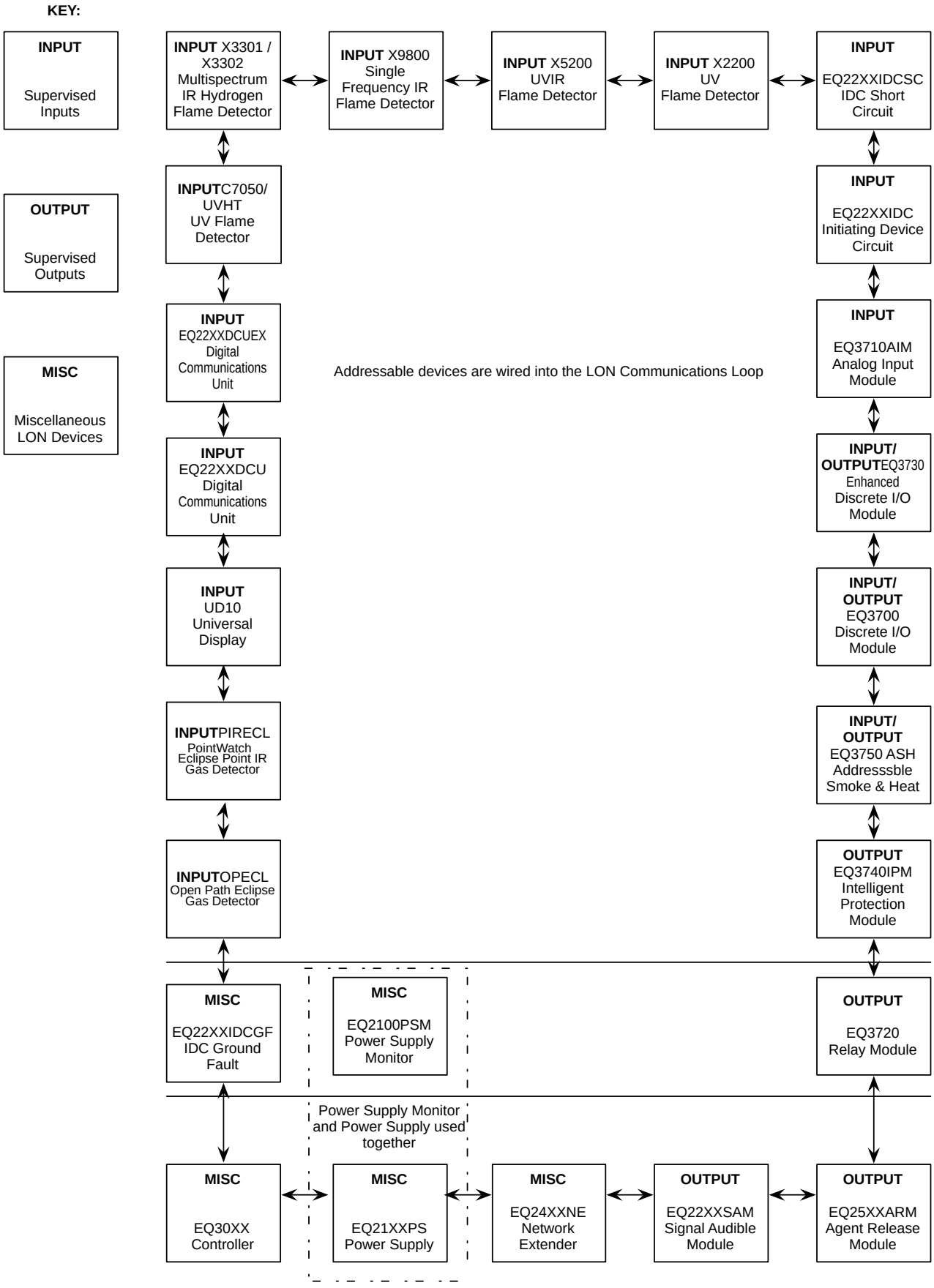
Typical programmed functions include flame/gas voting, timing delays, timing executions, latching conditions, alarm and trouble notification, suppression control, condition control, and process shutdown notification.

For complete system integration, the controller has the capability to communicate with other systems such as PLCs, distributed control systems (DCSs), and Supervisory Control and Data Acquisition (SCADA). Different communication protocols are supported, allowing the controller to communicate with other systems either directly or through communication gateways. The System Safety Software (S^3) package supports an OPC server option that can publish system information to OPC clients.

- Simplex and redundant operation
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Deluge and pre-action release capability for fire suppression
- Agent release capability for fire suppression
- Supports up to 246 addressable field devices
- Fault-tolerant LON communication loop
- Up to 32,800 feet (10,000 meters) of LON network communication wire
- Eagle Quantum Premier LON version of Det-Tronics’ flame and gas detectors
- Support for integrating third-party detectors (4-20 mA, “dry contact” type outputs or two wire smoke detectors) into EQP system
- Field devices have nonvolatile memory for alarm and calibration logging
- System and field device built-in system diagnostics
- IEC 61131-3 programmable logic
- Up to four Modbus RTU communication ports available
- ControlNet optional communication card (supports redundant communication channels)
- Compliance to FM 3010-2010 (Flame), ANSI/NFPA 72 2010 and NFPA 33
- Certified SIL-2 capable version available
- US Coast Guard type approval under 46 CFR 161.002.
- FM approved Proprietary Supervising Station System, defined in NFPA 72 2002


SUPERVISED INPUT DEVICES
SUPERVISED OUTPUT DEVICES
Relay Module
Water Flow, Pressure, etc.
Suppression Agent Release
Manual Call Stations
Horns and Strobes
System C: Devices (Output)
Smoke and Heat Detectors
Programmable Logic
System C: Devices (Input)
HAZARDOUS AREA LON
Optical Flame Detectors
Input/Output Module
System C: Devices
Toxic Gas Detectors
Network Extender
Combustible Gas Detectors
Addressable Signaling Line CIrcuit
Eagle Quantum Premier
Eagle Quantum Premier
Optional Redundant Controller
System B: Control Room
Serial Communications Ports and Protocols
DCS
Operator Interface Station
System Configuration using Safety System Software (S3)
Custom Graphics using HMI Software
End Users: Programmable Logic Controller (PLC), Distributes Control System (DCS) or System Control and Data Acquisition (SCADA)

OVERVIEW


KEY:
INPUT
Supervised Inputs
OUTPUT
Supervised Outputs
MISC
Miscellaneous LON Devices
INPUT X3301 / X3302 Multispectrum IR Hydrogen Flame Detector
INPUT X9800 Single Frequency IR Flame Detector
INPUT X5200 UVIR Flame Detector
INPUT X2200 UV Flame Detector
INPUT EQ22XXIDCSC IDC Short Circuit
INPUTC7050/ UVHT UV Flame Detector
INPUT EQ22XXIDC Initiating Device Circuit
INPUT EQ22XXDCUEX Digital Communications Unit
Addressable devices are wired into the LON Communications Loop
INPUT EQ3710AIM Analog Input Module
INPUT EQ22XXDCU Digital Communications Unit
INPUT/ OUTPUTEQ3730 Enhanced Discrete I/O Module
INPUT UD10 Universal Display
INPUT/ OUTPUT EQ3700 Discrete I/O Module
INPUTPIRECL PointWatch Eclipse Point IR Gas Detector
INPUT/ OUTPUT EQ3750 ASH Addresssble Smoke & Heat
INPUTOPECL Open Path Eclipse Gas Detector
OUTPUT EQ3740IPM Intelligent Protection Module
MISC EQ22XXIDCGF IDC Ground Fault
MISC EQ2100PSM Power Supply Monitor
OUTPUT EQ3720 Relay Module
Power Supply Monitor and Power Supply used together
MISC EQ30XX Controller
MISC EQ21XXPS Power Supply
MISC EQ24XXNE Network Extender
OUTPUT EQ22XXSAM Signal Audible Module
OUTPUT EQ25XXARM Agent Release Module

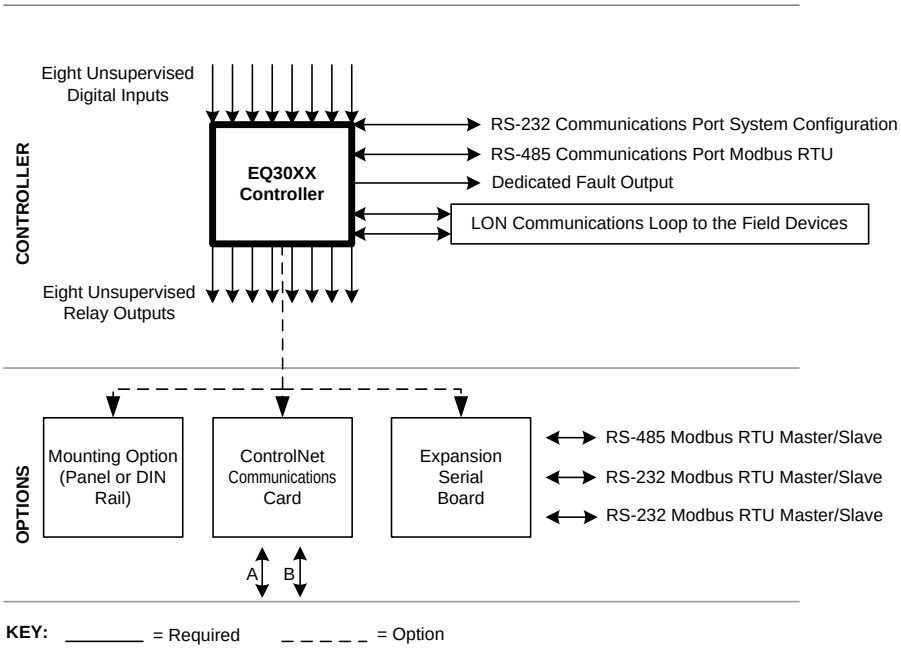
NOTES

CONTROL ROOM

Eagle Quantum Premier® Controller • EQ30XX

Eagle Quantum Premier Controller EQ30XX (Spec Sheet: 90-1148) The Eagle Quantum Premier Controller is a microprocessor-based module that performs all the communication and control functions for the system. The controller can be configured in a simplex or redundant mode of operation. It includes all the required operator interface controls for a fire alarm and releasing system.

- Fire detection and alarm
- Fire suppression control
- Gas detection and alarm
- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6310/6320
- Simplex or redundant operation
- Models with SIL 2 certification
- Programmable logic
- Multiple serial ports (three RS-232 and two RS-485)
- Transformer isolation of network ports
- Utilizes Modbus RTU or Allen Bradley protocols
- ControlNet Interface (Optional)
- Eight Programmable Relay Outputs
- Dedicated Fault Output
- Eight Digital Inputs
- Four-line, 20-character alphanumeric display
- LED status indicators
- Fault-tolerant communication loop
- Extensive built-in diagnostics
- Real-time clock
- Compact design
- US Coast Guard type approval under 46 CFR 161.002.
- Lloyd's Register Type Approval.
- FM approved Proprietary Supervising Station System, defined in NFPA 72 2002
- Compliance to EN54 approvals



EQ30XX Model Matrix

MODEL	DESCRIPTION
EQ3001	Eagle Quantum Premier Controller - 246 Nodes
EQ3016	Eagle Quantum Premier Controller - 16 Nodes

TYPE	MOUNTING OPTION
D	Din Rail
P	Panel

TYPE	COM BOARD 1
N	None
C	ControlNet

TYPE	COM BOARD 2
N	None
S	Serial Port Expansion

TYPE	APPROVALS
T	SIL/FM/CSA/ATEX/CE/IECEx
W	FM/CSA/ATEX/CE/IECEx
R	VNIIPO/VNIIFTRI (RUSSIA)

NOTE: Contact Customer Service when ordering replacement EQ30XX controllers for redundant systems.

EQ3001 Controller

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3001PNNW	007609-062	Panel			X	5.0 lb (2.3 kg)
EQ3001DNNW	007609-063	DIN			X	5.0 lb (2.3 kg)
EQ3001PCNW	007609-065	Panel	X		X	5.0 lb (2.3 kg)
EQ3001DCNW	007609-066	DIN	X		X	5.0 lb (2.3 kg)
EQ3001PNSW	007609-067	Panel		X	X	5.0 lb (2.3 kg)
EQ3001DNSW	007609-068	DIN		X	X	5.0 lb (2.3 kg)
EQ3001PCSW	007609-069	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3001DCSW	007609-070	DIN	X	X	X	5.0 lb (2.3 kg)
EQ3001PCSW-C*	007609-269	Panel	X	X	X	5.0 lb (2.3 kg)

*US Coast Guard type approval under 46 CFR 161.002. For use with USCG approved system only.

EQ3016 Controller

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3016PNNW	007609-462	Panel			X	5.0 lb (2.3 kg)
EQ3016DNNW	007609-463	DIN			X	5.0 lb (2.3 kg)
EQ3016PCNW	007609-465	Panel	X		X	5.0 lb (2.3 kg)
EQ3016DCNW	007609-466	DIN	X		X	5.0 lb (2.3 kg)
EQ3016PNSW	007609-467	Panel		X	X	5.0 lb (2.3 kg)
EQ3016DNSW	007609-468	DIN		X	X	5.0 lb (2.3 kg)
EQ3016PCSW	007609-469	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3016DCSW	007609-470	DIN	X	X	X	5.0 lb (2.3 kg)

CONTROL ROOM

EQ3001 Controller - SIL 2

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3001PNNT	007609-072	Panel			X	5.0 lb (2.3 kg)
EQ3001DNNT	007609-073	DIN			X	5.0 lb (2.3 kg)
EQ3001PCNT	007609-075	Panel	X		X	5.0 lb (2.3 kg)
EQ3001DCNT	007609-076	DIN	X		X	5.0 lb (2.3 kg)
EQ3001PNST	007609-077	Panel		X	X	5.0 lb (2.3 kg)
EQ3001DNST	007609-078	DIN		X	X	5.0 lb (2.3 kg)
EQ3001PCST	007609-079	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3001DCST	007609-080	DIN	X	X	X	5.0 lb (2.3 kg)

EQ3016 Controller - SIL 2

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3016PNNT	007609-472	Panel			X	5.0 lb (2.3 kg)
EQ3016DNNT	007609-473	DIN			X	5.0 lb (2.3 kg)
EQ3016PCNT	007609-475	Panel	X		X	5.0 lb (2.3 kg)
EQ3016DCNT	007609-476	DIN	X		X	5.0 lb (2.3 kg)
EQ3016PNST	007609-477	Panel		X	X	5.0 lb (2.3 kg)
EQ3016DNST	007609-478	DIN		X	X	5.0 lb (2.3 kg)
EQ3016PCST	007609-479	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3016DCST	007609-480	DIN	X	X	X	5.0 lb (2.3 kg)

EQ3001 Controller - Russia

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	VNIIPO/ VNIIFTRI (Russia)	Ship Weight
EQ3001PNNR	007609-962	Panel			X	5.0 lb (2.3 kg)
EQ3001DNNR	007609-963	DIN			X	5.0 lb (2.3 kg)
EQ3001PCNR	007609-965	Panel	X		X	5.0 lb (2.3 kg)
EQ3001DCNR	007609-966	DIN	X		X	5.0 lb (2.3 kg)
EQ3001PNSR	007609-967	Panel		X	X	5.0 lb (2.3 kg)
EQ3001DNSR	007609-968	DIN		X	X	5.0 lb (2.3 kg)
EQ3001PCSR	007609-969	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3001DCSR	007609-970	DIN	X	X	X	5.0 lb (2.3 kg)

Redundancy Parts

Part Number*	Description	Ship Weight
008981-001	Controller to Controller High Speed Serial Cable (4 ft)	1.0 lb (0.45 kg)
008982-001	LON Termination Module (2 required per LON)	1.0 lb (0.45 kg)

*Parts can only be used with EQP Controllers with serial port expansion option.

Controller Communication Cables

Part Number	Description	Length			Ship Weight
		15 ft. (4.57 m)	30 ft. (9.14m)	50 ft. (15.24m)	
007633-001	Controller RS-232 Cable (DB9 Female PC Connection)	X			1.0 lb (0.45 kg)
007633-002	Controller RS-232 Cable (DB9 Female PC Connection)		X		1.0 lb (0.45 kg)
007633-003	Controller RS-232 Cable (DB9 Female PC Connection)			X	1.6 lb (0.7 kg)

Typical Order for a Redundant System

Qty	Part Number	Description
2	007609-078	EQ3001DNST Controller
1	008981-001	Controller to Controller High Speed Serial Cable (4 ft)
2	008982-001	EQ3LTM LON Termination Module (2 required per LON)

NOTES

CONTROL ROOM

Power Supplies

EQP21XXPS Power Supplies are used in pairs where the primary source of input supply is connected to one and the secondary source is connected to the other. A maximum of eight power supplies operated in parallel can be connected to each input supply. Both the primary and secondary sets must be individually capable of operating the system without the other supply. The secondary source is required to be continuously powered.

EQP2410 Converter serves as a DC voltage regulator for the secondary/back-up power supply source. It converts grounded DC input source into floating DC output power for ground fault monitoring capability.

EQ2220GFM Ground Fault Monitor (Spec Sheet: 90-1134) provides ground fault monitoring in a system that includes reliable dual isolated 24 Vdc power. The output from the ground fault monitor is a contact closure in the presence of a ground fault. The ground fault monitor is DIN rail mountable and is intended to be mounted in the same enclosure as the controller.

EQP21XX Power Supply

Model	Part Number	Description	Ship Weight
EQP2120PS-B	010988-001*	EQP2120PS-B 20A 120/220V PANEL	3.7 lb (1.7 kg)
EQP2120PS	010988-002	EQP2120PS 20A 120/220V DIN	3.7 lb (1.7 kg)
EQP2110PS-P	010985-001*	EQP2110PS-P 10A 120/220V, PANEL	2.9 lb (1.3 kg)
EQP2110PS	010985-002	EQP2110PS 10A 120/220V, DIN	2.9 lb (1.3 kg)

*For FM/USCG approved system

NOTE: Requires a minimum of two supplies & one diode module per system. Also requires a GFM (below).

EQP2410 Converter

Model	Part Number	Description	Ship Weight
EQP2410PS-P	010892-001*	10A 24VDC CONVERTER, PANEL	2.7 lb (1.2 kg)
EQP2410PS	010892-002	10A 24VDC CONVERTER, DIN	2.7 lb (1.2 kg)

*For FM/USCG approved system

NOTE: Converters can be used in conjunction with a power supply (above) but can only be used as a secondary supply.

Diode Module

Model	Part Number	Description	Ship Weight
N/A	009934-001*	DIODE REDUNDANCY MOD W/MTG BKT	2.0 lb (0.90 kg)
N/A	009934-002	DIODE REDUNDANCY MOD DIN RAIL	2.0 lb (0.90 kg)

*For FM/USCG approved system

NOTE: Required for use with power supplies/converters listed above.

Ground Fault Monitor (For use with power supplies above)

Model	Part Number	Description	Ship Weight
EQ2220GFM	007941-001	Ground Fault Monitor	0.5 lb (0.2 kg)
EQ2220GFMR	007941-901	Ground Fault Monitor	0.5 lb (0.2 kg)

Power Supply (Spec Sheet: 90-1134). Six approved power supply options are available:

- 10 Amp / 60HZ (EQ2110PS)*
- 30 Amp / 60HZ (EQ2130PS)*
- 75 Amp / 60HZ (EQ2175PS)*
- 10 Amp / 50HZ (EQ2111PS)*
- 30 Amp / 50HZ (EQ2131PS)*
- 75 Amp / 50HZ (EQ2176PS)*

Contact the factory for additional options and current certifications
*Requires the use of the DEC Power Supply Monitor, detailed below.

EQ2100PSM Power Supply Monitor (Spec Sheet: 90-1134) is used in conjunction with any of the EQ21XX (p/n 000604-XXX) power supplies and backup batteries to provide an approved source of power for the Eagle Quantum Premier system. Since the power supply monitor resides on the communication loop (LON), any trouble condition related to system power will immediately be reported to the Operator Interface Station through the Local Control Unit. Status conditions being monitored include power supply failure, loss of AC power, loss of battery power, power ground fault, AC voltage, DC voltage, and battery changing current levels.

