



## MIC 3200™

*Small Size – Big Capability*

### 1/32 DIN Temperature Controller/Indicator

#### DESCRIPTION

The MIC 3200 is straightforward, easy to use, and designed to offer users a smaller controller without sacrificing functionality. The controller comes equipped with specially developed hands-free PID (easy tune) for excellent general control.

For more specific performance requirements, there is also pre-tune followed by manual fine-tune to get the very best control for a specific application.

#### APPLICATIONS:

Ideal for temperature control applications requiring a compact, value-priced, easy-to-use general-purpose controller.

#### INDUSTRIES:

- Industrial and lab ovens/furnaces, plastics and thermal forming
- Form/Fill and seal
- Packaging applications
- And any others where low costs, smaller size and unmatched connectivity are critical requirements.

#### FEATURES/BENEFITS

- Single, 4-digit, 0.39" LED display
- 1/32 DIN panel mount
- Universal Input for thermocouple, RTD, DC linear mA/mV; user-selectable
- 1 or 2 outputs; relay or SSR driver
- Process or deviation/band alarm functions
- ON/OFF, direct/reverse acting PID Control
- Optional RS-485 serial communications

PARTLOW™ brand

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Controllers

#### SPECIFICATIONS\*

##### STANDARD FEATURES

Full PID capability  
Single or dual outputs via relay or SSR driver  
Indicator only, indicator with alarm or full controller models available  
One or two alarm outputs  
Universal Input for thermocouple, RTD, DC linear mA/mV

##### ENVIRONMENTAL CHARACTERISTICS

**Operating Temperature:** 0 to 55°C, 32 to 131°F  
**Storage Temperature:** -20 to 80°C, -4 to 176°F  
**Humidity:** 20 to 90% RH, non condensing

##### ELECTRICAL

**Line Voltage:** 90 to 264VAC, 50/60 Hz standard; 12 to 24VAC 50/60Hz or 12 to 30VDC (optional)  
**Power Consumption:** 4 Watts maximum

##### INPUTS

**Thermocouple types:** J, K, T, R, S, B, and N.  
**RTD:** 100 ohm (.00385 Ohm/Ohm/C)  
**Millivolts:** 0 to 50mVDC, 10 to 50mVDC  
**Milliamps:** 0 to 20 or 4 to 20mADC,

##### OUTPUTS

**Relay:** SPDT, 2.0 A Resistive @ 120/240VAC  
**SSR Driver:** >10V DC into 500Ω minimum (50mA maximum)

##### DISPLAY

**Digital Display:** Four 7 segment LEDs, 0.39" high  
**Status Indicators:** Individual LED indicators for Control, Alarm, and Configuration status

##### ALARM ADJUSTMENT

**Process Alarm:** ± Input Span  
**Deviation Alarm:** -1999 to + Input Span  
**Deviation Band Alarm:** 1 to Input Span

##### CONTROL ADJUSTMENTS

**On/Off Hysteresis:** 0.1% to 10.0% of Input Span  
**Proportional Band:** 0.5% to 999.9%  
**Manual Reset:** 0% to 100%  
**Auto Reset:** 1 sec to 99 minutes 59 seconds and OFF  
**Rate:** 0 (OFF) to 9 mins. 59 sec  
**Cycle Time:** 0.5 sec (SSR Drive only) 1, 2, 4, 8, 16, 32, 64, 128, 256, and 512 seconds  
**Control Algorithms:** Direct/reverse acting PID or ON/OFF  
**Automatic Tuning Types:** Pre-Tune or EASY TUNE

