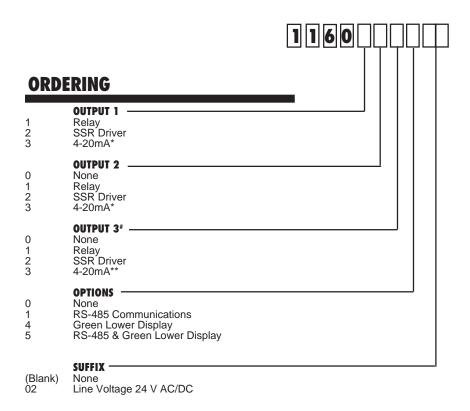
# MIC 1160 MICROBASED 1/16 DIN CONTROLLER



\* For control output only.

\*\* For retransmision only.

\* NOTE: OUTPUT 2, when programmed as an ALARM, IS programmed as ALARM 2 ONLY. OUTPUT 3, when programmed as an ALARM, IS programmed as ALARM 1 ONLY.



# **WARRANTY**

This instrument is backed by the Partlow comprehensive 3 year warranty. A complete warranty statement is published in the back of the product instruction manual. If you have further questions about warranties, please contact the Partlow factory.

# **ORDERING INFORMATION**

For pricing and additional ordering information, refer to Form 3265, Electronic Price Book, Page 7.



# **DESCRIPTION**

The easy programming and operational simplicity of the entire MIC Series of Partlow controllers is featured in the MIC 1160. It's adaptive-tune feature provides for better overall "quality control" with accurate "hands-free" tuning and faster, easier setup time

The MIC 1160 offers a choice of full PID, Heat-Cool, or Dual Alarm features to handle virtually any application. It's unique loop break alarm saves money by providing process problem indication without the need for additional hardware required by heater break detection.

The MIC 1160 reduces controller inventory cost because one controller will handle RTD, T/C, and analog inputs. It features a recorder type analog retransmission feature that provides flexibility for external process monitoring and recording.

CONTROLLERS

The MIC 1160's universal power supply provides the flexibility for global power capability which eliminates the need for different boards and covers the 94-264 range. It's sealed front panel provides for reliable and accurate operation in harsh environments.

### **SPECIFICATIONS**

### Input

**RTD** 

Thermocouple types J. K. T. R. S. B and L

100 ohm (.00385 ohm/ohm/C)

Volts 0 to 5VDC, 1 to 5VDC, 0 to 10VDC and

2 to 10 VDC

0 to 50mVDC and 10 to 50mVDC Millivolts Milliamps

0 to 20mADC and 4 to 20mADC
Displays cLL3 or cHH3 for thermocouple Sensor Fault Detection

or RTD inputs and sensor break, SnSr. Control outputs set to OFF (0% power); alarms operate as if the process variable has gone over-range (TC) and under-range

(RTD & V, mV, mA)

Outputs

Relay SPDT

2.0 A Resistive at 120/240 VAC

SSR Driver >4.3 VDC into 250 ohm minimum

**Current Output** 0-20mADC into 500 ohmmaximum

4-20mADC into 500 ohms maximum

Volts DC Output 0-10VDC 500 ohm minimum

0-5VDC 500 ohm minimum

Display

Four 7 segment LEDs, top .39" high, Digital Display

bottom .28" high

Individual LED indictors for Output 1, Status Indicators

Output 2, Manual, Alarm and

Pre or Auto Tune

**Alarm Adjustment** 

- Input Span Process Alarm **Deviation Alarm** - Input Span

**Deviation Band Alarm** 0 to Input Span

**Control Adjustments** 

On/Off Hysteresis 0.1% to 10.0% of Input Span Proportional Band 0% to 999.9% of Input Span

(0%=On/Off)

Manual Reset 0% to 100% of Output Power Off to 99 mins. 59 sec per repeat Auto Reset

Rate 0 sec to 99 mins. 59 sec

Cycle Time .5. 1. 2. 4. 8. 16. 32. 64. 128. 256. and

512 seconds

Spread -20% to +20% of PropBand 1 +

PropBand 2

Performance

- 0.25% of span, - 1 LSD at 20 deg C Measurement Accuracy

Note: Reduced performance with Type "B" thermocouple between

100-600C (212-1112F)

Ambient Temperature Error 0.01% of span /deg C change in

ambient

Better than - 0.2 deg C any point, Linearization Accuracy any 0.1 deg C range (- 0.05 deg C typical). Better than - 0.5 deg C any (TC and RTD)

point, any 1 deg C range

Better than - 0.7 deg C Cold Junction Compensation

4 per second Scan Rate

Noise Rejection Common mode: >120dB at 50/60Hz giving negligible effect at up to 264V

50/60Hz

Series Mode: >500% of span (at 50/60

Hz) causes negligible effect 90 to 264VAC 50/60 Hz

Line Voltage Operating Temperature 0 to 55 C

Storage Temperature -20 to 80 C Humidity 20 to 95% non condensing

Source Resistance 1000 ohm maximum (thermocouple) Lead Resistance 50 ohm per lead maximum balanced

(Pt100)

Dimensions 1/16 DIN front panel, 4.33" deep

Weight 8 ounces maximum IP65/NEMA4 Front Panel Sealing Power Consumption 4 Watts

**Agency Approvals** 

U.L. Category QUXY8 Process Control UL and CSA

Equipment Certified for Canada File # E67237 Multiple Listed Track

# 94ML004326

**Digital Communications** 

RS-485 serial communication port: Type

Character Format ASCII

User configurable to 1200, 2400, Bit Rate

4800, 9600

Address User configurable 1 to 32