

NEW



## MLC 9000+™

*Maximum Productivity and  
Versatility for Control without  
Compromise!*

### DESCRIPTION

The Loop Control Module (LCM), when combined with a Bus Control Module (BCM), forms the basis of the MLC 9000+ DIN rail mount PID control system. Each Three Loop Controller Module (LCM) and Heater Break is an independent PID controller with 3 loops of control and heater break detection. Up to a max of eight LCMs can be configured for each Bus Communications Module (BCM). Each LCM contains its own PID processor as well as all input and output connections. Mixed installations of Single, Three and Four Loop LCMs are available. Each LCM can be removed and replaced ("hot swapped") while the process is running.



### APPLICATIONS:

Ideal for multi-zone temperature or process control applications (speed, flow, pressure, etc). Takes the place of either a PLC and multiple discrete controllers or combination PLC/HMI. For users seeking an integrated solution for improved PLC performance with factory networks.

### INDUSTRIES

Packaging, plastics, converting, semiconductor, food processing, heat treat and environmental test chambers to name a few.

### FEATURE/BENEFITS

- Heat/Cool Operation
- Process & Heater Alarms
- 100ms Scan Time
- Soft Start
- Three Heater Currents Monitored with a Single Input
- Hot Swapping with Auto Loop Configuration

**PARTLOW™ brand**

# MLC 9000+™

**Maximum Productivity and Versatility  
for Control without Compromise!**

**MLC 9000+  
Three Loop & Heater Break Controller Module**

## SPECIFICATIONS\*

### STANDARD FEATURES

**Power Supply:** Powered by BCM within its operating condition

**Function:** Three loop temperature or DC process input. Type and scale user-selectable

**Measuring Accuracy:** DC = ±0.1% of span ±1 LSD; RTD = ±0.1% of span, ±0.3°C; Thermocouple = ±0.1% of span, +1°C for CJC, +0.3°C for 0.1°C resolution ranges, or 1°C for 1° resolution ranges

**Input sample rate:** 10Hz (100msec)

**Sensor Break Detection:** Break detected within two seconds; Control outputs turn to off (0% power); Alarms activate (except heater break alarms)

**Construction/Enclosure:** Compact, modular, behind the panel (BTP), DIN rail design.

### OPERATING CHARACTERISTICS (APPLIES TO BOTH BCM/LCM)

**Operating Temp:** 32° to 131°F (0° to 55°C)

**Storage Temp:** -4° to 176°F (-20° to 80°C)

**Humidity:** 30% to 90% non-condensing R.H.

### UNIVERSAL INPUTS

Each input will accept signal from any of the following:

**Function:** Three loop temperature or DC process input. Type and scale user selectable

**Thermocouple:** B, N, J, R, K, S, L, T; Spans from -400°F to +3198°F (-240°C to +1759°C) dependent on T/C type

**RTD:** 3-Wire PT100; -327.3°F to 1472.5°F (-199.9°C to +800.3°C)

**DC Linear:** 0-20mA, 4-20mA, 0-50mV, 10-50mV, 0-5V, 1-5V, 0-10V, 2-10V; Scaleable -32000 to +32000

### HEATER BREAK ALARM

**Function:** Compares heater current to nominal. Alarms for High/Low current or Short Circuit output

**Heater Current Input:** 0 to 50mA Sinusoidal rms, from Current Transformer. Scaleable 0.1 to 1000.0A AC

### OUTPUTS

Output types provided are dependent upon specific LCM model. See "ORDERING INFORMATION for details".

**Relay Outputs:** Contact type: Single Pole Single Throw (SPST); Rating: 2A resistive @ 120/240 VAC; Lifetime: >500,000 operations at rated voltage/current

**SSR Driver Outputs:** Drive Capability: 12VDC nominal (10V minimum), at up to 20mA; Isolation: Isolated from process input and relay outputs. Not isolated from each other, other similar outputs or linear outputs in the same system.

### RATINGS/AGENCY APPROVALS

**Safety:** EN61010 and UL/ULc 3121-1

**EMC:** Certified EN61326-1: 1997

**Other:** ISO 9002 Registered; CiA approval pending.

### PROTECTION

IEC IP20; Designed for installation in an enclosure which is sealed against dust and moisture.

### PHYSICAL DIMENSIONS

**Width:** 0.87" (22mm)

**Depth:** 4.72" (120mm)

**Height:** 3.94" (100mm)

**Weight:** 5.3 oz (0.15kg)

**Mounting:** directly fitted onto 35mm Top-Hat DIN rail mounting (EN55022, DIN 46277-3)

### WARRANTY

3 Years

## ORDERING INFORMATION

MLC 9002-Z3621-00 Three Universal inputs, one Heater Break input, six SSR outputs

MLC 9002-Z3611-00 Three Universal inputs, one Heater Break input, six relay outputs

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