- Supports ANSI/NFPA 72 Class A, Style 7 communication
- Monitors primary AC supply and battery integrity
- Compatible with 10, 30 and 75 amp output power supplies
- Field addressable
- FMRC approved and CSA Certified for use in Eagle Quantum
- Feet for panel mounting

Ground Fault Monitor IDCGF (Spec Sheet: 90-1134). The Initiating Device Circuit Ground Fault module monitors the Eagle Quantum Premier system for ground faults and provides one supervised digital input for detection of power supply trouble. It is intended for use with a third-party power supply that supplies a dry contact output for indicating a trouble condition. This module is housed in an explosion-proof NEMA 4X rated metal enclosure for installation in hazardous locations and can be located at any point on the communication loop.

Power Supply

Model	Part Number	Description	Ship Weight
EQ2110PS*	000604-013	EQ2110PS 10A 120VAC 60HZ	50 lb (25.0 kg)
EQ2130PS*	000604-014	EQ2130PS 30A 120/208/220 60HZ	115 lb (57.5 kg)
EQ2175PS*	000604-015	EQ2175PS 75A 120/208/220 60HZ	150 lb (75.0 kg)
EQ2111PS*	000604-034	EQ2111PS 10A 220/240VAC 50HZ	50 lb (25.0 kg)
EQ2131PS*	000604-035	EQ2131PS 30A 220/240VAC 50HZ	115 lb (57.5 kg)
EQ2176PS*	000604-036	EQ2176PS 75A 220/240VAC 50HZ	150 lb (75.0 kg)

*Requires use of EQ2100PSM Power Supply Monitor

Power Supply Monitor (For use with power supplies above)

Model	Part Number	Description	Ship Weight
EQ2100PSM	006979-001	Power Supply Monitor	5 lb (2.3 kg)

*Enclosure not included

Ground Fault Monitor (For field power supplies and hazardous area location)

Model	Part Number	Description	Material	Enclosure	Thread	Ports	FM/CSA ATEX/CE	Ship Weight
EQ2203IDCGF	006943-002	Ground Fault Monitor	AL	J-Box	3/4 NPT	5	X	5 lb (2.3 kg)
EQ2207IDCGF	006943-003	Ground Fault Monitor	AL	J-Box	M25/M20	5	X	5 lb (2.3 kg)
EQ2213IDCGF	006943-005	Ground Fault Monitor	SS	J-Box	3/4 NPT	5	X	10 lb (4.5 kg)
EQ2217IDCGF	006943-006	Ground Fault Monitor	SS	J-Box	M25/M20	5	X	10 lb (4.5 kg)
EQ22EMIDCGF	000506-013	GF Electronic Module - Panel Mount						3 lb (1.4 kg)

Operator Interface Safety System Software

Safety System Software (S^3). The Eagle Quantum Premier uses the safety system software to provide a user friendly, fully integrated, high performance package. The software provides convenient and accurate system configuration and status information including diagnostic and trouble shooting tools. An optional embedded OPC server provides additional flexibility.

The software database contains all of the information to easily configure the Eagle Quantum Premier system. All device information is presented in a series of user-friendly point configuration screens. Point display screens for each node are available to display detailed status information, recent alarms and calibration records.

In summary the software collects, tracks, displays, and distributes your safety system information while allowing intuitive operator input for command and control functions of these safety systems.

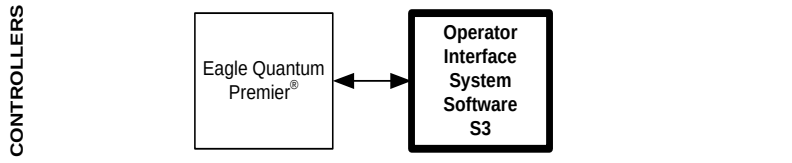
Operating System Requirements:
The S^3 software suite is designed to run on an Intel® based computer with at least a 800 MHz Pentium III processor. S^3 is compatible with Windows 7, Windows Vista, Windows XP Professional, and Windows 2000. Computers operating on a 64 bit platform are fully supported; as with many modern software programs, the faster the machine, the better the performance.

The Safety System Software has the following features:

- Configure field devices
- Program, simulate, monitor and document controller logic
- Review real time status through pre-built point displays
- An optional OPC Server license is available

Package Includes:

- S^3 Installation software
- 30 ft. serial cable with DB9 serial and EQP interface connectors
- Licensed software key (resembles a USB drive)
- High speed USB serial adapter



Operating Interface Safety System Software

Part Number	Description	Ship Weight
007800-011*	Safety System Software configuration/runtime package 60 node version **no driver**, USB key.	0.5 lb (0.23 kg)
007800-013*	Safety System Software configuration/runtime package 250 node version **no driver**, USB key.	0.5 lb (0.23 kg)
007800-012*	Safety System Software configuration/runtime package 60 node version with **OPC driver**, USB key.	0.5 lb (0.23 kg)
007800-014*	Safety System Software configuration/runtime package 250 node version with **OPC driver**, USB key.	0.5 lb (0.23 kg)
	Safety System Software configuration/runtime package 60 node version with **Emerson AMS driver**, USB key.	0.5 lb (0.23 kg)
	Safety System Software configuration/runtime package 250 node version with **Emerson AMS driver**, USB key.	0.5 lb (0.23 kg)

NOTE: The 60 node version of S^3 is recommended for the 16 node controller.

*It is strongly recommended that purchasers of S^3 attend the appropriate training class:

Course 102: EQP SYSTEMS ADVANCED TECHNICAL TRAINING
Register at Det-Tronics University from the website: www.det-tronics.com.

NOTES

EQ3750 Addressable Smoke and Heat (ASH) Module

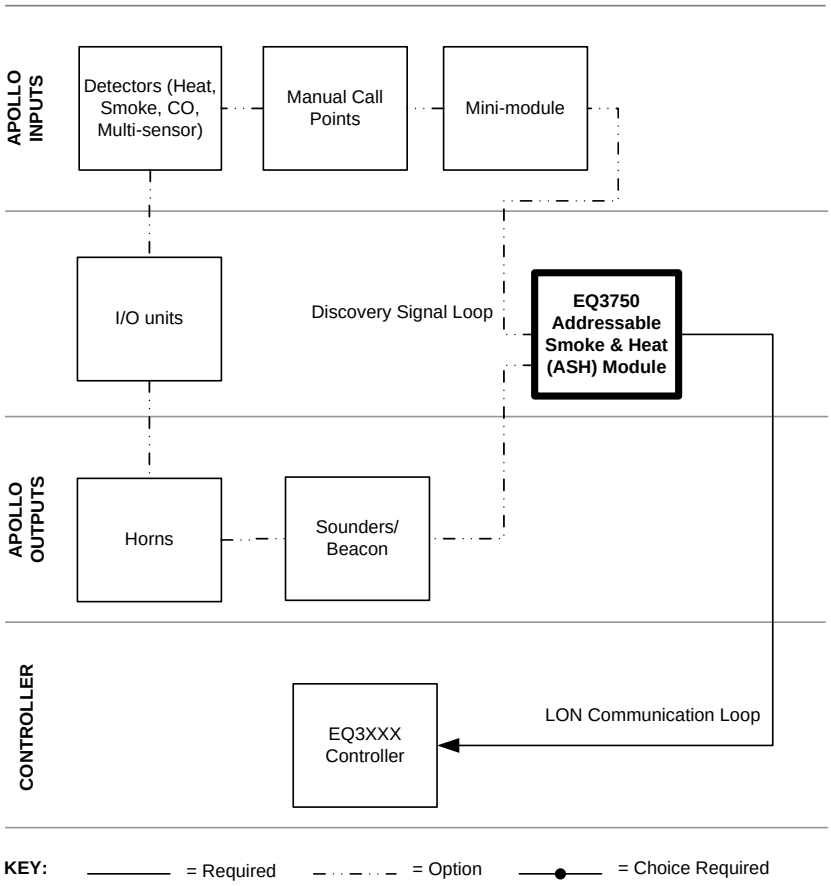
The EQP **Addressable Smoke and Heat (ASH) Module** (Spec Sheet: 90-1203) is designed to expand the input and output capability of the Det-Tronics Eagle Quantum Premier® system.

The ASH is an interface device designed to provide continuous and automated fire protection. It ensures system operation through continuous supervision of system inputs/outputs and Local Operating Network/Signaling Line Circuit (LON/SLC) monitoring in the controller.

The ASH is located directly on the LON of the EQP system, with a loop of up to 64 addressable devices tied into the ASH. This allows the EQP controller to annunciate a fire alarm from either its own LON based I/O or from the ASH connected addressable smoke and heat detection loops.

System status can be determined using the troubleshooting procedures, Eagle Quantum Safety System Software (S³), and the status indicators on the module.

- Expands the capabilities of the Det-Tronics Eagle Quantum Premier® system
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Provides power and communications to 64 addressable devices
- Uses Apollo Discovery smoke and heat detectors
- ASH alarm and fault status are logged in the EQP controller
- LEDs for easy annunciation of power, faults and an active device on the loop
- Monitors single addressable devices
- Provides remote I/O capabilities via LON/SLC
- DIN rail mounting
- Plug-in wiring connectors
- RFI and EMI hardened
- Smoke detectors are globally approved (see product data sheets)



EQ3750 ASH Model Matrix

MODEL	DESCRIPTION	
EQ3750	Addressable Smoke and Heat Module (ASH)	
	TYPE	**MOUNTING OPTION**
	D	DIN Rail
	TYPE	**APPROVALS**
	W	FM/CSA/ATEX/CE/IECEx

EQ3750 ASH Module

Model	Part Number	Material	FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3750DW	010210-001	AL	X	3 lb (1.4 kg)

Devices for EQ3750 ASH Module

Description	Part Number	Apollo Part #
APOLLO IONIZATION SMOKE, EU	000515-501	58000-500
APOLLO OPTICAL SMOKE, EU	000515-502	58000-600
APOLLO HEAT DETECTOR, EU	000515-503	58000-400
APOLLO MULTISENSOR, EU	000515-504	58000-700
APOLLO CO DETECTOR, EU	000515-505	58000-300
APOLLO INTELLIGENT MNT BASE, EU	000515-506	45681-210
APOLLO ISOLATING BASE	000515-507	45681-284
APOLLO INTELLIGENT ISOLATOR	000515-508	55000-720
APOLLO I/O UNIT W/ ISOLATOR	000515-509	55000-847
APOLLO SOUNDER CONTROL UNIT	000515-510	55000-852
APOLLO SWITCH MONITOR PLUS	000515-511	55000-841
APOLLO MANUAL CALL W/ISOLATOR	000515-512	58100-908
APOLLO MANUAL CALL, W/ISO, IP66	000515-513	58100-951
APOLLO MANUAL CALL COVER	000515-514	26729-152
APOLLO SOUNDER, 100DB, RED	000515-515	55000-278
APOLLO SOUNDER,100DB, RED, IP66	000515-516	55000-274
APOLLO BEACON, RED	000515-517	55000-877
APOLLO SOUNDER/BEACON, W/ISO	000515-518	55000-293
APOLLO INTELLIGENT ISOLATOR BA	000515-519	45681-211
APOLLO IONIZATION SMOKE, NA	000515-551	58000-550
APOLLO OPTICAL SMOKE, NA	000515-552	58000-650
APOLLO HEAT DETECTOR, NA	000515-553	58000-450
APOLLO MULTISENSOR, NA	000515-554	58000-750
APOLLO MOUNTING BASE 4", NA	000515-555	45681-210USA
APOLLO MOUNTING BASE 6", NA	000515-556	45681-225USA
APOLLO ISOLATOR, NA	000515-557	55000-750
APOLLO ISOLATOR BASE, NA	000515-558	45681-211USA
APOLLO PRIORITY SWITCH MONITOR	000515-559	55000-806
APOLLO SOUNDER CONTROL MOD, NA	000515-560	55000-825
APOLLO I/O MODULE, NA	000515-561	55000-820
APOLLO MINI MONITOR MOD, NA	000515-562	55000-765
APOLLO INTELLIGENT DEEP BASE	000515-563	45681-209

EU = European Approvals

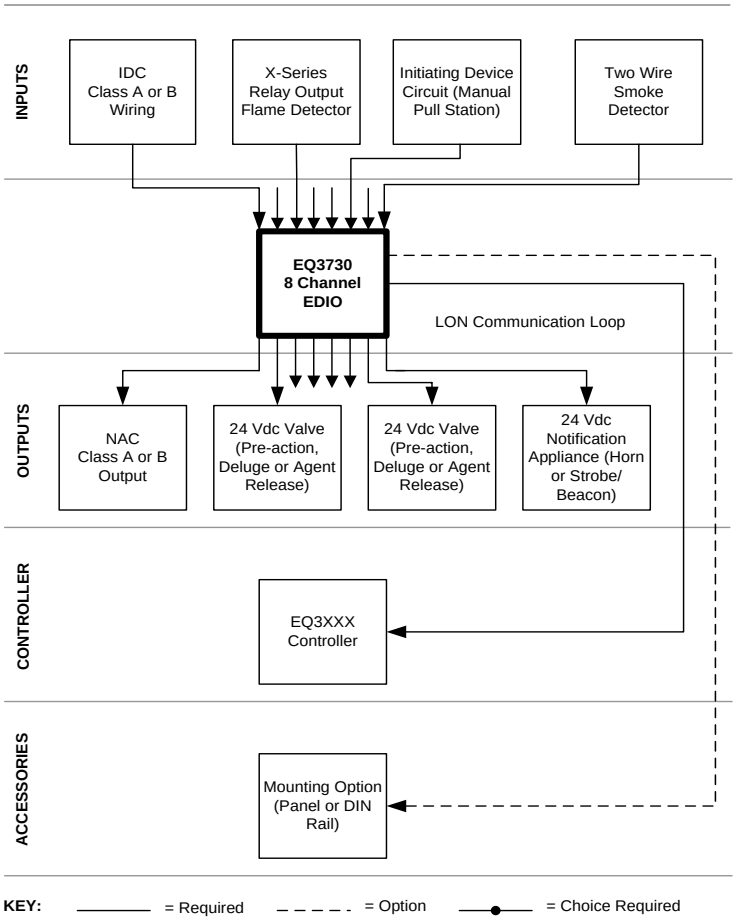
NA = North American Approvals

NOTE: Average lead time is 3-4 weeks. For additional options please consult the factory.

EQ3730EDIO Enhanced Discrete Input/Output Module (EDIO)

EQ3730EDIO Enhanced Discrete Input/Output Module (EDIO) (Spec Sheet: 90-1189)
The 8 Channel EDIO Module is specially designed to expand the input and output (I/O) capability of the Det-Tronics Eagle Quantum Premier System. The unit is designed to provide continuous and automated fire/gas protection while ensuring system operation through continuous supervision of system I/O and signaling line circuit (SLC). The EDIO module provides eight channels of configurable input or output points that can be configured as input/output, two-wire smoke/heat detector, Class A input, Class A output. Each input point can accept fire detection devices such as heat, smoke, or unitized flame detectors. Each output point can be configured for signaling or releasing output operation. Each channel on the module is provided with individual indicators for active and fault conditions.

- Monitors eight independent I/O channels
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Individual channels are configurable as an input/output/two-wire smoke/heat detectors/ Class A input/Class A output
- A smoke/heat channel can support up to 15 two-wire smoke and heat devices per channel
- For Class A input and output wiring two channels are required per Class A circuit
- Models with SIL 2 certification
- Individual point style is configurable as a supervised or an unsupervised point
- User configurable supervision for opens and/or shorts
- Individual point type is configurable for alarm/supervisory/other input styles, notification/ releasing/dry contact output
- Exceeds the requirements of NFPA 72
- Panel or DIN rail mounting



EQ3730 EDIO Model Matrix

MODEL	DESCRIPTION	
EQ3730	8 Channel Enhanced Discrete Input/Output Module (EDIO)	
	TYPE	**MOUNTING OPTION**
	D	DIN Rail
	P	Panel
	TYPE	**APPROVAL AGENCY**
	W	FM/CSA/ATEX/CE/IECEx
	T	SIL/FM/CSA/ATEX/CE/IECEx
	R	VNIIPO/VNIIFTRI (RUSSIA)

EQ3730 EDIO Module

Model	Part Number	Material	FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3730PW	009174-002	AL	X	1.0 lb (0.45 kg)
EQ3730DW	009174-003	AL	X	2.0 lb (0.90 kg)

EQ3730 EDIO Module - SIL 2

Model	Part Number	Material	SIL/FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3730PT	009174-012	AL	X	1.0 lb (0.45 kg)
EQ3730DT	009174-013	AL	X	2.0 lb (0.90 kg)

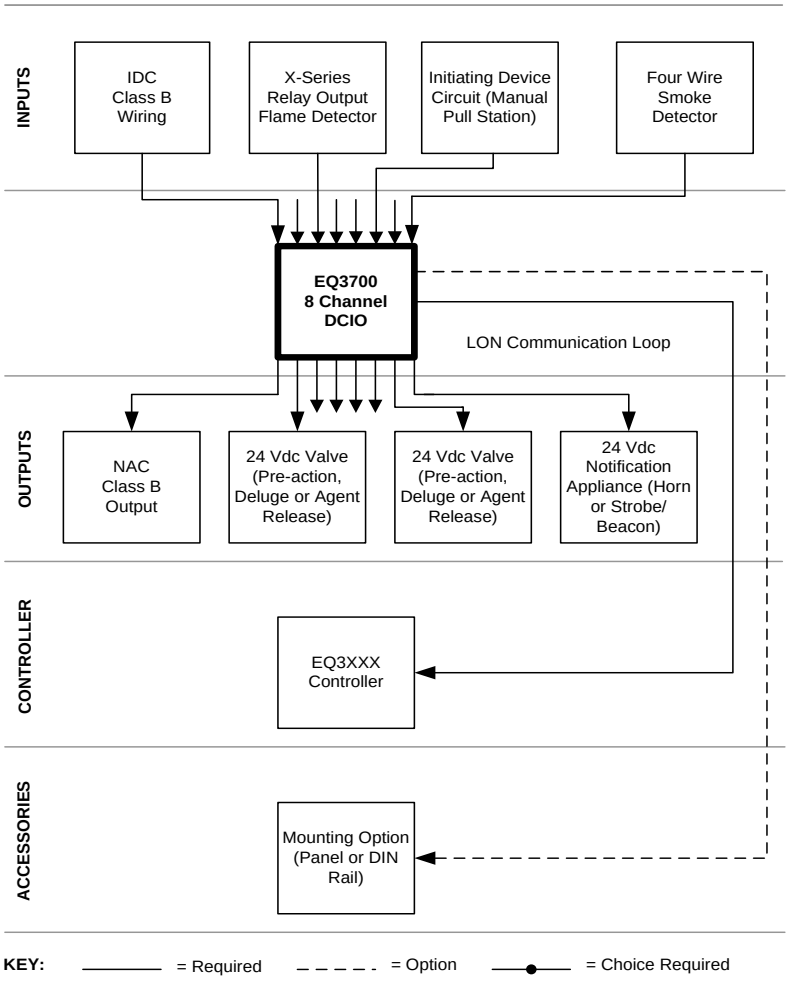
EQ3730 EDIO Module - Russia

Model	Part Number	Material	VNIIPO/VNIIFTRI (Russia)	Ship Weight
EQ3730PR	009174-902	AL	X	1.0 lb (0.45 kg)
EQ3730DR	009174-903	AL	X	2.0 lb (0.90 kg)

EQ3700DCIO Discrete Input/Output Module (DCIO)

EQ3700DCIO Input/Output Module (DCIO) (Spec Sheet: 90-1149) The 8 Channel DC I/O Module is specially designed to expand the Input and Output (I/O) capability of the Det-Tronics Eagle Quantum Premier System. The unit is designed to provide continuous and automated fire/gas protection while ensuring system operation through continuous supervision of system I/O and signaling line circuit (SLC). The DCIO module provides eight channels of configurable I/O points that can be programmed for supervised or unsupervised operation. Each input point can accept fire detection devices such as heat, smoke, or unitized flame detectors. Each output point can be configured for signaling or releasing output operation. Each channel on the module is provided with individual indicators for active and fault conditions.

