MIC 6000 SERIES
1/4 DIN PROFILE CONTROLLER

ORDERING

6 □ □ □ □ □ □ □

INPUT
1 T/C or mV
2 Volts/mA
3 RTD
4 All Inputs

OUTPUT GROUP 1
CONTROL GROUP 1
AND/OR EVENT
1 Relay
2 SSR Driver
3 4-20mA & Relay
4 4-20mA & SSR

OUTPUT GROUP 2
CONTROL OUTPUT 2
OR EVENT
0 None
1 Relay
2 SSR Driver
3 4-20mA
4 4-20mA & Relay
5 4-20mA & SSR

OUTPUT GROUP 3
ALARM OR EVENT
0 None
1 Relay
2 SSR Driver

REMOTE
0 None
1 Position Proportioning*
2 Remote Run/Hold
3 RS-485 Standard Com.**
4 RS-485 Standard Com.***
5 RS-485 Total Access Com.**
6 RS-485 Total Access Com.***

VOLTAGE
1 115 VAC Input & Relays
2 230 VAC Input & Relays
3 115 VAC Input
230 VAC Relays

OPTION SUFFIX
(See Appendix for explanation/specifications)
(Blank) None
EO Extended Feature Software
XP 24VDC Transmitter Power Supply
XA 24VDC Power Supply††
BA Remote Keypad
AI † 40 Profiles

THE LIFEGUARD WATER-TIGHT PROTECTION ACCESSORY
To order the LifeGuard, specify Part # 64417801.

LR39885

* Limited to Model 6X11X1X or 6X22X1X.
** Output Group 2 cannot be 3, 4, or 5.
*** Output Group 3 cannot be 1 or 2.
† If com is required, only Total Access Com. is available.
†† ALARM not available when XA suffix is ordered.

Note: RS-485 Total Access Com. includes Option EO. Option EO not available with RS-485 Standard Com.

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 29.



DESCRIPTION

The MIC 6000 is a 1/4 DIN, microprocessor based, single loop, profiling, process controller. It can function either as a basic process controller, utilizing manual setpoint changes, or it can execute any one of eight setpoint profiles; each profile can have six ramp and six soak segments. Access to configuration parameters and setpoint may be restricted by using the instrument's security-access mode.

The MIC 6000 can provide single or dual control outputs and up to three event outputs. The unit can include two 4-20mA current outputs which can be used for control or optional process value retransmission.

SPECIFICATIONS

Input

Thermocouple types	J, K, T, R, S, E, B, N, and C.
RTD	100 ohm (.00385 Ohm/Ohm/C)
Volts	0 to 5VDC, 1 to 5 VDC
Millivolts	0 to 25mVDC, 0 to 50mVDC, 10 to 50mVDC
Milliamps	4 to 20mADC, accommodated via the addition of a shunt resistor
Remote Run/Hold	Dry contact closure
Sensor Fault Detection	Displays Hi or Lo for thermocouple or RTD inputs (10% above or below range) and sensor break, SnSr. On/Off outputs go off, proportional outputs go to 0%. Sensor fault detection is not functional or 0 to 5VDC.

Outputs

Relay	SPST 115VAC: 5.0 A Resistive; 1/8 HP or 250VA 230VAC: 2.5 A Resistive; 1/8HP or 250VA
SSR Driver	Open collector output Short circuit protected at 100mA maximum Provides 4VDC at 20mA or 3VDC at 40mA
Current Output	4-20mADC into 650 ohms maximum

Display

Digital Display	Four 7 segment LEDs each .56 inches high.
Status Indicators	Individual LED indictors for Setpoint, Out 1, Out 2, Manual, Alarm, Degrees F, Degrees C, or Engineering Units, and minus sign for negative values, Seg 1 thru 6, Ramp, and Soak.

Alarm Adjustment

Process Alarm	-9999 to 9999 units
Deviation Alarm	-3000 to 3000 units
Deviation Band Alarm	1 to 3000 units

Control Adjustments

On/Off Hysteresis	0 to 300 units
Proportional Band	1 to 3000 units
Manual Reset	-1500 to 1500 units
Auto Reset	0.0 to 100.0 repeats/minute
Rate	0.0 to 10.0 minutes
Cycle Time	1 to 240 seconds
Position Prop. Sensitivity	0.0 to 50.0%
First Output Position	-1000 to 1000 units
Spread (Second Output Position)	-1000 to 1000 units
Profile Time Base	Selectable for ramp time and soak time as: HHH.T (hrs. & tenths) HH.MM (hrs. & min.) MM.SS (min. & sec.) Selectable for ramp rate (EO option only) as: XXX.X (units per hour) XXX.X (units per minute)

Performance

Measurement Error Limit	• Type J, K, T, E, N, C thermocouples and RTD +/- 0.25% of reading plus 1 degree at 25 C • Type R, S, B thermocouple +/- 0.25% of span at 25 C • mVDC, mADC and VDC +/- 0.25% of span at 25 C
Ambient Temperature Error	0.01% of span per degree C deviation from 25 C
Scan Rate	1 scan per second
Display Resolution	T/C & RTD: 0.1 or 1 degree mV & VDC: 0.001, 0.01, 0.1, or 1.0
Auto Reset Windup Inhibit	Auto reset is disabled when the process is outside of the proportional band.
Cold Junction Compensation	Self compensation for ambient temperature. All calibration values are stored in memory.
Noise Rejection	Normal mode, 85dB minimum at 60Hz or greater. Common mode, 90dB minimum +/- 24VAC maximum for RTD input, 115VAC maximum for other inputs.
Line Voltage	115/230VAC +/- 10% 50/60 Hz
Power Consumption	15VA maximum
Operating Temperature	0 to 55 C, 32 to 131 F
Storage Temperature	-40 to 65 C, -40 to 149 F
Humidity	0 to 90% RH, non condensing
Dimensions	1/4 DIN front panel, 5.8" deep
Weight	3 pounds maximum
Vibration	0.5 to 100Hz at 0.5g

Agency Approvals

UL and CSA

Transmitter Power Supply

Provides up to 40mA @ 24VDC.

Digital Communications

Type	RS-485 serial communication port: Half-Duplex bi-directional comm.
Character Format	ASCII
Protocol	Per ANSI X3.28 subcategories 2.5 A4
Configuration	User configuration to "Monitor" (read only) or "Normal" (read and write)
Bit Rate	User configurable to 300, 600, 1200, 2400, 4800, 9600 bits per second
Address	User configurable 0 to 99