##### PERFORMANCE

**Measurement Accuracy:** ± 0.1% of span, ± 1 LSD at 20 deg C  
Note: Reduced performance with Type "B" thermocouple between 100-600C (212-1112F).  
**Ambient Temperature Error:** 0.01% of span /deg C change in ambient  
**Linearization Accuracy:** (TC and RTD)  
Better than ± 0.2 deg C any point, 0.1 deg C range (± 0.05 deg C typical).  
Better than ± 0.5 deg C any point, any 1 deg C range  
**Cold Junction Compensation:** Better than ± 0.7 deg C  
**Noise Rejection:** Common mode: >120dB at 50/60Hz giving negligible effect at up to 264V 50/60Hz  
Series Mode: >500% of span (at 50/60Hz) causes negligible effects.  
**Source Resistance:** 1000 ohm maximum (thermocouple)  
**Lead Resistance:** 50 ohm per lead maximum balanced (Pt100)

##### PHYSICAL DIMENSIONS

**Dimensions:** 1/32 DIN front panel, 100mm (3.9") deep  
**Weight:** 100 g. (3.53 oz.)

##### COMMUNICATIONS

**Type:** Serial asynchronous UART-to UART Link  
**Data Format:** 1 start bit, selectable parity (odd, even or none), 8 data bits, 1 stop bit.  
**Physical Layer:** RS-485 (two wire)  
**Presentation Layer:** Modbus RTU protocol  
**Maximum Number of Zones:** 128  
**Baud Rate:** Selectable in range 9600, 4800, 2400, 1200  
**Zone Address Range:** 1 to 128

##### RATINGS/AGENCY APPROVALS

UL & cUL recognized (E67237), CE

##### WARRANTY

3 years

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Partlow Brand MIC 3200 Data Sheet (7/05)

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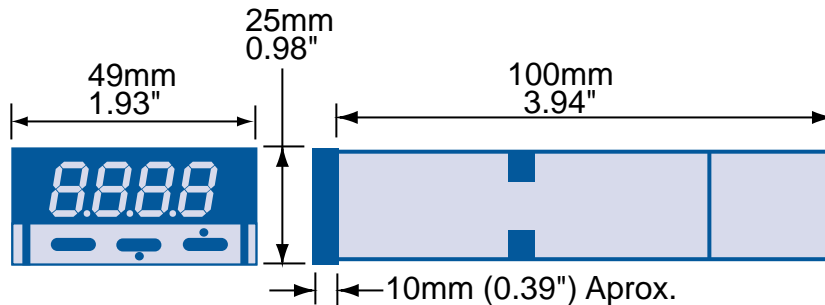
**Controllers**

**1/32 DIN Temperature Controller/Indicator**

**MODELS**

Code 1: Model #	Code 2: Process & Alarm 1 Outputs	Code 3: Option	Code 4: Display Color/ Line Voltage
3200	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I/32 DIN Temperature Controller/Indicator	00 Indicator Only 01 Indicator with Relay Output for Alarm 1 02 Indicator with SSR Driver Output for Alarm 1 12 Controller with Relay Output and SSR Alarm 1 Output 21 Controller with SSR Driver Output and Relay Alarm 1 Output	0 None 1 Relay Alarm 2 2 RS-485 Comms	0 Green Display 90-264VAC 1 Red Display 90-264VAC 2 Green Display 24V AC/DC 3 Red Display 24V AC/DC

**DIMENSIONS - 1/32 DIN**



Mount to panel 6mm (0.24") thick, minimum.  
 Panel Cutout: 45mm x 22.5mm (1.77" x 0.89")

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More Available. With factories around the world, global sales and applications support, and an expansive network of distributors, we stay close to our customers - shortening lead times and fostering responsiveness. Three-day lead time is standard, with same-day shipments available on many of our products.

More Selection. We have a broad selection of controllers to meet application requirements in a variety of industries. User-configurable, accurate and flexible, with low, mid, or high level performance ranges, our controller products meet your system and budgetary requirements.

More Reliable. Our experience with more than 25,000 customers has taught us to design controllers that are reliable and durable, with quality standards that meet six sigma requirements.

For additional information or a full-line catalog, contact DICG Customer Service or visit our web site.

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