- Monitors eight independent I/O channels
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Individual channels are configurable as an Input or Output
- Individual point Style is configurable as a supervised or an unsupervised point
- Individual point Type is configurable for alarm/supervisory/other input styles, notification/ releasing/dry contact output
- Meets the requirements of NFPA 72
- Panel or DIN rail mounting



EQ3700 DCIO Model Matrix

MODEL	DESCRIPTION		
EQ3700	8 Channel Discrete Input/Output Module (DCIO)		
	TYPE	**MOUNTING OPTION**	
	D	DIN Rail	
	P	Panel	
		TYPE	**APPROVAL AGENCY**
		W	FM/CSA/ATEX/CE/IECEx
		R	VNIIPO/VNIIFTRI (RUSSIA)

EQ3700 DCIO Module

Model	Part Number	Material	FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3700PW	007371-002	AL	X	1.0 lb (0.45 kg)
EQ3700DW	007371-003	AL	X	2.0 lb (0.90 kg)

EQ3700 DCIO Module - Russia

Model	Part Number	Material	VNIIPO/VNIIFTRI (RUSSIA)	Ship Weight
EQ3700PR	007371-902	AL	X	1.0 lb (0.45 kg)
EQ3700DR	007371-903	AL	X	2.0 lb (0.90 kg)

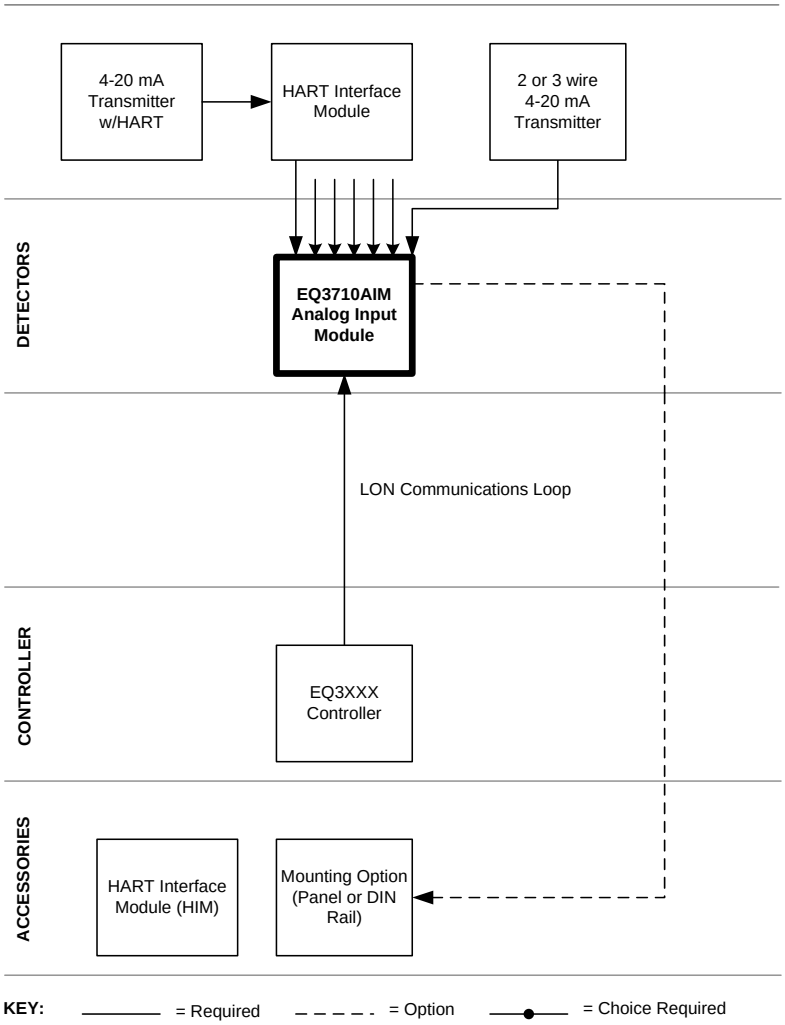
NOTES

EQ3710AIM Analog Input Module

EQ3710AIM Analog Input Module (Spec Sheet: 90-1183). The 8 Channel Analog Input Module expands the input capability of the Det-Tronics Eagle Quantum Premier System. The unit provides a means of connecting devices with a 4-20 mA output signal to the Eagle Quantum Premier System.

Each channel is fully configurable to provide device and alarm information. This information includes tag name, descriptor, engineering units, fault alarm, low/high alarm, and alarm threshold limits.

- Compliance to ANSI/ISA-12.13.01, for combustible gas
- Compliance to ANSI/ISA 92.0.01 and CSA 22.2 #152
- NFPA 72 Approved 4-20 mA flame detector input
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Monitors eight independent channels
- Panel or DIN rail mounting
- Optional HART Interface module (HIM) available
- Supports 2 or 3 wire 4-20 mA transmitters



EQ3710 AIM Model Matrix

MODEL	DESCRIPTION		
EQ3710	8 Channel Analog Input Module (AIM)		
	TYPE	**MOUNTING OPTION**	
	D	Din Rail	
	P	Panel	
		TYPE	**APPROVAL AGENCY**
		W	FM/CSA/ATEX/CE/IECEx
		T	SIL/FM/CSA/ATEX/CE/IECEx
		R	VNIIPO/VNIIFTRI (RUSSIA)

EQ3710 AIM

Model	Part Number	Material	FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3710DW	007918-003	AL	X	2.0 lb (0.90 kg)
EQ3710PW	007918-002	AL	X	1.0 lb (0.45 kg)

EQ3710 AIM - SIL 2

Model	Part Number	Material	SIL/FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3710DT	007918-013	AL	X	2.0 lb (0.90 kg)
EQ3710PT	007918-012	AL	X	1.0 lb (0.45 kg)

EQ3710 AIM - Russia

Model	Part Number	Material	VNIIPO/VNIIFTRI (RUSSIA)	Ship Weight
EQ3710DW	007918-903	AL	X	2.0 lb (0.90 kg)
EQ3710PW	007918-902	AL	X	1.0 lb (0.45 kg)

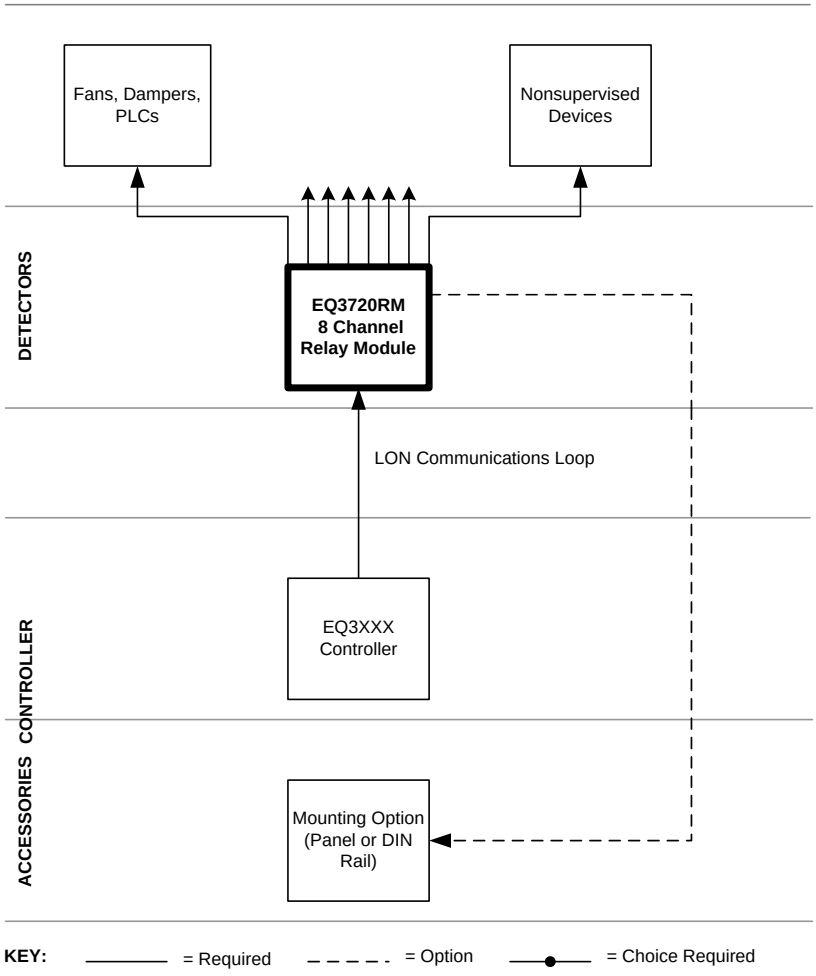
HART Interface Module

Part Number	Description
008056-001	HART Interface Module

EQ3720RM Relay Module

EQ3720RM Relay Module (Spec Sheet: 90-1181) The 8 Channel Relay Module is specially designed to expand the output capability of the Det-Tronics Eagle Quantum Premier System. The Relay Module provides eight channels of relay output points that are programmed for unsupervised operation. The output relays are rated up to 2 amps per channel at 30 Vdc maximum or 0.5 amps per channel at 120 Vac.

- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Controls eight independent form “C” relay output channels
- Panel or DIN rail mounting
- “Hold last state” capable
- Recommended for use as an interface to normally energized (fail-safe) systems



EQ3720 RM Model Matrix

MODEL	DESCRIPTION		
EQ3720	8 Channel Relay Module (RM)		
	TYPE	**MOUNTING OPTION**	
	D	Din Rail	
	P	Panel	
		TYPE	**APPROVALS**
		W	FM/CSA/ATEX/CE/IECEx
		R	VNIIPO/VNIIFTRI (RUSSIA)

EQ3720 Relay Module

Model	Part Number	Material	FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3720DW	007792-003	AL	X	2.0 lb (0.90 kg)
EQ3720PW	007792-002	AL	X	1.0 lb (0.45 kg)

EQ3720 Relay Module - Russia

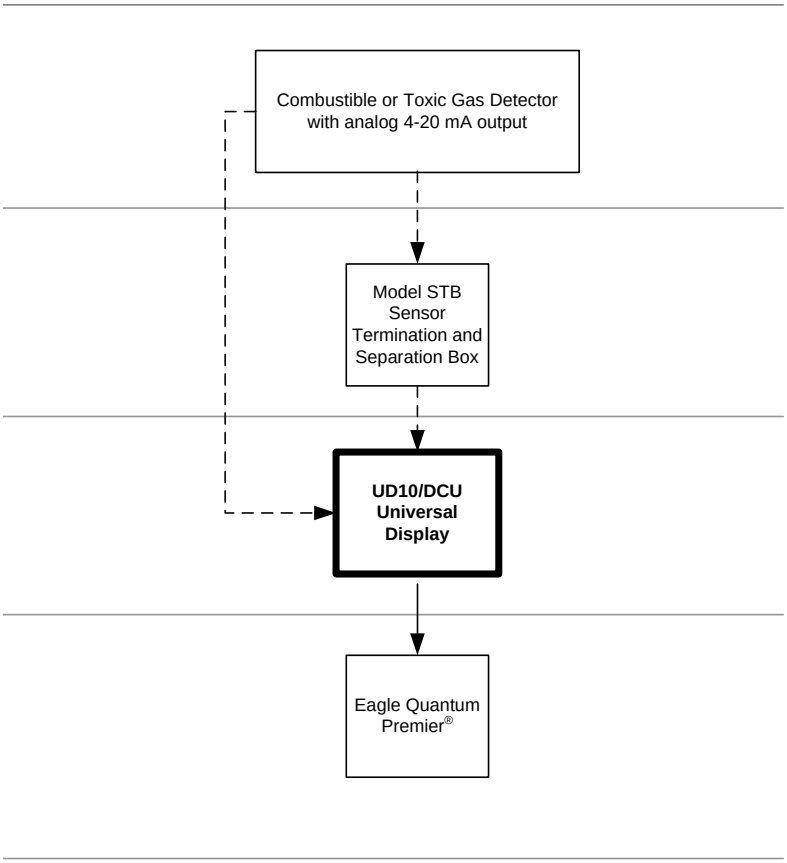
Model	Part Number	Material	VNIIPO/VNIIFTRI (RUSSIA)	Ship Weight
EQ3720DR	007792-903	AL	X	2.0 lb (0.90 kg)
EQ3720PR	007792-902	AL	X	1.0 lb (0.45 kg)

NOTES

FlexVu® UD10 Universal Display

FlexVu UD10 Universal Display (Spec Sheet 90-1200) is recommended for applications that require a gas detector with digital readout of detected gas levels. Its LON interface board makes the FlexVu UD10 compatible with Eagle Quantum Premier systems by digitizing the 4-20 mA analog signal from the attached sensor/transmitter and transmitting the value as a process variable over the LON to the EQP controller. The UD10 is designed for use with Det-Tronics' gas sensors and transmitters. When used with the EQP controller, it meets all gas performance standards.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Compliance to ISA-92.0.01 Part 1 peformance standard, and EN50104 for oxygen depletion
- Performance certified to FM 6310/6320, CSA 22.2 #152, ATEX EN60079-29-1, and IEC60079-29-1
- IECEx, FM, CSA, and ATEX, CE hazardous location certifications
- Accepts 4-20 mA input from a variety of detection devices (Point infrared, Open path, catalytic, toxic sensors, pressure, flow, etc.)
- Non-intrusive menu allows device calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Alarm setpoints adjustable via network
- Data logger for event time and date stamping
- Heated and backlit display
- IP66 rated
- Emulates the EQ22xxDCU



FlexVu UD10 Model Matrix

MODEL	DESCRIPTION
UD10	Universal Display Unit

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
5M	5 Port, Metric M25
5N	5 Port, 3/4" NPT

TYPE	OUTPUTS
28	EQP / DCU Emulator

TYPE	APPROVAL
W	FM/CSA/ATEX/CE/IECEx
B	INMETRO (BRAZIL)
R	VNIIFTRI (RUSSIA)

TYPE	CLASSIFICATION (Div/Zone)
2	Ex d (Flameproof)

TYPE	OPTIONAL CONDITIONING BOARD
C	CGS

FlexVu UD10 Universal Display

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
UD10A5M28W2	010765-005	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28W2	010765-006	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28W2	010765-007	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28W2	010765-008	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M28W2C	010254-005	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28W2C	010254-006	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28W2C	010254-007	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28W2C	010254-008	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

FlexVu UD10 Universal Display - Brazil

Model	Part Number	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	INMETRO (Brazil)	Ship Weight
UD10A5M28B2	010765-085	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28B2	010765-086	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28B2	010765-087	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28B2	010765-088	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M28B2C	010254-085	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28B2C	010254-086	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28B2C	010254-087	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28B2C	010254-088	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

DEVICES

FlexVu UD10 Universal Display - Russia

Model	Part Number*	Material	Threads	Relay 4-20 RS485 HART	EQP/ DCU Emulator	Cond. Board	VNIIFTRI (Russia)	Ship Weight
UD10A5M28R2	010765-905	AL	M25		X		X	4.2 lb (1.9 kg)
UD10A5N28R2	010765-906	AL	3/4 NPT		X		X	4.2 lb (1.9 kg)
UD10S5M28R2	010765-907	316 SS	M25		X		X	10.5 lb (4.8 kg)
UD10S5N28R2	010765-908	316 SS	3/4 NPT		X		X	10.5 lb (4.8 kg)
UD10A5M28R2C	010254-905	AL	M25		X	CGS	X	4.2 lb (1.9 kg)
UD10A5N28R2C	010254-906	AL	3/4 NPT		X	CGS	X	4.2 lb (1.9 kg)
UD10S5M28R2C	010254-907	316 SS	M25		X	CGS	X	10.5 lb (4.8 kg)
UD10S5N28R2C	010254-908	316 SS	3/4 NPT		X	CGS	X	10.5 lb (4.8 kg)

*Check with the factory for product availability.

FlexVu UD10 Spare Module

Part Number	Description	Output	Ship Weight
010535-001	UD10 Display Module	EQP/DCU	1 lb (0.45 kg)

FlexVu UD10 Accessories

Part Number	Description	Ship Weight
009700-001	Magnetic Tool	<1 lb (0.45 kg)
010268-001	Gas Inspector CD	<1 lb (0.45 kg)
010204-001	W6300G1003 Gas Inspector Connector (includes CD)	1 lb (0.45 kg)
102988-002	Plug, 5.0mm, 6 Position - P2	<1 lb (0.45 kg)
102988-026	Plug, 5.0mm, 3 Position - P1 (J10, CGS)	<1 lb (0.45 kg)
102988-028	Plug, 5.0mm, 5 Position - (J3, CGS)	<1 lb (0.45 kg)
103726-002	Plug, 3.5mm, 3 Position - J2	<1 lb (0.45 kg)
103726-004	Plug, 3.5mm, 5 Position - J3	<1 lb (0.45 kg)
103726-011	Plug, 3.5mm, 12 Position - J4	<1 lb (0.45 kg)

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

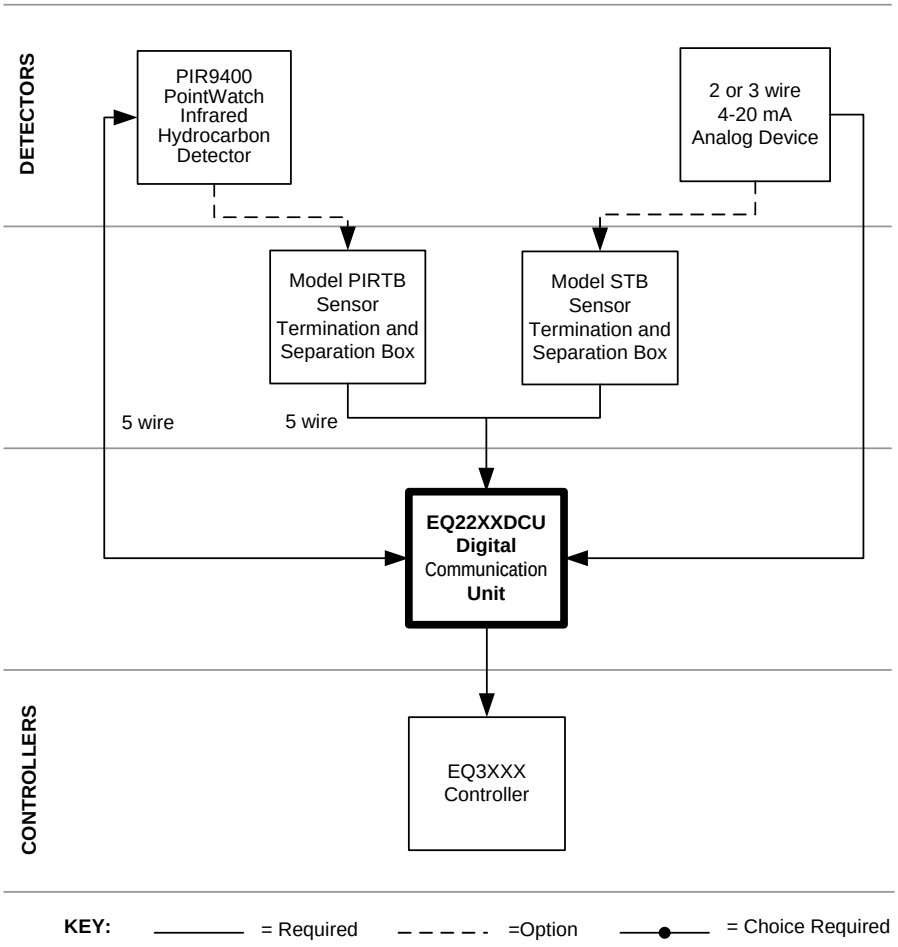
*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

EQ2200DCU Digital Communication Unit

EQ2200DCU Digital Communication Unit (Spec Sheet: 90-1118) is approved for use with a variety of Det-Tronics' sensors including PointWatch IR gas detector and hydrogen sulfide (H2S) electrochemical sensor (C706x Series). It will also accept any sensor/transmitter with a linear 4-20 mA output signal and allows for one person non-intrusive calibration. The DCU digitizes the analog signal and transmits the value to the controller.

