



Series 90B Annunciator

FOR POWER GENERATION TRANSMISSION & DISTRIBUTION PETROLEUM, PETROCHEMICAL AND OTHER PROCESS INDUSTRIES



INNOVATIVE ALARM MONITORING SYSTEM

Innovative Annunciator

AMETEK's new Series 90B Annunciator brings alarm monitoring to a new level. It features long life, reliable LED illumination for local viewing of alarms and a host of communication options to connect to other devices. Alarms can be viewed remotely via a standard web browser using a built-in web server.

Reliability

Every Series 90B Annunciator is equipped with low-power, long-life LEDs. The brightness exceeds standard incandescent bulbs and lasts years longer. If an LED needs replacing, an automatic detector provides notification so critical alarms are not missed. An optional built-in ground fault detector is available for indicating ground faults in field wiring.

Communications

Dual independent communication ports (RS-232/485 and Ethernet) are available to transmit alarms to other devices. The Series 90B can receive alarms using communication ports, eliminating the need to connect digital inputs and associated wiring. The Series 90B supports Modbus, DNP and ASCII protocols.

Web browser Display

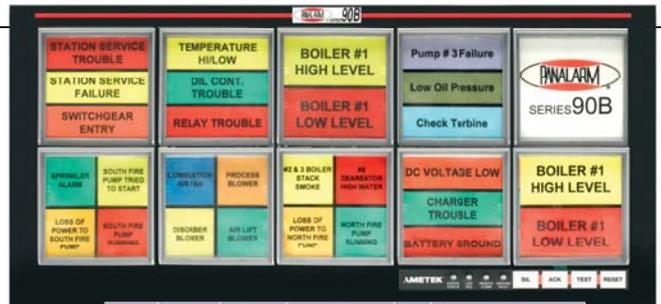
The Series 90B has a built-in web server for displaying alarms remotely via a standard web browser. The web browser displays a graphic image for each event with the date and time of the occurrence.

Time Stamped Alarms (SER)

All of your alarms can include a time stamp, synchronized by IRIG-B or internal clock. Time stamps can be presented through Modbus, DNP, OPC, or to a local printer or terminal for viewing.

Ease of Installation

AMETEK's Series 90B Annunciator is self contained with all options built into the unit.



Date	Time	Station ID	Device ID	Point	Alarm Description
03/13/2013	16:11:11.016	NRG Oswego	DMS3K IP: 192.168.2.5	1	101J25-10
03/13/2013	16:11:11.016	NRG Oswego	DMS3K IP: 192.168.2.5	6	High Temp Alarm
03/13/2013	16:11:11.016	NRG Oswego	DMS3K IP: 192.168.2.5	26	Gen Neutral Lockout Trip
03/13/2013	16:12:41.015	NRG Oswego	DMS3K IP: 192.168.2.5	4	101J18-27
03/13/2013	16:12:41.015	NRG Oswego	DMS3K IP: 192.168.2.5	10	U7 Combined RH Valve 1 Closed
03/13/2013	16:12:41.015	NRG Oswego	DMS3K IP: 192.168.2.5	16	U7 Main Stop Valve 2 Closed
03/13/2013	16:12:41.015	NRG Oswego	DMS3K IP: 192.168.2.5	18	U7 Main Stop Valve 3 Closed



Installation and wiring is simplified and, in most cases, the power supply is built into the annunciator. While all systems are preconfigured to specifications, the software configuration tool allows users to make easy modifications without changing PCB board jumpers.

Window legends are printed on standard transparency film, making them easy to change at any time. All features and options are field selectable and upgradeable.

FEATURES AND BENEFITS

- LED illumination (standard)
- Dual communications: Serial and multi-user ethernet
- Modbus, DNP, OPC protocols
- Web browser display of alarms
- Time-stamped alarms (SER)
- Software configurable
- Laser-printed legends
- Ease of installation



SPECIFICATIONS

INPUT

Field Contacts

- Normally Open (N.O.) or Normally Closed (N.C.) input selection through software or hardware
- Wetted (voltage supplied) or dry (voltage free) contacts

Field Contact Voltage

- 20-150 VDC, 20-150 VAC (.0018 mA per input)

Input Isolation

- Each input is optically isolated

Input Response

- 50 milliseconds (standard)
- 1 millisecond fast response (optional)
- 50 milliseconds to 250 seconds software adjustable

DISPLAY

LED

- White LED, minimum 2 per window

Window Sizes (h x w)

