

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

**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

\* Specifications are for base models with standard features only unless otherwise noted. Specifications subject to change without notice in accordance with our DBS policy of continuous improvement. All product and brand names are trademarks of their respective owners. All rights reserved.

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 West Brand 2300 Data Sheet (7/05)