- Compliance to ANSI/ISA-12.13.01 and CSA 22.2 #154, for combustible gas
- Accepts 4-20 mA input from a variety of detection devices (PointWatch, toxic sensors, pressure, flow, etc.)
- One person non-intrusive calibration
- Alarm setpoints adjustable via network
- Alarm history stored in nonvolatile memory
- Calibration history stored in nonvolatile memory
- Active fault isolation
- Self diagnostics
- Detector can be close-coupled or separated
- Supports sensor separation



EQ22xxDCU Digital Communication Unit

Model	Part Number	Description	Material	Enclosure	Thread	Ports	FM/CSA/ ATEX/CE	Ship Weight
EQ2207DCU	006607-005	DCU Assy., Std	AL	J-Box	M25/M20	5	X	6 lb (2.7 kg)
EQ2217DCU	006607-011	DCU Assy., Std	SS	J-Box	M25/M20	5	X	10 lb (4.5 kg)
EQ2253DCU	006607-017	DCU Assy., Std	AL	J-Box	3/4 NPT	5	X	6 lb (2.7 kg)
EQ2263DCU	006607-019	DCU Assy., Std	SS	J-Box	3/4 NPT	5	X	10 lb (4.5 kg)
EQ22EMDCU	000506-005	Full Elect. Module Assy - Panel Mount						3 lb (1.4 kg)

Sensors/Transmitters for DCU

Model*	Part Number	Description	Thread	Approvals		Ship Weight
				FM/CSA	ATEX/CE	
DE5434-003	005434-003	H_2S Sensor (0-20)		X	X	2 oz (0.06 kg)
DE5434-004	005434-004	H_2S Sensor (0-50)		X	X	2 oz (0.06 kg)
DE5434-002	005434-002	H_2S Sensor (0-100)		X	X	2 oz (0.06 kg)
PIR9400A3A1AW	006300-001	Pointwatch, AL	3/4 NPT	X	X	2 lb (0.95 kg)
PIR9400A2A1AW	006300-002	Pointwatch, AL	20 mm	X	X	2 lb (0.95 kg)

*Additional models are available. Please consult the gas section of this catalog or contact the factory for assistance

Replacement Parts - DCU

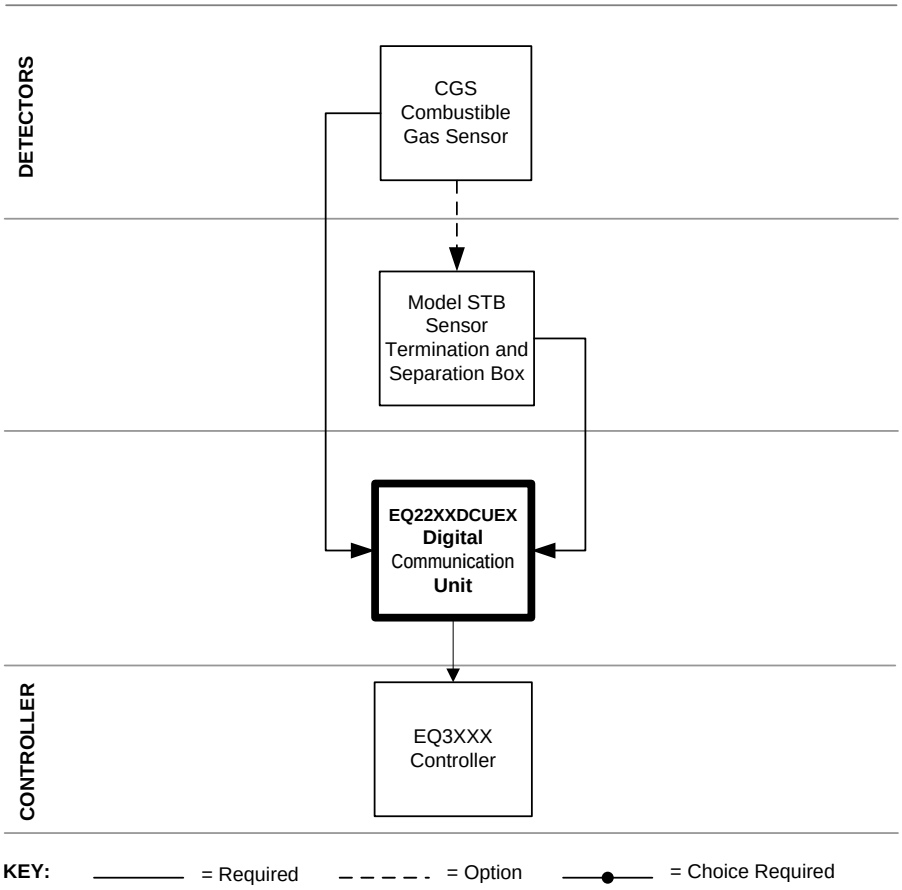
Part Number	Description	Ship Weight
006642-004	Communications Module (top board)	4 lb (1.8 kg)
006586-002	Terminal Board, DCU	4 lb (1.8 kg)
006122-002	RibbonCable (Long–for tall cover)	4 oz (0.1 kg)
101173-029	Standoffs, 2.25 in. (two required)	4 oz (0.1 kg)

NOTE: Refer to EQ22EMDCU above when requiring complete Electronic Module

EQ2200DCUEX Digital Communication Unit

EQ2200DCUEX Digital Communication Unit (Spec Sheet: 90-1118) is a digital communication unit for catalytic combustible gas sensors (CGS). The DCUEX digitizes the analog signal and transmits the value to the controller.

- Compliance to ANSI/ISA-12.13.01 and CSA 22.2 #154, for combustible gas
- One person non-intrusive calibration
- Alarm setpoints adjustable via network
- Alarm history stored in non-volatile memory
- Calibration history stored in nonvolatile memory
- Active fault isolation
- Self diagnostics
- Detector can be close-coupled or separated
- Supports sensor separation



EQ22xxDCUEX Digital Communication Unit - Combustible Sensor Only

Model	Part Number	Description	Material	Enclosure	Thread	Ports	FM/CSA/ ATEX/CE	Ship Weight
EQ2207DCUEX	006607-006	DCUEX Assy., Std	AL	J-Box	M25/M20	5	X	6 lb (2.7 kg)
EQ2217DCUEX	006607-012	DCUEX Assy., Std	SS	J-Box	M25/M20	5	X	10 lb (4.5 kg)
EQ2253DCUEX	006607-018	DCUEX Assy., Std	AL	J-Box	3/4 NPT	5	X	6 lb (2.7 kg)
EQ2263DCUEX	006607-020	DCUEX Assy., Std	SS	J-Box	3/4 NPT	5	X	10 lb (4.5 kg)
EQ22EMDCUEX	000506-006	Full Elect. Module Assy–Panel Mount						3 lb (1.4 kg)
N/A	102740-002	Calibration magnet						

Combustible Gas Sensors for DCUEX

Model*	Part Number	Description	Thread	FM/CSA/ ATEX/CE	Ship Weight
CGSS1A6C2R1X	006824-001	Constant Current	3/4"	X	1 lb (0.46 kg)
CGSS1C6C2R1X	006824-003	Constant Current	20 mm	X	1 lb (0.46 kg)

*Additional models are available. Please consult the gas section of this catalog or contact the factory for assistance.

Replacement Parts - DCUEX

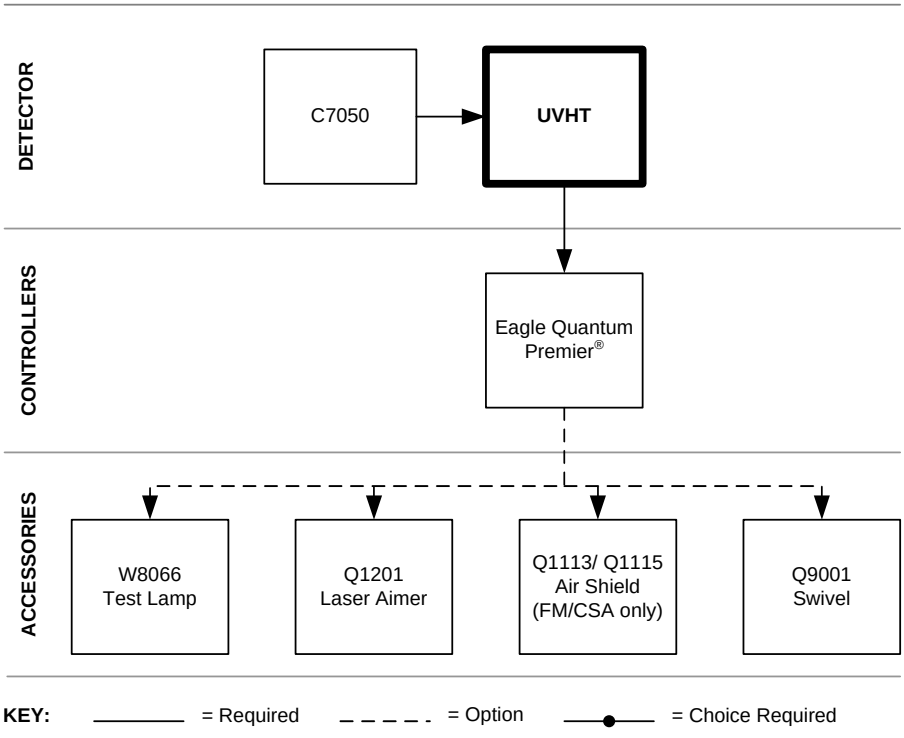
Part Number	Description	Ship Weight
006642-004	Communications Module (top board)	4 lb (1.8 kg)
006586-002	Terminal Board, DCUEX	4 lb (1.8 kg)
006108-001	Transmitter Board	4 lb (1.8 kg)
006122-002	Ribbon Cable (Long–for tall cover)	4 oz (0.1 kg)
101173-023	Standoffs, 2.0 in. (four required)	4 oz (0.1 kg)

NOTE: Refer to EQ22EMDCUEX above when requiring complete Electronic Module

EQ2200UVHT and C7050 Detector

EQ2200UVHT (Manual: 95-8570) combined with the **C7050 Detector** (Manual: 95-8214) on an EQP (or as a replacement on an older EQ system) provides fast, reliable flame detection in a wide variety of applications. The detector has the Automatic Optical Integrity (**oi**) feature, providing a continuous check of detector optical surfaces, detector sensitivity, and electronic circuitry of the detector/controller system. Not recommended for applications where welding or lightning may be present.

- Replaceable tube module
- External Automatic **oi**
- Internal Automatic **oi**
- Standard temperature option
- High temperature option, 125°C continuous duty
- Variable sensitivities available to match hazard
- FM, CSA, ATEX, CE



C7050 Model Matrix

MODEL	DESCRIPTION
C7050B	Controller Based UV Flame Detector

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	
6	1 Port

TYPE	THREAD TYPE
E	1/2" NPT
F	M20

TYPE	OUTPUTS
4	Pulse (Standard)

TYPE	TUBE MODULE OPTION
E	DE1888K3 (High Temperature for UVHT)

TYPE	OPTIONS
1S	Normal Operating Temperature 75°C
1H	High Operating Temperature 125°C

TYPE	APPROVAL TYPE
1	Explosion Proof

TYPE	APPROVALS
E	ATEX/CE/IECEx
A	FM/CSA

C7050B Ultraviolet Flame Detectors (ATEX/CE/IECEx)

Model	Part Number	Encl Material	Conduit Entry	Tube Module	ATEX/CE/ IECEx	Ship Weight
C7050BS6F4E1H1E	006899-040	SS	M20	DE1888K3	X	2.2 lb (1.0 kg)
C7050 LENS CAP/BODY	008054-001	SS	N/A	N/A	X	1 lb (0.45 kg)

High temperature rating - continuous duty at 125° Celsius, for environments that normally exceed 75° Celsius operation.

C7050B Ultraviolet Flame Detectors (FM/CSA)

Model	Part Number	Encl Material	Conduit Entry	Tube Module	FM/CSA	Ship Weight
C7050BA6E4E1H1A	006899-037	AL	1/2"	DE1888K3	X	1.2 lb (0.6 kg)
C7050BS6E4E1H1A	006899-038	SS	1/2"	DE1888K3	X	2.2 lb (1.0 kg)
C7050BA6F4E1H1A	006899-039	AL	M20	DE1888K3	X	1.2 lb (0.6 kg)
C7050 LENS CAP/BODY	004907-021	AL	N/A	N/A	X	<1 lb (<0.45 kg)
C7050 LENS CAP/BODY	004907-022	SS	N/A	N/A	X	1 lb (0.45 kg)

High temperature rating - continuous duty at 125° Celsius, for environments that normally exceed 75° Celsius operation.

*EQP UVHT Electronic Module**

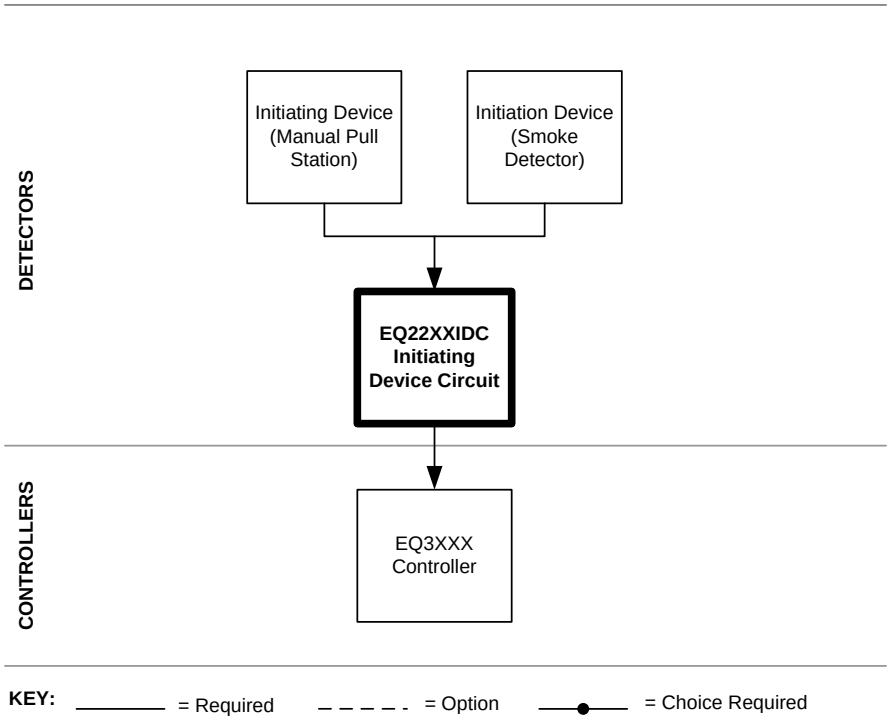
Model	Part Number	Encl Material	Conduit Entry	Tube Module	FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ2253UVHT*	007082-001	AL	3/4"	N/A	X	4.0 lb (1.8 kg)
EQ2207UVHT*	007082-002	AL	M25/M20	N/A	X	4.0 lb (1.8 kg)
EQ2263UVHT*	007082-003	SS	3/4"	N/A	X	9.5 lb (4.3 kg)
EQ2217UVHT*	007082-004	SS	M25/M20	N/A	X	9.5 lb (4.3 kg)

*One (1) Electronic Module (EQxxxxUVHT) is required for use with each C7050B Detector

EQ2200IDC Initiating Device Circuit (IDC)

EQ2200IDC Initiating Device Circuit (IDC) (Spec Sheet: 90-1121) consists of a terminal wiring board and a communication module, mounted inside an explosion-proof, water-tight enclosure on a plate for mounting in an enclosure. The IDC accepts two dry contact inputs for use with devices such as relays, pushbuttons, and key switches.

- Provides two ANSI/NFPA 72 Class B Style B supervised input circuits
- Nonvolatile alarm history memory
- Active fault isolation
- Each input programmable for fire, supervisory, trouble, or normal service



EQ22xxIDC Initiating Device Circuit

Model	Part Number	Material	Enclosure	Thread	Ports	FM/CSA/ ATEX/CE	ATEX/CE Only	Ship Weight
EQ2253IDC	006608-009	AL	J-Box	3/4" NPT	5	X		6 lb (2.7 kg)
EQ2263IDC	006608-010	SS	J-Box	3/4" NPT	5	X		10 lb (4.5 kg)
EQ2207IDC	006608-013	AL	J-Box	M25/M20	5	X		6 lb (2.7 kg)
EQ2217IDC	006608-016	SS	J-Box	M25/M20	5	X		10 lb (4.5 kg)
End-of-line Resistor	000106-108	10Kohm - 2 required						1 oz (0.02 kg)
EQ2207IDCSC	007257-001	AL	J-Box	M25/M20	5		X	10 lb (4.5 kg)
EQ2217IDCSC	007257-002	SS	J-Box	M25/M20	5		X	10 lb (4.5 kg)

EQ22xxIDC Initiating Device Circuit - Electronic Module

Model	Part Number	Description	FM/CSA	Ship Weight
EQ22EMIDC	000506-004	Full Elect. Module Assy–Panel Mount	X	3 lb (1.4 kg)

Replacement Parts - IDC

Part Number	Description	Ship Weight
006642-005	Communications Module (top board)	3 lb (1.4 kg)
006590-003	Terminal Board, IDC	3 lb (1.4 kg)
006122-002	Ribbon Cable (Long–for tall cover)	4 oz (0.1 kg)
101173-029	Standoffs, 2.25" (two required–tall cover)	4 oz (0.1 kg)

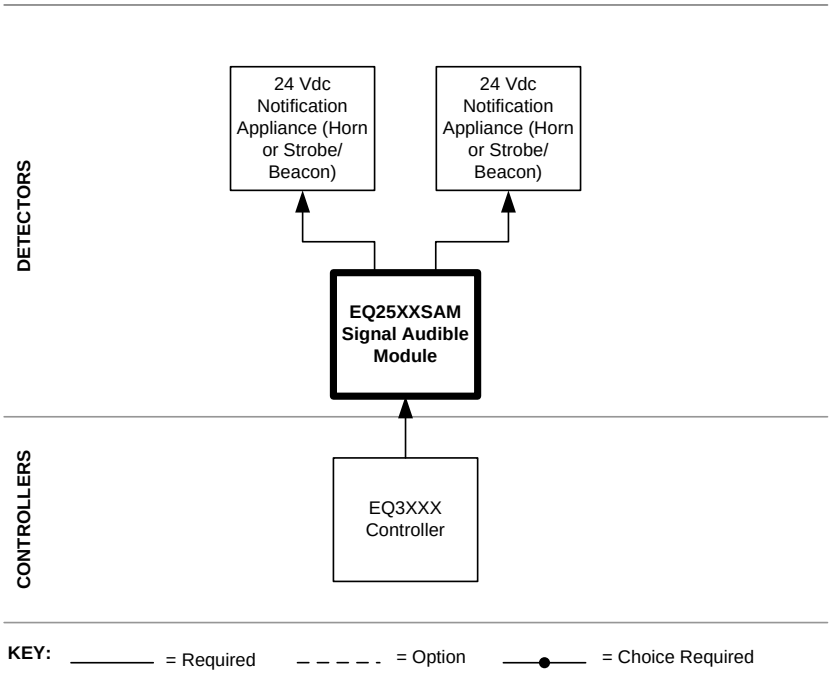
NOTE: Refer to EQ22EMIDC above when requiring complete Electronic Module

NOTES

EQ2500SAM Signal Audible Module

EQ2500SAM Signal Audible Module (Spec Sheet: 90-1129) provides two indicating circuits for controlling UL Listed 24 Vdc polarized audible/visual indicating appliances. The SAM is located on the system LON and is controlled by programmable logic in the Eagle Quantum Premier Controller. Each output circuit is independently programmable to allow annunciation of separate events. In release applications, signal outputs can be programmed to provide signaling for prerelease, release, or post-release.