- Quad: 1.5 x 1.5 inch (38 x 38 mm)
- Third: 1.0 x 3.0 inch (25 x 76 mm)
- Half: 1.5 x 3.0 inch (38 x 76 mm)
- Full: 3.0 x 3.0 inch (76 x 76 mm)

Window Colors

- White, red, yellow, amber, green, blue

Legends

- Laser printed on transparency film or engraved windows

ALARM SEQUENCE

Sequence Selections

- LN, AO, AONL, AF, AFNL, FR, AM, FRM, AS, ASFR, ASFRM, TFS, TFSFRM, TFSM, ARR, FRR, VS, VSRR, MC
- Software configurable
 - Dual color sequences
 - Customized flash rates
 - Up to 4 first out groups

CONTROLS

- Integral test, acknowledge, silence and reset with LED status lights
- External push button inputs
- Configurable switch inputs (inhibit LEDs, horns, relays)

OUTPUTS

Auxiliary Relay Option

- Individual or dual relay per point
- Follows field contact or alarm sequence
- Software configurable
- Energized/de-energized operation
- Form A or form B (N.O. or N.C.)
- Form C (SPDT)

Common Relays

- 2 relays included for: critical and non-critical horn; ring back audible
- 2 relays available for: critical and non-critical re-flash, common alarm; watchdog, power fail, ground fault
- Software configurable
- Energized/de-energized operation
- Form A or form B (N.O. or N.C.)

Relay Ratings

- 24 VDC @ 3.0 amps
- 110 VDC @ 0.1 amps
- 120 VAC @ 3.0 amps

Audible

- Internal 80 db @ 30 cm audible device
- external horns available

COMMUNICATION

- RS-232/485 & Ethernet, single or dual communications & web browser display

Protocols

- Modbus RTU and Ethernet
- Master or slave
- Transmit or receive alarms
- Pushbutton controls

DNP 3.0

- Slave mode
- Transmit alarms
- Pushbutton controls

OPC Server Software

- Ver. 2.0 OPC DA

Serial ASCII

- For local terminal/printer

TIME STAMPED ALARMS

- 1 or 4msec time stamp resolution
- IRIG-B time sync input or internal clock
- Point #, alarm status, time and date
- Modbus, DNP, ASCII outputs
- 40,000 event storage, non-volatile

CONNECTIONS

Input/Output Terminals

- Fixed barrier terminal block, 12 GA (2.5 mm) maximum, ring, spade or bare wire termination

Communication Ports

- Serial: 9 pin female D connector
- Ethernet: RJ45 connector
- IRIG-B: BNC connector

MECHANICAL

Mounting

- Semi-flush panel mounting
- 19 inch rack mounting
- Wall (surface) mounting
- NEMA enclosures

Weight

- 1.2 lbs per cell (0.34 kg per cell)

POWER REQUIREMENTS

Internal or External Power Supplies

- 230VAC (176-264VAC 50 Hz)
- 120VAC (88-132VAC 60 Hz)
- 125VDC (100-250VDC)
- 48VDC (38-58VDC)
- 24VDC (19-29VDC)

Max. 1.7 watts/input @ power input

ENVIRONMENT

Operating Temperature Range

- -4 to 122°F (-20 to 50°C)

Humidity

- 20-95% RH

Surge Withstand

- ANSI C37.90.1 (oscillatory)

Fast Transient

- IEC-61000-4-4

Surge Immunity

- IEC-61000-4-5

EMI/RFI/ESD

- IEC-61000-4-3, 4-6, 6-3, 4-8, 4-2

Isolation

- 1950VDC or 1400VAC input to output, logic, case

CERTIFICATIONS

- UL, ULC, CE, FM Class 1, Div 2, FMC

Semi-flush Mounting Details

Cells H or W	Overall H or W	Panel Cutout H or W
1	5.0 (127)	4.06 (103)
2	8.47 (215)	7.53 (191)
3	11.94 (303)	11.00 (279)
4	15.40 (391)	14.47 (368)
5	18.88 (479)	17.94 (456)
6	22.34 (568)	21.41 (544)
7	25.81 (656)	24.88 (632)
8	29.28 (744)	28.34 (720)
9	32.75 (832)	31.81 (808)
10	36.22 (920)	35.29 (896)
11	39.69 (1008)	38.75 (984)
12	43.16 (1096)	42.22 (1072)
13	46.63 (1184)	45.69 (1160)

Depth behind panel: 6.75", 8" with rear cover

Example: 2 H x 3 W has a cutout height of 7.53 (191) and a cutout width of 11.0 (279)



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