- Provides two ANSI/NFPA 72 Class “B” Style “Y” output notification appliance circuits
- Each circuit is individually supervised for opens and shorts
- Each circuit is individually controlled by user logic
- Each circuit supports a variety of programmable blink/flash rates
- Current reversal on activation
- 2 output channels
- Channels are individually activated
- Each channel is supervised for open/short circuits



EQ25xxSAM Signal Audible Module

Model	Part Number	Material	Thread	Ports	FM/CSA/ ATEX/CE	FM/CSA Only	Ship Weight
EQ2553SAM	006738-009	AL	3/4" NPT	5	X		6 lb (2.7 kg)
EQ2507SAM	006738-013	AL	M25/M20	5	X		6 lb (2.7 kg)
EQ2563SAM	006738-010	SS	3/4" NPT	5	X		10 lb (4.5 kg)
EQ2517SAM	006738-016	SS	M25/M20	5	X		10 lb (4.5 kg)
EQ25EMSAM	000506-007	FULL Electronic Module ASSY–Panel Mount				X	3 lb (1.4 kg)

Replacement Parts - SAM

Part Number	Description	Ship Weight
006642-007	Communications Module (top board)	3 lb (1.4 kg)
006736-003	Terminal Board, SAM	3 lb (1.4 kg)
006122-002	Ribbon Cable (Long–for tall cover)	4 oz (0.1 kg)
101173-029	Standoffs, 2.25" (two required–tall cover)	4 oz (0.1 kg)

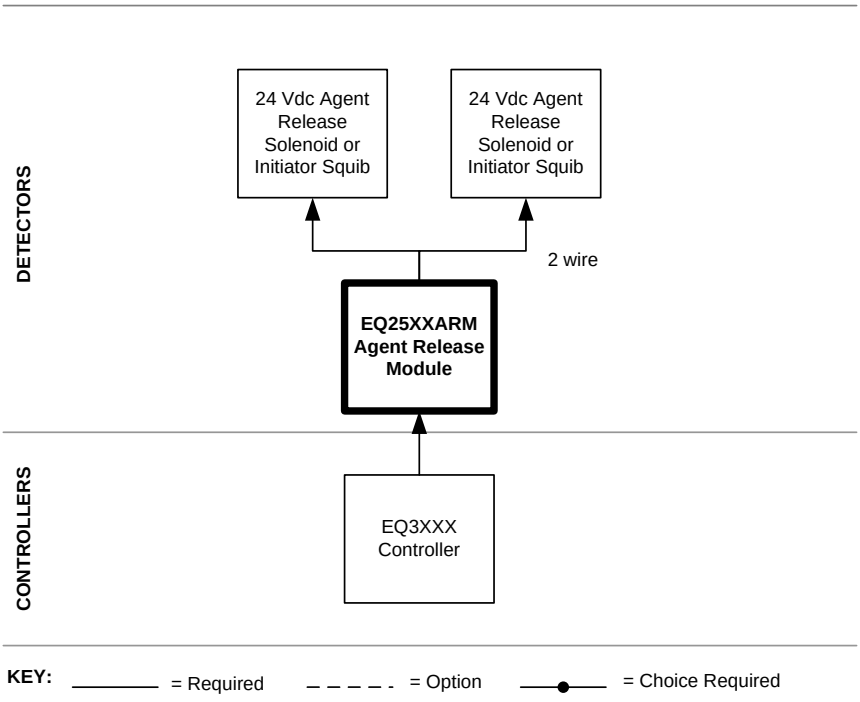
NOTE: Refer to EQ25EMSAM above when requiring complete Electronic Module

NOTES

EQ2500ARM Agent Release Module

EQ2500ARM Agent Release Module (Spec Sheet: 90-1128) provides agent release capability for the Eagle Quantum System. The ARM is located on the LON and is controlled by programmable logic in the Eagle Quantum Premier Controller. The ARM can be programmed for “Single,” “Cross” or “Counting” Zone Style initiation. Optional time delay, abort, and manual release sequences allow the output to be programmed for use in unique applications. Provides local control of releasing solenoids.

- Capable of actuating a single solenoid or two solenoids simultaneously
- Provides up to 2 amperes at 24 Vdc (for each output)
- Monitors wire and solenoid coil for opens
- 2 output channels
- Release activates both outputs at the same time
- Each channel is supervised for open circuits



EQ25xxARM - Agent Release Module

Model	Part Number	Material	Thread	Ports	FM/CSA/ ATEX/CE	FM/CSA Only	Ship Weight
EQ2553ARM	006733-009	AL	3/4" NPT	5	X		6 lb (2.7 kg)
EQ2563ARM	006733-010	SS	3/4" NPT	5	X		10 lb (4.5 kg)
EQ2507ARM	006733-013	AL	M25/M20	5	X		6 lb (2.7 kg)
EQ2517ARM	006733-016	SS	M25/M20	5	X		10 lb (4.5 kg)
EQ25EMARM	000506-009	Full Electronic Module Assy–Panel Mount				X	3 lb (1.4 kg)

Replacement Parts - ARM

Part Number	Description	Ship Weight
006642-006	Communications Module (top board)	3 lb (1.4 kg)
006731-003	Terminal Board, ARM	3 lb (1.4 kg)
006122-002	Ribbon Cable (Long–for tall cover)	4 oz (0.1 kg)
101173-029	Standoffs, 2.25" (two required–tall cover)	4 oz (0.1 kg)

NOTE: Refer to EQ25EMARM above when requiring complete Electronic Module

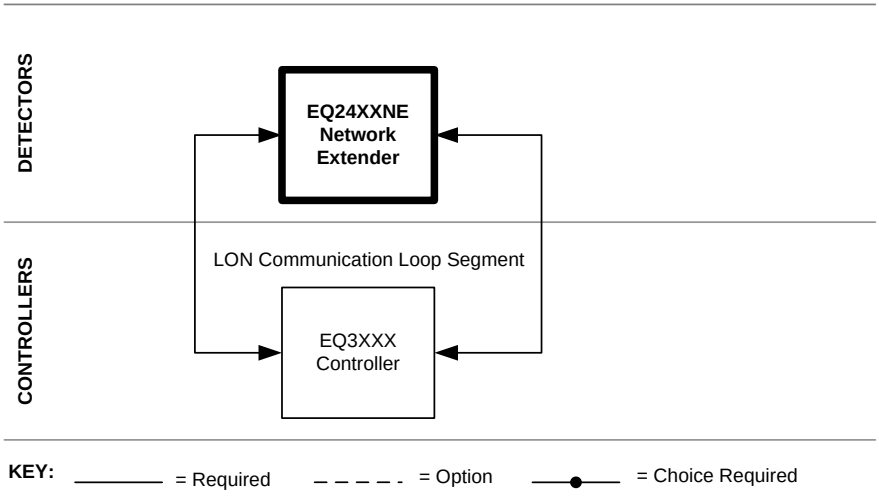
NOTES

EQ2400NE Network Extender

EQ2400NE Network Extender (Spec Sheet: 90-1132) expands the capabilities of the Eagle Quantum Premier system by allowing additional nodes as well as additional wiring to be added to the LON communication loop. Without a network extender, the communication network is limited to 60 nodes on a 2,000 meter loop. Each network extender increases the capacity of the loop by 40 nodes and an additional 2,000 meters of wiring. The maximum system size is 246 field nodes and 10,000 meters of wiring. To ensure optimum performance, it is important to distribute the network extenders along the loop so that no more than 40 nodes or 2,000 meters of wiring are on either side of a network extender.

Network extender circuitry supports communication in both directions. If a network fault should occur, uninterrupted communication can continue in the opposite direction.

- Increases network capacity by 40 nodes per unit (system maximum = 246)
- Each extender increases wiring length by 2,000 meters
- Visual indication of network traffic
- Up to 6 extenders can be added per system



EQ24xxNE - Network Extender

Model	Part Number	Material	Enclosure	Thread	Ports	FM/CSA/ ATEX/CE	Ship Weight
EQ2453NE	006941-009	AL	J-Box	3/4 NPT	5	X	6 lb (2.7 kg)
EQ2408NE	006941-007	AL	J-Box	3/4 NPT	6	X	6 lb (2.7 kg)
EQ2407NE	006941-003	AL	J-Box	M25/M20	5	X	6 lb (2.7 kg)
EQ2409NE	006941-008	AL	J-Box	M25/M20	6	X	6 lb (2.7 kg)
EQ2463NE	006941-010	SS	J-Box	3/4 NPT	5	X	10 lb (4.5 kg)
EQ2417NE	006941-006	SS	J-Box	M25/M20	5	X	10 lb (4.5 kg)
EQ24EMNE	000506-011	Electronic Module Panel Mount					3 lb (1.4 kg)

NOTES

Risk Area Heat Detector Model HD

The **Risk Area Heat Detector** (Spec Sheet: 90-1211) accurately senses the surrounding air temperature and actuates an electrical contact output at a pre-determined temperature.

The heat detector can be used as an alarm device to sense excessive heat or fire and warn personnel, or it can be used as a signaling device to sense fire and send a signal to an alarm panel for actuation of a fire suppression system.

The design of the heat detector utilizes Rate Compensation, which provides enhanced performance when compared to fixed-temperature or rate-of-rise detectors. The Model HD Detector senses the surrounding air temperature and actuates its output when the temperature reaches the pre-determined level, regardless of the fire growth rate. The unique properties of the alloy outer shell allow the Model HD to respond more quickly as the fire growth rate increases; i.e. the faster the fire grows, the sooner the unit will react.

The device is furnished with an explosion-proof junction box. The detector's electrical contact is factory wired to a screw terminal block located within the junction box. All external wiring to the device is also connected to this terminal block. The screw terminals accept wiring from 12 to 24 AWG. The junction box is available in aluminum or stainless steel, with two or four conduit entries, and either 3/4 inch NPT or 25 mm threads.

The Model HD is ideally suited for use in hazardous (classified) locations.

- Repeatable - resets itself, nothing to replace, testable
- Rugged - withstands shock and vibration
- Versatile - various temperature settings available
- Economical - wide spacings reduce installation costs
- Factory set internal contact area is hermetically sealed in stainless steel
- Ease of wiring and installation
- Aluminum or stainless steel junction box, stainless steel heat detector
- Approved and certified to FM, CSA, and ATEX Hazardous Location standards
- Compatible with EDIO, DCIO, and IDC LON devices

HD Model Matrix

MODEL	DESCRIPTION
HD	Risk Area Heat Detector

TYPE	SETTING
140	140° F (60° C)
160	160° F (71° C)
190	190° F (88° C)
210	210° F (99° C)
225	225° F (107° C)
275	275° F (135° C)
325	325° F (163° C)
360	360° F (182° C)

TYPE	MATERIAL
A	Aluminum
S	Stainless Steel (316)

TYPE	THREAD TYPE
2M	2 Port, Metric M25
2N	2 Port, 3/4" NPT
4M	4 Port, Metric M25
4N	4 Port, 3/4" NPT

TYPE	OUTPUT
11	Contact Closure

TYPE	APPROVALS
W	FM/CSA/ATEX/CE

TYPE	CLASSIFICATION
1	Div/Zone Ex de
2	Div/Zone Ex d

Risk Area Heat Detector Model HD

Model*	Material	# of Ports	Threads	Ex de	Ex d	FM/CSA/ ATEX/CE
HDxxxA2N11W1	AL	2	3/4"	X		X
HDxxxA2M11W1	AL	2	M25	X		X
HDxxxS2N11W1	SS	2	3/4"	X		X
HDxxxS2M11W1	SS	2	M25	X		X
HDxxxA2N11W2	AL	2	3/4"		X	X
HDxxxA2M11W2	AL	2	M25		X	X
HDxxxS2N11W2	SS	2	3/4"		X	X
HDxxxS2M11W2	SS	2	M25		X	X
HDxxxA4N11W1	AL	4	3/4"	X		X
HDxxxA4M11W1	AL	4	M25	X		X
HDxxxS4N11W1	SS	4	3/4"	X		X
HDxxxS4M11W1	SS	4	M25	X		X
HDxxxA4N11W2	AL	4	3/4"		X	X
HDxxxA4M11W2	AL	4	M25		X	X
HDxxxS4N11W2	SS	4	3/4"		X	X
HDxxxS4M11W2	SS	4	M25		X	X

*For "xxx", Insert required temperature from model matrix.

DEVICES

Model HD Accessories

Part Number	Description
104106-001	End of Line Resistor, 10KΩ ±1%, 5W wirewound
101118-009	Short Circuit Monitoring Resistor, 3.3KΩ, 1%, wirewound
005003-001	Lubriplate Grease, 1 oz.

Stop Plugs and Reducers

Part Number	Description	Ship Weight
101197-001*	Stop Plug, 3/4" NPT, AL	<1 lb (<0.45 kg)
101197-004*	Stop Plug, 3/4" NPT, SS	<1 lb (<0.45 kg)
101197-005	Stop Plug, M25, AL, IP66	<1 lb (<0.45 kg)
101197-003	Stop Plug, M25, SS, IP66	<1 lb (<0.45 kg)
010816-001*	Stop Plug, 20 Pack, 3/4"NPT, AL	1 lb (0.45 kg)
010817-001*	Stop Plug, 20 Pack, 3/4"NPT, SS	2 lb (0.9 kg)
010818-001	Stop Plug, 20 Pack, M25, AL, IP66	1.5 lb (0.7 kg)
010819-001	Stop Plug, 20 Pack, M25, SS, IP66	3.25 lb (1.5 kg)
102804-001	Reducer, M25 to M20, AL	<1 lb (<0.45 kg)
102804-003	Reducer, M25 to M20, SS	<1 lb (<0.45 kg)

*NEMA 4/IP66 rating requires addition of Teflon tape.

NOTES

Smoke and Heat Detectors for Unclassified Areas (non-addressable)

Smoke & Heat Detectors for Unclassified Areas

Part Number	Description	Ship Weight
000119-066	Smoke Detector, ionization type, dual chamber, general purpose, cULus/FM/CSFM/MEA	2.2 lb (1 kg)
000119-067	Smoke Detector, photoelectric type, general purpose, cULus/FM/CSFM/MEA	2.2 lb (1 kg)
000120-149	Heat Detector, 135°F (57°C), electronic, fixed type with 15°F (8°C) rate-of-rise, general purpose, cULus/FM/CSFM/MEA	2.2 lb (1 kg)
000120-150	Heat Detector, 135°F (57°C), electronic, fixed type, general purpose, cULus/FM/CSFM/MEA	2.2 lb (1 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

2-Wire Smoke Accessories

Part Number	Description	Ship Weight
000119-021	Smoke Detector Base, 2-Wire for smoke & electronic heat detectors, remote LED & test capabilities, cULus	0.5 lb (.23 kg)
000505-019	End of Line (EOL) Resistor (5.1K), for alarm supervision of smoke & electronic heat detectors	<1 lb (<.45 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

4-Wire Smoke Accessories

Part Number	Description	Ship Weight
000119-005	Smoke Detector Base, 4-wire with aux. relay, remote LED & remote test capabilities, UL	0.5 lb (.23 kg)
102385-002	End of Line Supervisory Relay for 4- wire Smokes	<1 lb (<.45 kg)
000106-108	EOL Resistor, 10K Ohm	<1 lb (<.45 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

Smoke & Heat Detection Accessories

Part Number	Description	Ship Weight
000161-005	Back Box, surface mount, alloy housing, five 1/2” NPT entries, cULus	1.5 lb (.68 kg)
000116-167	Remote Alarm Indicator, general purpose	0.5 lb (.23 kg)
000119-063	Infrared Wireless Sensitivity Tester for Advanced Smoke Detectors	1 lb (.45 kg)
000119-045	Smoke Detector Test Kit (No-Climb), includes Fiberglass 4 Section Telescopic Pole 14.7ft, Fiberglass Extension Pole 3.7ft, Universal Detector Removal Tool, Aerosol Smoke Dispenser, and Protective Carrying Bag	34 lb (16 kg)
000515-095	Smoke Detector Testing Tool	8 lb (3.6 kg)
000515-092	Telescopic Fiberglass Pole, 14.7 Ft	21 lb (9.5 kg)
000119-046	Spare Smoke for Smoke Detector Test Kit	1.5 lb (.68 kg)
000515-097	Heat Detector Test Kit, includes detector test head, two (2) battery batons, and charger	14 lb (6.4 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

Manual Call Stations (non-addressable)

Class 1, Division 1

Part Number	Description	Ship Weight
000115-195	Manual Pull Station, push button with lift flap (dual action), SPST contact, surface mount, alloy housing painted red, key for reset, 1/2" NPT bottom, includes "FIRE-PUSH BUTTON" label, Class 1, Division 1, Groups C-D, NEMA 4X, UL	5.5 lb (2.5 kg)
000115-003	Manual Pull station, Dual Action Lift and Pull Ring, 3/4" Entry, Class 1, Division 1, SPDT Contacts, Groups C & D, Aluminum material, UL, ULC, CSA, CSFM Listed, Red Finish	5.5 lb (2.5 kg)
000115-040	Manual Pull Station, pull ring with lift flap (dual action), SPDT contact, surface mount, Aluminum housing, two 3/4" NPT (F) entries, Class 1, Division 1, Groups B, C, & D, NEMA 4/7/9, ULC, Red Finish	5.5 lb (2.5 kg)
000115-010	Manual Pull Station, Single Action (Dual if used with Lift Flap), DPDT Contacts, Aluminum material, Class 1, Division 1, Groups B, C, & D, NEMA 4X, UL Listed, Red Finish, Model B-9	3.5 lb (1.6 kg)
000210-709	Lift Flap for B-9, "CO2 Release" label	0.5 lb (.23 kg)
000115-011	Lift Flap for B-9, "FIRE ALARM" label	0.5 lb (.23 kg)
000115-012	Lift Flap for B-9, "FIRE SYSTEM RELEASE" label	0.5 lb (.23 kg)
000115-027	Lift Flap for B-9, "FM-200 Release" label	0.5 lb (.23 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

Class 1, Division 2

Part Number	Description	Ship Weight
000115-053	Manual Pull Station, pushbutton type with lift flap (dual action), Class 1, Division 2, Groups A, B, C, & D, NEMA 4X, SPST contact, surface mount, GRP housing painted red, key for reset, two 1/2" NPT (F) entries, includes "FIRE ALARM" label and 10K EOL resistor, UL	2.7 lb (1.3 kg)
000115-054	Manual Call Station, break glass type, SPST contact, Class 1, Division 2, Groups A, B, C, & D, NEMA 4X, SPST contact, surface mount, GRP housing painted red, key for test, two 1/2" NPT (F) entries, includes "FIRE BREAK GLASS" label, no EOL resistor, UL	2.7 lb (1.3 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

General Purpose

Part Number	Description	Ship Weight
000515-012	Manual Pull Station, Dual Action w/ Labels, DPST Contacts, Red Finish, Model 3300	1.2 (.6 kg)
000115-051	Manual Pull Station, Dual Action w/ Labels, SPST Contacts, Red Finish, Model 3300	1.2 (.6 kg)
000515-013	Weatherproof Backbox for 3300 Pull Station	1 lb (.45 kg)
000515-014	Indoor Backbox for 3300 Pull Station	0.5 lb (.23 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

Accessories

Part Number	Description	Ship Weight
000115-028	Glass Breakrods for B-9 (10 Pk)	0.5 lb (.23 kg)
000515-015	Glass Breakrods for 3300 Pull Station (12 Pk)	0.5 lb (.23 kg)
000515-016	Spare Key for 3300 Pull Station	0.5 lb (.23 kg)
000106-108	EOL Resistor, 10K Ohm	<1 lb (<.45 kg)

NOTE: Average lead time is 2-3 weeks. For additional options please consult the factory.

Horns (non-addressable)

Class 1, Division 1

Part Number	Description	Ship Weight
000122-144	Horn, 27 Tones, marine grade alloy, Up to 100+/-3dB, UL Class 1, Division 1, Groups C & D, NEMA 4x, Voltage: 24VDC, Cable Entries: 1x3/4" NPT LHS, 1x3/4" NPT RHS, Duty Label: None, Tag Label: None, Other Features: None, Finish: Red Finish	12.3 lb (5.6 kg)
000122-098	Horn, Alloy, Up to 100+/-3dB, UL Class 1, Div 1, Groups C & D, NEMA 4x, 24VDC, 3/4" NPT bottom entry, No duty or tag label, Fitted with 10K EOL Resistor), Red finish	12.3 lb (5.6 kg)
000122-024	Horn, Explosion Proof, Class 1, Division 1, 24 Vdc, 3/4" Entry, 100 dB @ 10 ft., UL, cUL, CSFM	10.3 lb (4.7 kg)
000122-036	Siren, Explosion Proof, Class 1, Division 1, Groups B, C, & D, 4 Selectable Tones, 24 Vdc, 108 dB @ 10 ft., NEMA 4X, UL, cUL	23 (10.5 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Class 1, Division 2

Part Number	Description	Ship Weight
000122-079	Horn, up to 115 dB, UL Class 1 Division 2, Class 1 Zones 1 & 2, NEMA 4X & 6, GRP material, 24 Vdc, no labels, one (1) 1/2" NPT entry, no special features, red finish	13.2 lb (6 kg)
000122-074	Horn, up to 118dB(A), GRP, UL Class 1 Division 2, Class 1 Zones 1 & 2, Class II Div 2, Groups F & G, NEMA 4x & 6, Voltage: 12V-48V d.c, Labels: None, Entries: 2x1/2" NPT, Options: None, Color: Painted Red	13.2 lb (6 kg)
000122-099	Horn, up to 118dB, GRP material, Certified EExd IIC T5, ATEX approved Ex II 2GD, IP66 & 67, 24 Vdc, No labels, two M20 entries, Natural Black finish	13.2 lb (6 kg)
000122-031	Alarm Horn, Class 1, Division 2, Groups A, B, C, & D, 24 Vdc, 0-110 dB @ 10 ft., NEMA 4X, UL, ULC, CSFM (requires tone module)	6.1 lb (2.7 kg)
000122-052	Universal Tone Module, 32 switchable Tones, UL, ULC, CSA, CSFM	0.5 lb (.23 kg)
000106-108	End of Line (EOL) Resistor, for supervision of end devices, 10K Ohm	<1 lb (<.45 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

General Purpose

Part Number	Description	Ship Weight
000122-039	Horn, 80 to 92 dB @ 10 ft, surface mount, diode polarized, UL Listed	1 lb (.45 kg)
000122-037	Indoor backbox, general purpose	0.5 lb (.23 kg)
000122-033	Horn, 24 Vdc, Non-Polarized, general purpose, Model 450	1.5 lb (.68 kg)
000122-034	Panel Mount Gasket Kit, 350/450	0.5 lb (.23 kg)
000122-035	Back Box for 450 Horn	1 lb (.45 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Accessories

Part Number	Description	Ship Weight
000106-108	EOL Resistor, 10K Ohm	<1 lb (<.45 kg)

NOTE: For additional options please consult the factory.

DEVICES

Strobes (non-addressable)

Class 1, Division 1

Part Number	Description	Ship Weight
000121-121	Xenon Strobe (5 Joule), NEMA 4X & 6, Alloy, UL Class 1, Division 1, Groups C & D, 24 Vdc, Red lens with no guard, 1/2" entries, No duty or Tag labels, , Red finish	4.5 lb (2 kg)
000121-116	Xenon Strobe 21 Joule, NEMA 4X & 6, UL Class 1, Division 1, Groups C & D, 24 Vdc, 3/4" NPT Entry, 60 flash per minute, Clear Lens with no lens guard, no duty or tag label, Alloy material, Red finish	14.5 lb (6.6 kg)
000121-028	Strobe, Amber Lens, Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Pendant Mount, NEMA 4X, UL, ULC, CSA, CSFM	18 lb (8.2 kg)
000121-029	Strobe, Red Lens Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Pendant Mount, NEMA 4X, UL, ULC, CSA, CSFM	18 lb (8.2 kg)
000121-030	Strobe, Blue Lens Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Pendant Mount, NEMA 4X, UL, ULC, CSA, CSFM	18 lb (8.2 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Class 1, Division 2

Part Number	Description	Ship Weight
000121-155	Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, red lens with wire guard, Class 1, Division 2, Groups A-D, NEMA 4X, cULus	5.8 lb (2.6 kg)
000121-166	Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, blue lens with wire guard, Class 1, Division 2, Groups A-D, NEMA 4X, cULus	5.8 lb (2.6 kg)
000121-156	Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, amber lens with wire guard, Class 1, Division 2, Groups A-D, NEMA 4X, cULus	5.8 lb (2.6 kg)
000121-163	Strobe, Xenon type, 15 Joule, 24 Vdc, pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, clear lens with wire guard, Class 1, Division 2, Groups A-D, NEMA 4X, cULus	5.8 lb (2.6 kg)
000121-133	Strobe, Clear Lens, Class I, Division 2, 4-wire with supervisory diode, NEMA 4X, 24 Vdc, 80 flash/per minute, 1/2" Pipe Mount, UL. ULC, CSA, CSFM	2 lb (.9 kg)
000121-122	Xenon Strobe 5 Joule, ATEX Approved Ex II 2GD, EExd IIB T5, IP66 & 67 GRP Material, two M20 entries, 24 Vdc, 60 flash per munite, Red Lens with guard, Backstrap mounting, No duty or tag labels, Red finish	5.5 lb (2.5 kg)
000121-031	Strobe , Red Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized	1.5 lb (.68 kg)
000121-035	Strobe , Amber Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized	1.5 lb (.68 kg)
000121-037	Strobe , Blue Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized	1.5 lb (.68 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Strobes (non-addressable) Continued...

General Purpose

Part Number	Description	Ship Weight
000121-073	Strobe, NEMA 4X, Xenon type, 2.2 Joule, 1/2" pipe mount, 24 Vdc, red lens, UL/ULc/CSA, non-polarized	<1 lb (<.45 kg)
000121-115	Strobe, NEMA 4X, Xenon type, 2.2 Joule, 1/2" pipe mount, 24 Vdc, blue lens, UL/ULc/CSA, non-polarized	<1 lb (<.45 kg)
000505-005	End of Line / Polarizing Assembly, 10k Ohm	<1 lb (<.45 kg)
000121-038	Strobe, White Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, NEMA 4X, UL, cUL, CSA, non-polarized	2 lb (.9 kg)
102778-003	Strobe, Blue Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, NEMA 4X, UL, cUL, CSA, non-polarized	2 lb (.9 kg)
102778-004	Strobe, Red Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, NEMA 4X, UL, cUL, CSA, non-polarized	2 lb (.9 kg)
102778-005	Strobe, Amber Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, NEMA 4X, UL, cUL, CSA, non-polarized	2 lb (.9 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Accessories

Part Number	Description	Ship Weight
000121-053	Dome Guard for121X & 27XST, Federal DGXC	<1 lb (<.45 kg)
000121-054	Ceiling Mount for 121X & 27XST, Federal CMXC	1.5 lb (.68 kg)
000121-055	Wall Mount for 121X & 27XST, Federal WMXC	1.5 lb (.68 kg)
000106-108	EOL Resistor, 10K Ohm	<1 lb (<.45 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

DEVICES

Combination Horn/Strobe

Class 1, Division 2

Part Number	Description	Ship Weight
000121-075	Horn/Strobe Combination Unit Consisting of the following: Xenon Strobe, 5 Joule, Class 1, Division 2, NEMA 4X & 6, GRP Material, two (2) 1/2" NPT entries, 24 Vdc, 60 flash/minute, red lens with guard, no labels, red finish Sounder, up to 115 dB, Class 1 Division 2, Class 1 Zones 1 & 2, NEMA 4X & 6, GRP material, 24 Vdc, no Labels, one (1) 1/2" NPT entry, no special features, red finish 2-Way Baseplate	23 lb (10.5 kg)
000121-079	Horn/Strobe Combination Unit Consisting of the following: Xenon Strobe, 5 Joule, ATEX Approved Ex II 2G, EExd IIB T5, IP66 & 67, GRP Material, 24 Vdc, 60 flash/minute, red lens with guard, two (2) 20 mm entries, no labels Sounder, Up to 115 dB, ATEX Certified EExd IIC T5, IP66 & 67, GRP material, 24 Vdc, no labels, one (1) 20 mm entry, no special features, red finish 2-Way Baseplate	23 lb (10.5 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

General Purpose

Part Number	Description	Ship Weight
000122-078	Horn/Strobe, outdoor general purpose, clear lens labeled "FIRE", requires outdoor backbox	1.5 lb (.68 kg)
000121-120	Horn/Strobe, indoor general purpose, clear lens labeled "FIRE", requires indoor backbox	1.5 lb (.68 kg)
000122-037	Indoor/outdoor backbox (use with 000122-078 or 000121-120)	<1 lb (<.45 kg)

NOTE: Average lead time is 4-5 weeks. For additional options please consult the factory.

Accessories

Part Number	Description	Ship Weight
000106-108	000106-108 End of Line (EOL) Resistor, for supervision of end devices, 10K Ohm	<1 lb (<.45 kg)

NOTE: For additional options please consult the factory.

NOTES

DEVICES

Model GP16XX Gas Panel

Model GP16XX Gas Panel (Spec Sheet: 90-1210) is an economical system package, designed for selected gas detection applications.

- Stand-alone controller approved to ANSI/ISA12 and 92, FM 3610-6, CSA 22.2, EN60079-29-1.
- Utilizes Eagle Quantum Premier (EQP)
- 16 gas detection points available
- Flexible device communication protocol (LON and/or 4-20 mA)
- User friendly HMI touch screen
- User configurable
- User defined alarm set-points
- Sounder on panel
- 24.0in (60.96mm) x 24.0in (60.96mm) x 6.4in (16.2mm)
- Common relay outputs available from controller

Model GP16XX Gas Panel

Model	# AIM Modules	FM/CSA/ ATEX/CE	Ship Weight
GP1600	0	X	26.5 lb (12.0 kg)
GP1610	1	X	27.5 lb (12.5 kg)
GP1620	2	X	28.5 lb (13.0 kg)

MODEL GP16XX INCLUDES

Below is a list of system components that are included or optional in the Model GP16XX Gas Panel system:

- EQP Controller – 16 node (included)
- EQ3710 AIM – Analog Input Module (optional, up to qty 2)
- EQ2220 GFM – Ground Fault Monitor (included)
- Power Supply – 24 Vdc, 10A (included)

EQP SYSTEM COMPONENTS

Below is a list of field devices compatible with the Model GP16XX Gas Panel system:

- PIRECL – PointWatch Eclipse
- UD10/DCU – FlexVu Universal Display
- EQ22XX DCU – Digital Communication Unit
- EQ22XX DCUEX – Digital Communication Unit
- Any 4-20 mA Device (via Analog Input Module)

DET-TRONICS
A UTC Fire & Security Company

DETECTOR ELECTRONICS CORPORATION
6901 West 110th Street
Minneapolis, MN 55438

MODEL GP16XX GAS PANEL CONFIGURATION WORKSHEET

Date:	
Customer:	
PO#:	

HARDWARE:

Maximum number of field devices is 16 (i.e. the total of B & C cannot exceed 16)

A	Number of Analog Input Modules – AIM (Maximum of 2)	
B	Number of 4-20 mA Field Devices (Maximum 8 per AIM)	
C	Number of LON Field Devices	

SOFTWARE:

Record detector model, gas range, low alarm, and high alarm set-points in the table below.

FACTORY DEFAULT: Range = 0-100 Low Alarm = 20 High Alarm = 40

NOTE: If factory defaults are acceptable rather than specified values check here ☐

CHANNEL	DETECTOR MODEL or PART #	RANGE (0-xxxx)	LOW ALARM SET POINT	HIGH ALARM SET POINT
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

08/11 **Rev A**

SIL 2 CERTIFIED SYSTEM

SIL 2 Certified Fire and Gas Detection System

Det-Tronics has the capability to offer a third-party approved SIL 2 rated fire and gas detection system fully exida certified to IEC61508.

EQ3001 and EQ3016 Eagle Quantum Premier Controllers share a common hardware and software platform with standard EQP Controllers. The SIL rated version of the Controller conducts additional diagnostic checks and annunciates additional fault conditions. Using Det-Tronics EQP Safety Controllers in redundant mode will increase their availability, but will have no effect on their ability to perform a safety-related function. The redundant controller system is certified for use as part of a SIL 2 system.

EQ3730EDIO Enhanced Discrete Input/Output Module (EDIO) module provides eight channels of configurable digital input or digital output devices. The EDIO Module is specially designed and certified to meet the requirements of IEC 61508.

EQ3710AIM Analog Input Module expands the input capability of the Det-Tronics Eagle Quantum Premier System. The unit provides a means of connecting devices with a 4-20 mA output signal to the Eagle Quantum Premier System.

Multispectrum Infrared Flame Detector X3301 establishes a new benchmark in multiple-fuel fire detection performance and false alarm rejection. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. SIL 2 certified by exida to IEC-61508 for a 4-20 mA and relay output.

PointWatch Eclipse Infrared Gas Detector is a point infrared gas detector providing detection of flammable hydrocarbon gases in the lower explosion limit (LFL) range. SIL 2 certified by exida to IEC-61508 for a 4-20 mA and relay output.

EQ3001 Controller - SIL 2

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3001PNNT	007609-072	Panel			X	5.0 lb (2.3 kg)
EQ3001DNNT	007609-073	DIN			X	5.0 lb (2.3 kg)
EQ3001PCNT	007609-075	Panel	X		X	5.0 lb (2.3 kg)
EQ3001DCNT	007609-076	DIN	X		X	5.0 lb (2.3 kg)
EQ3001PNST	007609-077	Panel		X	X	5.0 lb (2.3 kg)
EQ3001DNST	007609-078	DIN		X	X	5.0 lb (2.3 kg)
EQ3001PCST	007609-079	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3001DCST	007609-080	DIN	X	X	X	5.0 lb (2.3 kg)

EQ3016 Controller - SIL 2

Model	Part Number	Mounting	ControlNet	Serial Port Expansion	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
EQ3016PNNT	007609-472	Panel			X	5.0 lb (2.3 kg)
EQ3016DNNT	007609-473	DIN			X	5.0 lb (2.3 kg)
EQ3016PCNT	007609-475	Panel	X		X	5.0 lb (2.3 kg)
EQ3016DCNT	007609-476	DIN	X		X	5.0 lb (2.3 kg)
EQ3016PNST	007609-477	Panel		X	X	5.0 lb (2.3 kg)
EQ3016DNST	007609-478	DIN		X	X	5.0 lb (2.3 kg)
EQ3016PCST	007609-479	Panel	X	X	X	5.0 lb (2.3 kg)
EQ3016DCST	007609-480	DIN	X	X	X	5.0 lb (2.3 kg)

EQ3730 EDIO Module - SIL 2

Model	Part Number	Material	SIL/FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3730PT	009174-012	AL	X	1.0 lb (0.45 kg)
EQ3730DT	009174-013	AL	X	2.0 lb (0.90 kg)

EQ3710 AIM - SIL 2

Model	Part Number	Material	SIL/FM/CSA/ ATEX/CE/IECEx	Ship Weight
EQ3710DT	007918-013	AL	X	2.0 lb (0.90 kg)
EQ3710PT	007918-012	AL	X	1.0 lb (0.45 kg)

SIL 2 CERTIFIED SYSTEM

X3301 Protect•IR Multispectrum Infrared Flame Detector - SIL 2

Model	Part Number*	Material	Threads	Output	Ex d e	Ex d	SIL/FM/CSA/ ATEX/CE/ IECEx	Ship Weight
X3301A4N14T1	008262-001	AL	3/4 NPT	EQP	X		X	6 lb (2.75 kg)
X3301A4M14T1	008263-001	AL	M25	EQP	X		X	6 lb (2.75 kg)
X3301S4N14T1	008264-001	316 SS	3/4 NPT	EQP	X		X	10 lb (4.54 kg)
X3301S4M14T1	008265-001	316 SS	M25	EQP	X		X	10 lb (4.54 kg)
X3301A4N14T2	008274-001	AL	3/4 NPT	EQP		X	X	6 lb (2.75 kg)
X3301A4M14T2	008275-001	AL	M25	EQP		X	X	6 lb (2.75 kg)
X3301S4N14T2	008276-001	316 SS	3/4 NPT	EQP		X	X	10 lb (4.54 kg)
X3301S4M14T2	008277-001	316 SS	M25	EQP		X	X	10 lb (4.54 kg)

*The standard EQP detectors are completely configuable using the S3 software and are shipped defautled to the -001 setting.

PointWatch Eclipse Infrared Gas Detectors - SIL 2

Model	Part Number	Entry Thread Type	Output	HART Port	Relays	Weather Protection*	Approvals
PIRECLA4A1T1	007168-212	3/4 NPT	EQP	X	No	w/ hydrophobic	SIL/FM/CSA/ ATEX/CE/ IECEx
PIRECLA4A1T2	007168-243	3/4 NPT	EQP	X	No	w/ hydrophobic	
PIRECLA4A2T1	007168-214	3/4 NPT	EQP	X	No	no hydrophobic	
PIRECLA4A3T1	007168-216	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	
PIRECLA4A3T2	007168-244	3/4 NPT	EQP	X	No	1/16 NPT w/hydro	
PIRECLB4A1T1	007168-213	M25	EQP	X	No	w/ hydrophobic	
PIRECLB4A1T2	007168-247	M25	EQP	X	No	w/ hydrophobic	
PIRECLB4A2T1	007168-215	M25	EQP	X	No	no hydrophobic	
PIRECLB4A3T1	007168-217	M25	EQP	X	No	1/16 NPT w/hydro	
PIRECLB4A3T2	007168-248	M25	EQP	X	No	1/16 NPT w/hydro	
PIRECLA4D1T1	010195-212	3/4 NPT	EQP		No	w/ hydrophobic	
PIRECLA4D1T2	010195-243	3/4 NPT	EQP		No	w/ hydrophobic	
PIRECLA4D2T1	010195-214	3/4 NPT	EQP		No	no hydrophobic	
PIRECLA4D3T1	010195-216	3/4 NPT	EQP		No	1/16 NPT w/hydro	
PIRECLA4D3T2	010195-244	3/4 NPT	EQP		No	1/16 NPT w/hydro	
PIRECLB4D1T1	010195-213	M25	EQP		No	w/ hydrophobic	
PIRECLB4D1T2	010195-247	M25	EQP		No	w/ hydrophobic	
PIRECLB4D2T1	010195-215	M25	EQP		No	no hydrophobic	
PIRECLB4D3T1	010195-217	M25	EQP		No	1/16 NPT w/hydro	
PIRECLB4D3T2	010195-248	M25	EQP		No	1/16 NPT w/hydro	
Ship Weight: 11.5lb (5.2kg)							

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 007168-201P). Add "E" for ethylene or "B" for butane.

*Units with 1/16 NPT are 007529-XXX Duct Kit compatible.

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Availability and specifications are subject to change without notice.

REFERENCES

Abbreviations

AGC/TE	Automatic Gain Control/Thermoelectric Cooler
AIM	analog input module
AL	Aluminum
amp(s)	ampere/amperes
Arc	Arc Rejection – an algorithm that prevents false alarms from transient UV sources
ANSI	American National Standards Institute
ARM	Agent Release Module
ASH	Addressable Smoke & Heat
assy	assembly
ATEX	Standard for products used in explosive atmospheres
Aux	Auxiliary
AWG	American Wire Gauge
bd(s)	boards
BNC	Bayonet Neill-Concelman Connector
°C	Celsius
cal	calibration
CCTV	Closed Circuit Television
CD	Compact Disc
CE	'Conformité Européenne', French for 'European Conformity'
CFR	Code of Federal Regulations
COMM	Communication
config	configuration
COV	Cone of Vision
cps	counts per second
Ctrlr	controller
CSA	Canadian Standards Association Certification
dB	decibels
dBA	decibels adjusted
DCIO	Discrete Input/Output
DCS	Distributed Control System
DCU	Digital Communication Unit
DDL	Device Description Language
DNV	Det Norske Veritas (Norway) approved
DVR	Digital Video Recorder
e	Increased Safety
ea	each
EC	Electrochemical
EDIO	Enhanced Discrete Input/Output
EMC	electromagnetic compatibility
EMI	electromagnetic interference
Encl	enclosure
EOL	End of Line
EQ	Eagle Quantum
EQP	Eagle Quantum Premier
EVF	External Voltage Fluctuation
Ex d	Flame Proof
Ex e	Increased Safety
°F	Fahrenheit
FF	Foundation™ Fieldbus
FOV	field of view
FM	Factory Mutual Approvals
ft	foot or feet
HART	Highway Addressable Remote Transducer
HMI	Human Machine Interface
Ht	height

Hz	Hertz
GFM	Ground Fault Monitor
ib	Intrinsic Safety (Class 1, Zone 1)
IEC	International Electrotechnical Commission
ID	inside diameter
IDC	Initiating Device Circuits
IDCGF	Initiating Device Circuits Ground Fault
Ind	independent
IP	Ingress Protection
IR	infrared
IS	Intrinsic Safety
ISA	The Instrumentation, Systems, and Automation Society
J-box	Junction box
kg	kilogram
lb	pound
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LFL-m	Lower Flammable Limit, meters
LON	Local Operating Network
LOS	Line Of Sight
LPM	Liter(s) Per Minute
m	meter(s)
mA	milliampere(s)
MIR	Multispectrum Infrared
MOS	Metal-Oxide Semiconductor
mm	millimeter(s)
mt	mount
mtg	mounting
N/A	Non-Applicable
N/C	No Charge
NE	Network Extender
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
No.	number
N.C.	Normally Closed contacts
NPT	National Pipe Thread
N.O.	Normally Open contacts
NT	Nanotechnology
NTSC	National System Television Committee
$\mathbf{O_i}$	Optical Integrity
OPC	Open for Process Control
PAL	Phase Alternating Line
PB	pushbutton
PC	Personal Computer
pkg	package
PM	Power Monitor
PLC	Programmable Logic Controller
ppb	parts per billion
ppm	parts per million
PSM	Power Supply Monitor
PVC	Polyvinyl Chloride
OD	outside diameter
OEM	Original Equipment Manufacturer
oz	ounce
p/n	part number

PIRTB	Point-type Infrared Termination Box
R	Russian approved
Repl	replacement
RFI	radio frequency interference
RH	relative humidity
rly(s)	relay/relays
RM	Relay Module
RTC	real-time clock
RTU	Remote Terminal Unit
RUS	Russian approved
Rx	Receiver
S^3	Safety System Software
SAM	Signal Audible Module
SCADA	Supervisory Control and Data Acquisition
sec	seconds
sep	separation
SIL	safety integrity level
sgl	single
SS	Stainless Steel
STAR	Selectable Transient Arc Rejection
surv	surveillance
Tx	Transmitter
TAR	Transient Arc Rejection
TDSA	Time Domain Signal Analysis
temp	temperature
Ω	ohm
UCR	Upper Count Rate
UEL	Upper Explosive Limit
UL	Underwriter Laboratories
ULC	Underwriter Laboratories of Canada Listed
USB	Universal Serial Bus
UV	Ultraviolet
UVIR	Ultraviolet/Infrared
Vac	Volts alternating current
Vdc	Volts direct current
VDS	Verband der Sachversicherer (German approval)
Vol	Volume
w/	with
w/o	without

Product Life Cycle Definitions

Active: An active product is one that is being actively promoted, with new versions being released. These products are manufactured on a regular basis and are promoted as the latest technology from Det-Tronics.

Retired Product Status (RPS): An RPS product will continue to be manufactured for a *maximum* of five years after being given this status. No further development work will be done, or new certifications pursued, on RPS products.

Repair Only Status (ROS): An ROS product will no longer be manufactured. An ROS product will remain on this status for a maximum of five years.

Obsolete (OBS): An OBS product will no longer be manufactured or repaired.

REFERENCES

Ordering Information

If unit required is not listed, it may be possible to order a special model that better fits the requirements. The manufacturer reserves the right to offer a particular model. Consult factory for pricing and availability.

Detector Electronics Corporation
6901 West 110th Street
Minneapolis, Minnesota 55438 USA

The manufacturer reserves the right to make substitutions or changes to products without notice.

All prices are in U.S. Dollars. Prices are F.O.B. factory, Minneapolis, Minnesota, USA. Prices shown contain no provision for V.A.T. National, State or Local taxes or customs duty that may apply. Prices shown do not contain provision for special export crating. Prices are subject to change without notice. Prices are effective for shipments after September 1, 2012.

Terms are Confirmed Letter of Credit with order unless open account terms are established in advance. Invoices to customers with approved credit are payable

30 days net (Domestic) from date of invoice.
35 days net (International) from date of invoice.

A minimum of 30% restocking charge will be applied to all returns. Actual credit will depend on age and condition. Prior to returning products, contact Detector Electronics Corporation to obtain a Return Material Identification (RMI) number.

Expedited Shipments

Any order received (telephone or wire) requesting same day shipment will be treated as an "expedited shipment." There will be a minimum charge for "expedited shipments" of $350 and an additional 10% expediting charge for all counter-to-counter rush orders. Detector Electronics cannot guarantee same day shipment for orders placed after 3:00 PM CST.

MINIMUM ORDER: $250.00

Disclaimer

ANY TECHNICAL ASSISTANCE, RECOMMENDATIONS OR SUGGESTIONS PROVIDED BY DETECTOR ELECTRONICS CORP. (DET-TRONICS) AS TO THE NUMBER OR PLACEMENT OF ANY DEVICES IN ANY PARTICULAR INSTALLATION ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE DEPENDENT UPON THERE HAVING BEEN FULL, COMPLETE AND ACCURATE INFORMATION PROVIDED TO DET-TRONICS. THE END USER (OWNER) AND THE INSTALLER ARE THE ULTIMATE DECISION MAKERS AND ARE RESPONSIBLE TO ENSURE THAT THE ACTUAL INSTALLATION IS FULLY COMPLIANT WITH ALL LOCAL CODES, IS FULLY APPROVED BY THE AUTHORITY HAVING JURISDICTION, AND ACHIEVES THE DESIRED PERFORMANCE. DET-TRONICS RECOMMENDATIONS DO NOT ACCOUNT FOR THE UNREPORTED PRESENCE OF DISTURBING ELEMENTS (E.G., WALLS, PARTITIONS, SOLID OBJECTS, OBSTACLES, WIND, ETC.) AND CANNOT ACCOUNT FOR FUTURE CHANGES TO SITE CONDITIONS.

General Terms and Conditions for Sales Contract

(Rev. 18, July 20, 2012)

All sales by Detector Electronics Corporation (hereinafter called "Det-Tronics") of equipment offered and sold by it shall be subject to the following General Terms and Conditions which shall be deemed incorporated into all orders and offers to purchase submitted to Det-Tronics for acceptance and into all of its acceptances and contracts for sale.

1. WARRANTY. Det-Tronics makes the following limited warranty: Det-Tronics warrants to Buyer that the Equipment represented by this contract shall be free from defects in material and workmanship upon delivery. If such Equipment is not as warranted (within eighteen (18) months after date of manufacture, or within twelve (12) months after date of installation, whichever occurs first (as evidenced by a certification by the installer), Det-Tronics' liability and Buyer's exclusive remedy will be limited to the repair or replacement of the defective good(s). If, after inspection of the returned equipment, Det-Tronics determines that the defect is a result of damage, misuse, mishandling, installation, abnormal conditions of storage or operation, unauthorized repair or modification, or due to Buyer's failure to install, maintain, or operate the Equipment in compliance with the written instructions, all expenses incurred by Det-Tronics in connection with the replacement or repair of the equipment shall be for the account of Buyer. Any equipment returned to Det-Tronics for replacement shall become the property of Det-Tronics. Any part, item, or equipment repaired or replaced and returned to Buyer shall be warranted by Det-Tronics for the remainder of the original warranty period. Extended warranty periods are offered for specific detectors and are shown in the notes below.

NOTE #1: The PointWatch PIR9400 and PointWatch Eclipse PIRECL Point Infrared Hydrocarbon Detectors and the X3301 and X3302 Multispectrum Infrared Flame Detectors warranty for parts and labor shall be five (5) years from the date of manufacture.

NOTE #2: The X2200 UV Flame Detector and X9800 Single Frequency IR Flame Detectors and X5200 UV/IR Flame Detector warranty for parts and labor shall be three (3) years from the date of manufacture.

NOTE #3: The OPECL Open Path Eclipse Gas Detector warranty for parts and labor shall be two (2) years from the date of manufacture.

The validity, performance and interpretation of the limited warranty shall be governed by the internal laws (and not the laws of conflicts) of the State of Minnesota. All disputes arising in connection with the limited warranty shall be resolved, if not sooner settled, by a court of competent jurisdiction located in Hennepin County, Minnesota, USA.

THE FOREGOING WARRANTIES ARE THE SOLE AND EXCLUSIVE WARRANTIES GIVEN BY DET-TRONICS IN CONNECTION WITH THE SERVICES PERFORMED AND PRODUCTS PROVIDED HEREUNDER, AND ARE IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, WHICH ARE HEREBY DISCLAIMED AND EXCLUDED BY DET-TRONICS, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.

2. LIMITATION OF LIABILITY. To the extent permitted by law, the aggregate liability of Det-Tronics hereunder whether in contract, tort (including negligence) or otherwise, will be limited to one times the contract value, provided however the foregoing limitation does not limit the liability of Det-Tronics for any injury to, or death of a person, caused by the gross negligence of Det-Tronics. Under no circumstances shall either party be liable for special, indirect, or consequential damages of any kind including, but not limited to, loss of profits, loss of good will, loss of business opportunity, additional financing costs or loss of use of any equipment or property, whether in contract, tort (including negligence), warranty or otherwise, notwithstanding any indemnity or other provision to the contrary.

3. ACCEPTANCE STATES THE ENTIRE CONTRACT. The acknowledgment by Det-Tronics of the Buyer's order or offer to purchase is an acceptance of the Buyer's order and intended to embody the complete and exclusive contract of sale in relation to the subject matter hereof, and no understandings or agreements, verbal or otherwise, in relation thereto except as herein expressly set forth or incorporated herein by reference shall be binding on either party.

The acceptance by Det-Tronics of Buyer's order(s) is on the condition that these Terms and Conditions shall apply and shall constitute the complete contract between the parties. Any provisions or conditions of the Buyer's order forms or any verbal or other understandings or agreements which are in any way in conflict with or in addition to these terms and conditions shall not be binding on Det-Tronics and shall not be applicable, unless expressly agreed to in writing by Det-Tronics herewith or hereafter.

REFERENCES

4. DELIVERY. Delivery shall be FCA Factory Bloomington, Minnesota, unless otherwise agreed and indicated on our order acknowledgement. Shipping dates are approximate and are based upon current and anticipated manufacturing capabilities and upon receipt of all necessary information from Buyer. Det-Tronics reserves the right to make delivery in installments and the contract shall be severable as to each such installment. Delay in delivery or other default in any installment shall not relieve Buyer of its obligation to accept and pay for remaining deliveries. If delivery of goods is delayed due to default in payment of the purchase price or to delay in receipt of shipping instructions, documents for payment, required inspection, export license or authorization or other cause for which Det-Tronics is not responsible, charges for demurrage and storage shall be paid by Buyer. All claims for a delay in delivery shall be deemed waived unless presented to Det-Tronics in writing thirty (30) days after the delivery of each shipment.

Unless otherwise indicated by the agreed upon Incoterm, all shipping and insurance charges, any duty and all taxes related to Buyer's order shall be paid by Buyer. Claims for damages in transit must be asserted against the Carrier. Within (7) days after receipt of shipment, Buyer must report to Det-Tronics any shortage or damage not due to the carrier, otherwise claims for such shortage or damage will be deemed waived.

5. FORCE MAJEURE. Neither party shall not be liable for any delays in delivery, or for non-delivery or nonperformance, in whole or in part, caused by the occurrence of any event beyond the control of either party, including but not limited to one or more of the following causes: fires, destruction of plant; strike; lockout; dispute with workmen; epidemic; quarantine; flood; accident; delay in transportation; war (whether declared or undeclared); insurrection; riot; blockade; embargo; acts, demands or requirements of the United States, or the country in which or through which delivery is to be made or any state or territory thereof, or of any governmental subdivision of any thereof; restraining orders for decrees of any court or judge; or any other cause whatsoever, whether similar or dissimilar to those herein before enumerated. The existence of any such cause or causes of delay shall extend the time of performance by the time or times measured by any such cause or causes of delay. If delivery is not completed within sixty (60) days after the date stipulated in the acceptance of the order due to any said causes, either party may cancel this contract on ten (10) working days notice to the other.

6. CANCELLATION, COUNTERMAND AND RETURN OF GOODS. Orders accepted by Det-Tronics cannot be cancelled or countermanded, or shipments deferred or equipment returned except with prior written consent from Det-Tronics' office in Minneapolis, Minnesota, and upon terms that will indemnify Det-Tronics against all losses resulting therefrom, including the profit on any part of the order that is cancelled. When Det-Tronics authorizes the return of equipment, Buyer shall prepay the shipping charges on such returned equipment unless otherwise expressly stated by Det-Tronics in its written return authorization.

7. PRICE, TAXES AND OTHER CHARGES. Unless otherwise agreed, the sales price stipulated in this contract is fixed and excludes all other fees including, but not limited to, customs duties, charges or surcharges, consular fees, sale, use, excise, turnover, occupational or transportation taxes, or any other taxes imposed by any country or political subdivision thereof.

8. PAYMENT TERMS. Subject to approval and continuance of approval by Det-Tronics, terms of payment are thirty (30) days net from the date of invoice. For international orders, terms of payment are by satisfactory irrevocable Letter of Credit or advance payment prior to shipment as Det-Tronics may elect. Unless otherwise agreed, all payments shall be US dollars. Acceptance and endorsement by Det-Tronics of an instrument for less than the full amount which claims to be due shall not be deemed to be an admission of payment in full and any conditions to the contrary which are noted on such an instrument shall not be binding on Det-Tronics. Det-Tronics' prices prevailing at time of each shipment shall apply. Prices are subject to correction for error.

9. TITLE AND RISK OF LOSS. Risk of Loss shall pass to the Buyer upon delivery to the carrier, Buyer or Buyer's agent, unless specified otherwise by the agreed upon Incoterm. Title shall pass to the Buyer upon delivery to the carrier, Buyer or Buyer's agent unless specified otherwise in the contract.

10. PATENTS. Buyer shall indemnify and hold Det-tronics harmless from any claim of patent infringement if such patent infringement or claim involves Equipment produced by Det-tronics at Buyer's direction, or is based upon the use of the Equipment in combination with other items where such infringement or claim thereof would not have occurred under the normal or limited use for which the Equipment was designed.

11. GENERAL PROVISIONS. Det-Tronics reserves the right to correct any stenographical or clerical errors in any of the writings issued by it. Except as otherwise set forth herein, the terms and conditions and any description on the face of the acknowledgement constitute a complete and exclusive statement of the sale of the products by Det-Tronics to the Buyer. There are no other promises, conditions, understandings, representations or warranties. This contract may be modified only in a writing signed by Det-Tronics. No waiver of any right will be effective against Det-Tronics unless supported by consideration and expressly stated in a writing signed by Det-Tronics, and the failure of Det-Tronics to enforce any right will not be construed as a waiver of Det-Tronics' right to performance in the future. The Buyer may not assign any rights to, or delegate any performance owed under this contract without the written consent of Det-Tronics. Det-Tronics shall have the right to credit toward the payment of any monies that may become due Det-Tronics hereunder any sums which may now or hereafter be owed to Buyer by Det-Tronics. The validity, performance and interpretation of all matters relating to the interpretation and effect of this Agreement and any amendment hereto shall be governed by and construed in accordance with the internal laws (and not the laws of conflicts) of the State of Minnesota. All disputes arising in connection with the contract shall be resolved, if not sooner settled, by a court of competent jurisdiction located in Hennepin County, Minnesota, USA. The Buyer shall pay Det-Tronics all fees, costs and expenses of Det-Tronics reasonably incurred in the enforcement of Det-Tronics' rights under or with respect to this contract, including, without limitation, reasonable attorneys' fees.

12. LICENSES AND PERMITS. Where Buyer is a U.S. company located in the United States, or has provided a duly executed power of attorney to an agent, Buyer shall be solely responsible for obtaining all export licenses or governmental permits necessary to export the products from the United States. At Buyer's request, Detector will endeavor to assist Buyer in obtaining such licenses and permits. Buyer shall be solely responsible for obtaining all import permits or other documents necessary for the importation of the products into another country or political subdivision thereof.

13. NON-DISCLOSURE OF CONFIDENTIAL AND/OR PROPRIETARY INFORMATION. Buyer shall not disclose any technical/proprietary information furnished by Det-Tronics or acquired by Buyer or virtue of or as a result of the implementation of this contract to any person, firm, body or corporate authority and shall make all endeavors to ensure such technical/proprietary information is kept CONFIDENTIAL. Title to such technical/proprietary information imparted/supplied by Det-Tronics to Buyer shall at all times remain the absolute property of Det-Tronics.

14. SOFTWARE LICENSE. All software programs which are embodied in a human readable media or machine readable media and which include, but are not limited to, programs having a series of instructions, statements and data, and are related materials furnished by Det-Tronics, are trade secrets and proprietary to Det-Tronics. Det-Tronics provides such programs under a non-transferable and non-exclusive license to use them on the system for which Det-Tronics provided it; the Buyer may not assign, sublicense or otherwise transfer said license and programs or materials without the prior written consent of Det-Tronics. In the event information/data is exchanged between Det-Tronics and the Buyer, both parties mutually agree not to expose said programs to any claim, lien, conversion or any other encumbrance. Det-Tronics and the Buyer further agree to exercise due care and employ reasonable efforts to prevent disclosure of said technical information/data/program(s) unless it was or is:

[i] Known to the receiving party without restriction when received or thereafter developed independently by the receiving party, or
[ii] Obtained from a source other than the originating party, or
[iii] In the public domain when received or thereafter enters the public domain through no fault of the receiving party, or
[iv] Disclosed by the originating party to a third (3rd) party without restriction.

15. CHANGES. The Buyer may make changes, additions or deletions to specifications, drawings and other descriptions and conditions recited in the related document(s) upon written notice to Det-Tronics. If any such change(s), addition(s) or deletion(s) initiated by the Buyer affects the cost of manufacture or time of delivery, Det-Tronics shall give the Buyer written notice thereof within two (2) weeks from the date of Buyer's notice, and the Buyer shall give the instruction within a period of two (2) weeks from the date of Buyer's receipt of whether to accept Det-Tronics's proposed cost or delivery changes or to withdraw such change(s). In case of withdrawal of change(s), addition(s), deletion(s) during the above period(s), the original contract price and/or delivery shall remain unchanged.

16. FEDERAL ACQUISITION REGULATIONS. The components, equipment and services proposed by Det-Tronics are commercial items as defined by the Federal Acquisition Regulations ("FAR") and the prices in any resulting contract and in any change proposal are based on Det-Tronics' standard commercial accounting policies and practices which do not consider any special requirements of U.S. Government cost principles and do not meet the requirements of Part 31 of the FAR or any similar procurement regulations. Det-Tronics agrees only to perform a contract for the sale of a commercial item on a fixed-price basis. In addition, Det-Tronics will not agree to submit or certify to any cost or pricing data nor will Det-Tronics agree to any requirements to establish price reasonableness under FAR Part 15 or such similar regulations. In stating its position, Det-Tronics refers to FAR Part 12 - "Acquisition of Commercial Items." All Sales under $3,000 are made pursuant to FAR Part 13, Simplified Acquisitions.

REFERENCES

17. EXPORT CONTROL. Buyer agrees to conduct its operations under this Contract and perform all its responsibilities in full compliance with export and other foreign trade controls under any applicable United States (U.S.) laws restricting sales or transfers to other countries or parties of commodities, software, technology, or technical data. Any other provision of this Contract to the contrary notwithstanding, Buyer agrees that no commodities, software, technology, or technical data of U.S. origin or with U.S. origin content will be sold, exported, re-exported or transmitted except in full compliance with all applicable laws, including all relevant U.S. government requirements. In addition, Buyer shall comply with all applicable laws, including U.S. government requirements, governing the transfer of information and items to U.S. embargoed and sanctioned countries and denied and restricted parties. Any violation of this section, as determined solely by Det-Tronics, shall be deemed a material breach of this Contract. It is the responsibility of Buyer to inform Detector of the parties to the transaction, ultimate destination and application or end use.

18. COMPLIANCE WITH LAWS. Buyer represents, warrants, certifies and covenants (collectively "Covenants") that it will comply with all laws applicable to the goods, services and/or the activities contemplated or provided under these Terms, including, but not limited to, any national, international, federal, state, provincial or local law, treaty, convention, protocol, common law, regulation, directive or ordinance and all lawful orders, including judicial orders, rules and regulations issued thereunder.

19. WAIVER - No claim or right arising out of a breach of this Order can be discharged in whole or in part by a waiver or renunciation unless supported by consideration and made in writing signed by the aggrieved party. Either party's failure to enforce any provisions hereof shall not be construed a waiver of a party's right thereafter to enforce each and every such provision.

20. NUCLEAR LIABILITY INDEMNIFICATION: Buyer hereby releases and agrees to save Det-tronics and its subcontractors and vendors harmless from claims, liability, or exposure occasioned by injury to, or death of any person, or loss of, damage to or loss of use of property caused by, or arising, in any manner, out of a "nuclear incident", as defined in the Atomic Energy Act of 1954, as amended, whether alleged to arise out of breach of contract, tort (including negligence), warranty, strict liability, or otherwise. The Buyer shall, at its cost, secure and maintain in force insurance protection (in which Det-tronics and its subcontractors and vendors by name or description are additional insured or beneficiaries of waivers of subrogation) against liability or loss arising out of or arising from a nuclear incident (as defined above), including the following:

a. Nuclear property and liability insurance of the type issued by American Nuclear Insurers (ANI) or equivalent insurance, in the maximum obtainable amounts and in such form as shall meet the financial protection requirements of the Nuclear Regulatory Commission pursuant to Subsection 170(b) of the Atomic Energy Act of 1954, as amended.

b. A government indemnity agreement with the Nuclear Regulatory Commission pursuant to Subsection 170(c) of the Atomic Energy Act of 1954, as amended.

The insurance and indemnities required above shall be maintained in effect as to each unit on the site from the day nuclear fuel is first shipped to the site at which such unit shall be located, and shall continue in effect, to the extent the same is available, for so long as such unit is operated or there is any chance of a nuclear incident.

Document Charges

Certificates

	Each
Approval Certificates (i.e. FM, CSA, ATEX, CE)	No Charge
Certificate of Origin	No Charge
Certificate of Origin – Notarized	$40.00
Certificate of Origin – Chamberized	$190.00
Calibration Certificate	No Charge
Certificate of Guarantee/Warranty	No Charge
Certificate of Quality	No Charge
Compliance/Conformance Certificate	No Charge
Test and Inspection Certificate	No Charge
Consularized Documents	Consult Factory
Custom Certificates (Require Part Number and/or Serial Numbers etc)	$160.00
Dossiers/Binders - Consisting of:	
Index, Test Data, Product Specification Sheet, Product Manual, Product Catalog	$850.00 per set
Any additions to above	Consult Factory
Drawings:	
Product Detail Drawing per product	$850.00
Spare Parts List per product	$850.00
Custom Drawings	$850.00
Any additions to above	Consult Factory
Product Manuals - Additional	$2.00
Test Data	$160.00
Courier of Documents (Letter Envelope only):	
Domestic (within U.S.)	$50.00
International	$80.00

Note: The above prices are not discountable.

Miscellaneous Charges

	Each
Assembly of product with another product Example: Transmitter and Sensor	$275.00 per set
Paper Tags (P/N = PAPER TAGS)	$22.00
Stainless Steel Tags (P/N = STAINLESS TAGS)	$30.00
Stainless Steel Tags Attached (P/N = SS TAGS ATTACHED)	$70.00

Example: SS Tag ($30) + Labor ($40) = Total ($70)

Inspection at factory	Add $2000 to orders up to $250,000. Please consult the factory for Inspections of orders greater than $250,000 (This is based on a local inspector.)
Note: The above prices are not discountable.	
Engineering testing for gas curves (must pre-qualify)	$200

Det-Tronics may not accept some items for testing, such as hazardous, toxic, carcinogenic, pyrophoric, or hypergolic materials. In this case, an estimated gas curve may be provided based upon the Material Safety Data Sheet (M.S.D.S.), previous test data and engineering judgement. All requests for testing must be accompanied with an M.S.D.S for that material before any shipment of the material is made. Recent Minnesota State law also may preclude Det-Tronics from accepting or handling certain hazardous materials. Following is the recommended procedure for requests gas curve testing:

1. The request for gas curve testing, complete with appropriate M.S.D.S., should be issued to Det-Tronics Customer Service Dept. A purchase order issued to Det-Tronics for testing services will be required upon request approval.
2. A one ounce sample of liquids or 7.5 liters of gaseous materials shall be packaged and shipped in the appropriate container to the attention of: Gas Sensor gas curve Test Lab.
3. A Material Safety Data Sheet must accompany each sample to be tested.
4. Technical information typically required for each compound includes: specific gravity, molecular weight, vapor density, flashpoint, and lower and upper flammability limit.
5. All sample materials will be returned to the customer after test completion for proper disposal.

REFERENCES

Repairs and Rentals

REPAIR CENTER

Available only for active models listed in this price schedule. Before returning equipment for repair, contact Detector Electronics Customer Service Department to obtain a Return Material Identification (RMI) number that will be reserved for your specific return order, and referenced in all documentation. Pack the return shipment carefully to avoid damage in transit. Place the RMI number, with your name and address as sender, plainly on the outside of the package.

CLASS 1

Repair Charge	***$500***
Test Fee	***$350***
MIR3	Gas Transmitter
R8471	Gas Controllers
U9500 Infiniti	Gas Transmitter
W8067S	Test Lamp
UD10/UD20	Universal Display

CLASS 2

Repair Charge	***$850***
Test Fee	***$450***
004161-001	Electronic Module
30-2021/E	UV Detector
DE2071	Electronics package for U7602B
DE4933-001	Electronic Module
DE4960-001	Electronic Module
DE5400-001	IR Detector
DE6000-001	IR Module
EQ2100PSM	Power Supply Monitor
EQ22xxDCU	EQP Component
EQ22xxDCUEX	EQP Component
EQ22xxIDC	EQP Component
EQ22xxIDCGF	Ground Fault Monitor
EQ24xxNE	EQP Component
EQ25xxARM	EQP Component
EQ25xxSAM	EQP Component
EQ3700 DCIO	EQP Component
EQ3710 AIM	EQP Component
EQ3720 RM	EQP Component
EQ3730 EDIO	EQP Component
EQ3740 IPM	EQP Component
MIR2	IR Gas Detector
OPECL (RX/TX modules only)	IR Detector
PIR9400	IR Detector
PIRECL	IR Gas Detector
R6007	Relay Module
U7652 IR Module	IR Module
X-Series Heads	Sensor Module
C7093	IR Detector

CLASS 3

Repair Charge	***$1600***
Test Fee	***$500***
30-3003/D	Smoke Detector
EA2000CG	Eagle 2000 Gateway
EQ2100CG	EQ Gateway
EQ2100IM	EQ LON Isolator
EQ2100LC	EQ Logic Controller
MIR1	Gas Detector/Transmitter
PIRDUCT	IR Detector
PIRVOL	IR Gas Detector
X2200	UV Flame Detector
X3301	IR Flame Detector
X3302	Hydrogen Flame Detector
X5200	UV/IR Flame Detector
X9800	IR Flame Detector
W867	(Battery Replacement) $1550

CLASS 4

Repair Charge	***$2650***
Test Fee	***$600***
EQ3001	Eagle Quantum Premier
OPECL (Complete Kit)	IR Gas Detector
R1425	Detonator
R7094	IR Controller
R7404	UV Controller
R7484	IR Controller
R7494	UV/IR Controller
R6006	Relay output Module

CLASS 5 (TEST FEES)

UV Sensor Module	$350
Gas Sensor (all)	$350

NON-REPAIRABLE ITEMS

006598-001 E-Mod	820 Gas Controller	PM-5CX Flame Detector	R8466 Gas Controller	X3300/Pulse Flame Det
006605-xxx U7602 E-Pkg	880 Gas Controller	PM-5CXJ Flame Det.	SW9200 SlickWatch	X7050 xWatch
1000 Gas Controller	8000 Gas Controller	PM-5MP, MPX Flame Det.	THZ Gas Detector	
1100 Gas Controller	8100 Gas Controller	PM-6 Flame Detector	TXL Gas Detector	
2000 Gas Controller	Air Dilution Kit	PM-6M, MX Flame Detector	U7099 Flame Detector	
2100 Gas Controller	C7050 Flame Detector	PM-9 Flame Detector	U7600 A/B/C Flame Det.	
30-2056B IR Detector	C7052 Flame Detector	PSS - LC Test Lamp	U7602 Flame Det/Controller	
400 Gas TX	C7061C Gas Detector	PW9200 PathWatch	U7652 Flame Detector	
405 Gas TX	C7093D & E Flame Detector	R6001 Zone Unit	U7698 Flame Det./Controller	
410 Gas TX	C7098B Flame Detector	R6003 Zone Unit	U7698 A-D Flame Det./Controller	
415 Gas TX	DE2020 Camera	R7300 Flame Detector	U8800 Gas Controller	
500 Gas TX	DE5203 Circuit Brd. Rpl.	R7301 Flame Controller	U8800 Gas TX	
700 Transmitter	DE5500-001 E-Mod	R7302 Flame Controller	U8700 Gas TX/Controller	
704 Transmitter	DE5994-003 E-Mod	R7303 Flame Controller	U8810 Gas TX	
710 Gas Controller	EQ2220GFM	R73XX Controller Brd	UV Module	
740 Gas Controller	GTS Gas Module	R7409 Flame Controller	W866 Test Lamp	
800 Transmitter	GTX Gas Transmitter	R7405 Flame Controller	W868 Test Lamp	
808 Transmitter	K-Series TX	R7495 Flame Controller	W8066 UV Lamp	
810 Gas Controller	NTMOS Gas Detector	R8460 Gas Controller	W8067B Test Lamp	

RENTAL EQUIPMENT PRICING

Class 1

$350 per day, including day of shipment

- 009360-001 W867 EX Lamp Kit

NOTE: The rental charges listed include overnight shipping. They begin on the day the product ships from the factory, apply to both weekdays and weekends, and end the day before the product is received back at the factory. When returning the product, reference the RMI number (found on the rental product packing list) on the outside of the package and on any paperwork returned with the product. Ship the rental product prepaid via overnight delivery.

FACTORY REPAIR PRICING POLICY

In order to provide faster turnaround time on product repairs at our factory in Minneapolis, Detector Electronics has initiated standard or fixed pricing. The standard pricing will apply to groupings of similar products. In order for the program to be successful in providing the shortest repair time, we will be requesting that an authorized purchase order for the amount of the standard pricing be issued prior to our issuing a return authorization number. Please note that no guarantees for repair lead time can be given for product returned without return authorization and an authorized purchase order.

The standard pricing does not apply when a unit is returned for repair and is tested with no defect or problem discovered. A standard test fee will apply for out of warranty units that are tested only. Also, units requiring major component assembly replacement such as circuit boards, sensor modules and faceplates etc., will be invoiced at actual time and material costs. Det-Tronics will contact the customer for approval before proceeding if the repair falls out of our standard guidelines. Test fees will be waived if the returned unit is repaired or a replacement purchased in the same transaction.

Typical repair lead times are one to two weeks after receipt.

Standard Pricing: (Freight costs and applicable taxes will be added to invoices at actual costs.)

Any product that does not fall into one of the above classes will be charged at 40 percent of the current list price.

REFERENCES

REPORTS

Service Report: No fee or extra charge for this.

This is a report that is generated by the Repair Technician that has been assigned to repair a product that has been sent back to the factory. The report is based on the state of the defective product compared to Product Specifications of a new product. This report will consist of the following:

- The Part Number and Model Number of the product returned.
- The Serial Number (if applicable), Date Code and Warranty status.
- Description of problem the customer is experiencing, if provided.
- What the initial diagnosis was when the product was received compared to the New Product Specifications.
- Parts used to correct or repair the product.
- Product ECO's (Engineering Change Orders) that were done to the product to get the product up to the latest rev.

Failure Analysis: Fee for this = $1500 per device (also applicable for in-warranty products).

This is a report that is generated by a Quality Engineer that has been assigned to analyze a product that has been sent back to the factory to determine the root cause(s) of failure. At a minimum this report will consist of the following:

- The Part Number and Model Number of the product returned.
- The Serial Number (if applicable), Date Code and Warranty status.
- Customer name, address and contact name.
- Description of problem the customer is experiencing (background discussion).
- Performance analysis.
- Graphic data (where appropriate).
- Root failure cause(s) - Determination of initial event(s) leading to the direct cause of the failure.
- Recommend corrective action
- Verification of corrective action.
- Final or interim report.

What is required:

1. Purchase Order Number to cover $1500 per product.
2. Detailed problem of what the product is doing or not doing.
3. Application - Where and what type of facility the product is being used in.
4. End user Contact and Telephone information.

Repair Center Warranty Policy

Repair Center services performed (excluding all gas sensor inspections and software-related repairs) are warranted against defects in material and workmanship for a period of two (2) months from date of shipment from Detector Electronics Corporation (Det-Tronics). This warranty applies only to the material and workmanship directly related to the specific repair services performed, and does not apply to unrelated device or component failures. This warranty does not cover device failures due to exposure to corrosive environments, unauthorized field repairs or alterations, damage caused by accident, abuse, negligence, abnormal use or acts of Nature. Fuses will be considered to have failed due to external causes and therefore are not covered under this warranty.

Det-Tronics' liability and Buyer's exclusive remedy against Det-Tronics is expressly limited, at Det-Tronics' option, to the repair or replacement of the defective good(s), with Det-Tronics returning the repaired or replaced good(s) to the Buyer F.O.B. destination at the lowest cost. Any part, item or equipment repaired or replaced and returned to Buyer shall be warranted by Det-Tronics for the remainder of the original warranty period.

This warranty applies only to the equipment delivered which after shipment from Det-Tronics' factory have not been altered, changed or repaired by others. The products of other manufacturers are covered only by such warranties as made by these original manufacturers even though such items may have been included as components.

IN NO EVENT SHALL DET-TRONICS OR ITS SUBCONTRACTORS OR VENDORS BE LIABLE IN CONTRACT, TORT, STRICT LIABILITY, WARRANTY, OR OTHERWISE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL LOSS OR DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO DAMAGE TO OR LOSS OF PROPERTY OR EQUIPMENT, LOSS OF ANTICIPATED PROFITS OR REVENUE, CLAIMS OF CUSTOMERS, OR HARM TO GOODWILL OR BUSINESS REPUTATION, LOSS OF USE OF SYSTEM, NON-OPERATION OR INCREASED EXPENSE OF OPERATION OF OTHER EQUIPMENT DIRECTLY OR INDIRECTLY ARISING FROM THE SALE, HANDLING OR USE OF THE EQUIPMENT, OR FROM ANY OTHER CAUSE RELATING THERETO AND DET-TRONICS' LIABILITY HEREUNDER. The remedies set forth above and the obligations and liabilities thereunder are exclusive and in lieu of all other remedies, warranties, guarantees or liabilities expressed or implied, arising by law or otherwise including without limitation, any obligations of Det-Tronics with respect to merchantability and fitness for a particular purpose/use or whether or not occasioned by Det-Tronics' negligence. Det-Tronics shall not be liable to the Buyer for any claims, demands, injuries, damages, actions or causes of action whatsoever based on negligence or strict liability.

If, after inspection of the returned equipment, Det-Tronics determines that the defect is a result of damage, misuse, mishandling, installation, abnormal conditions of storage or operation, unauthorized repair or modification, or due to the Buyer's failure to install, maintain or operate the equipment in compliance with the written instructions, all expenses incurred by Det-Tronics in connection with the replacement or repair of the equipment shall be for the account of the Buyer. Any equipment returned to Det-Tronics for replacement shall become the property of Det-Tronics.

The liability of Det-Tronics, its subcontractors or vendors with respect to any contract, or anything done in connection therewith or from the Field Service; Technical Assistance, manufacture, sale delivery, resale, installation, repair, replacement or use of any service or equipment covered by or furnished under this Contract, whether in contract, in tort, in warranty, in strict liability, or otherwise, shall not exceed the original purchase price paid on the contract. If the Contract provides for the furnishing of more than one unit of equipment or materials, the limitation prescribed hereinabove shall be applied to each individual unit with respect to which such breach has occurred and "contract price" shall be deemed to mean the unit price specified in the Contract, or if none is specified, a proportionate part of the total price stipulated for all such units.

The validity, performance and interpretation of the limited warranty shall be governed by the internal laws (and not the laws of conflicts) of the State of Minnesota. All disputes arising in connection with the limited warranty shall be resolved, if not sooner settled, by a court of competent jurisdiction located in Hennepin County, Minnesota, USA.

2013 DET-University Field Training Rate Schedule

Training Deliverables

All courses provide verbal presentation, practical hands-on with applicable equipment or software, course material handouts, and respective product documentation for each participant. Certificates of Completion are issued on request.

Factory-Certified Technical Trainer Rates

On-Site Per Day Rate (not to exceed 4 persons or 8 hours)	$1,700.00
Day Rate for Each Additional Person (not to exceed 10 total persons)	$425.00
Webinar/Phone Training Hourly Rate	$200.00
Custom Course Development Hourly Rate	$250.00
Custom Demonstration Setup (Requiring Project Engineering) Day Rate	$1,700.00
On-Site Hourly Rate	$212.50
Time and One-Half	$318.17
Double Time	$425.00
Travel Per Hour Rate	$150.00

NOTES: 1. Prices are effective September 1, 2012 and subject to change without notice.

2. Customer cancellations received less than 14 days from the scheduled delivery date may be subject to a charge of up to 30% of the purchase order price.

Travel, Shipping, and Living Expenses

Airfare, Auto Rental, Parking, Tolls, Hotel, Meals, etc.	Cost +10%
Mileage	Based on the IRS rate for the year incurred +10%
Shipping (each 2-person training demo kit weight can reach 100 lb)	Cost +10%

Workday Defined

The above charges are for a normal eight-hour working day with time and one-half charged for Saturdays, and time over eight (8) hours for a weekday; Sundays and holidays and work after twelve (12) continuous hours will be charged at double time.

Det-Tronics will supply receipts and documentation for the substantiation of reasonable travel and living expenses. These shall include (1) air travel receipt if used, (2) hotel receipt if used, and (3) car rental receipt if used. No other receipts for living expenses will be furnished unless specifically requested by the purchaser in writing prior to the start of the assignment.

NOTES

1. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
2. Double time applies to all work/travel performed on Sundays, holidays, and work after 12 continuous hours.
3. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
4. All weekday or weekend travel time is chargeable per the above notes.
5. Eight-hour minimum charge for all one-day sessions with four-hour minimum per day thereafter.
6. Hazardous Duties, Offshore or other duties defined as hazardous (offshore platforms, chemical exposure, etc.) are subject to an additional charge of $200 per day above the standard daily rate.
7. Hazardous Duties, Offshore or other duties defined as hazardous (offshore platforms, chemical exposure, etc.) are subject to an additional charge of $200 per day above the standard daily rate.
8. Training time, if put on “hold” at job-site or hotel, will be charged at the regular daily rate.

Detector Electronics Holidays

New Year January 1st	**Independence Day** July 4th	**Christmas** December 25th - 30th
Good Friday March 29th	**Labor Day** September 2nd	**New Year’s Eve** December 31st
Memorial Day May 27th	**Thanksgiving** November 28th - 29th	

Training Event Scheduling

Typically scheduled within 8-12 weeks of receiving purchase order; dependent on trainer and equipment availability.

Terms of Payment

Purchase Orders must be received prior to shipping equipment and conducting training sessions. Fax to 952-829-8750. Training Invoices are due and payable upon receipt. International Training Support is by Letter of Credit or Prepaid (estimated amount).

2013 Field Services Rate Schedule

Field Service Engineer and Project/Software Engineer

Rates	Field Service Engineer	Project/Software Engineer	Specialist
On Site Per Day Rate	$1,500.00	$1,700.00	$2,000.00
On Site Per Hour Rate	$187.50	$212.50	$250.00
Time and One-Half	$281.25	$318.75	$375.00
Double Time	$375.00	$425.00	$500.00
Travel Per Hour Rate	$120.00	$150.00	$175.00

1. Time and one-half applies to all work/travel performed after 8 hours per day or on Saturday.
2. Double time applies to all work/travel performed on Sundays, holidays, and work after 12 continuous hours.
3. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
4. All weekday or weekend travel time is chargeable per the above notes.
5. Eight-hour minimum charge for all one-day service calls with four-hour minimum per day thereafter.
6. Hazardous Duties, Offshore or other duties defined as hazardous (offshore platforms, chemical exposure, etc.) are subject to an additional charge of $200 per day above the standard daily rate.
7. Work performed in areas with a current US State Department of Transportation Warning of "Not Recommended for Travel for US Citizens" will be invoiced at the "Hazardous Duties" rate. All rates are in U.S. dollars.
8. Technician time, if put on "hold" at the job-site or hotel, will be charged at the regular daily rate.

Detector Electronics Holidays

New Year January 1st	**Independence Day** July 4th	**Christmas** December 25th - 30th
Good Friday March 29th	**Labor Day** September 2nd	**New Year's Eve** December 31st
Memorial Day May 27th	**Thanksgiving** November 28th - 29th	

Workday Defined

The above charges are for a normal eight-hour working day with time and one-half charged for Saturdays, and time over eight (8) hours for a weekday; Sundays and holidays and work after twelve (12) continuous hours will be charged at double time. In addition, the travel and living expenses will be billed at cost. Det-Tronics will supply receipts and documentation for the substantiation of reasonable travel and living expenses. These shall include (1) air travel receipt if used, (2) hotel receipt if used, and (3) car rental receipt if used. No other receipts for living expenses will be furnished unless specifically requested by the purchaser in writing prior to the start of the assignment.

Expenses

Expense	Rates
Travel	At Cost +10%
Shipping	At Cost +10%
Living Expenses	At Cost +10%
Mileage	Based on the IRS rate for the year incurred +10%

Terms of Payment

Purchase Orders must be received prior to shipping equipment and/or scheduling service. Fax to 952-829-8750. Invoices are due and payable upon receipt. International Field Service Support is by Letter of Credit or Prepaid (estimated amount).