

Product Specification

MLC 9000+ Single Loop Controller Module



Each Single Loop Module is an independent PID controller. Up to a max of eight Loop Modules can be connected to a single Bus Module. Each Loop Module contains its own PID processor as well as all input and output connections. Mixed installations of Single and Multiple Loop Modules are possible. Each Loop Module can be removed and replaced (Hot Swapped) whilst the process is running.

- Heat/Cool operation
- Process & Heater alarms
- 100ms Scan Time
- Soft Start
- Heater Current Monitoring
- Hot Swapping with auto loop Configuration



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Technical Data

Process Input

Function Thermocouple

RTD DC Linear

Measuring Accuracy

Input sample rate Sensor Break Detection

Heater Break Alarm

Function

Heater Current Input

Outputs

Relay Outputs

SSR Driver Outputs

Linear Output

One loop temperature or DC process input. Type and scale user selectable

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

3-Wire PT100, NI120 Spans from -199.9°C to +800.3°C (-327.3°F to 1472.5°F)

0-20mA, 4-20mA, 0-50mV, 10-50mV, 0-5V, 1-5V, 0-10V, 2-10V. Scaleable -32000 to +32000

+32000

DC = $\pm 0.1\%$ of span ± 1 LSD. RTD = $\pm 0.1\%$ of span, $\pm 0.3^{\circ}$ C. Thermocouple = $\pm 0.1\%$ of span, $\pm 1^{\circ}$ C for CJC, $\pm 0.3^{\circ}$ C for 0.1°C resolution ranges, or 1°C for 1° resolution ranges 10Hz (100msec)

Break detected within two seconds. Control outputs turn to off (0% power). Alarms activate (except heater break alarms)

Optional. Compares heater current to nominal. Alarms for High/Low current or Short Circuit output

0 to 50mA, 0 to 60mA Sinusoidal rms, from Current Transformer.

Scaleable 0.1 to 1000AAC

Contact type: Single Pole Single Throw (SPST) Rating: 2A resistive @ 120/240VAC Lifetime: >500000 operations at rated voltage/current

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.

Only available on 3 O/P models. Resolution: 8 bits in 250msec, (10 bits in 1 second typical) Accuracy $\pm 0.25\%$ (mA into 250 ohm load, V into 2kohm load) Degrading linearly to $\pm 0.5\%$ for increasing burden to maximum derive capability (500 ohm)

Operating & Environmental

Supply Voltage Ambient Temperature Storage

Relative Humidity

Dimensions Mounting

Approvals & Certifications

Powered by BCM within its operating condition

0C to 55C (32F to 131F) -20C to 80C (-4F to 176F)

30% to 90% non condensing (operation and storage)

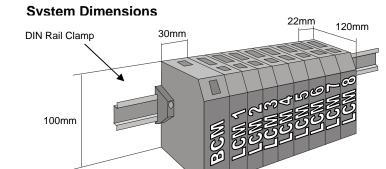
Width: 22mm, Height: 100mm, Depth: 120mm. Weight: 0.15kg

DIN rail mounting via supplied interconnect module (EN50022, DIN46277-3) EMC: Certified to EN61326. Safety: Complies with EN61010 and UL 3121-1

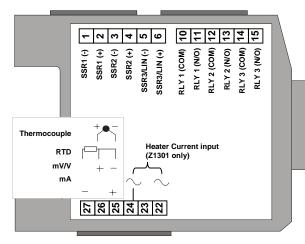


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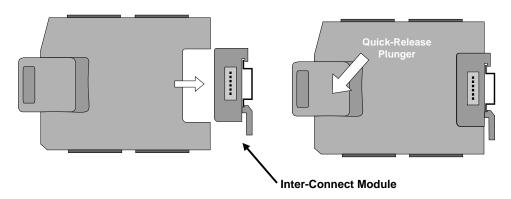
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Connection Details



LCM Mounting Details



Order Code

MLC 9000-Z1200 One Universal input, two SSR/relay outputs MLC 9000-Z1300

One Universal input, two SSR/relay outputs and one Linear output or three

SSR/relay outputs

MLC 9000-Z1301 One Universal input, one Heater Break input, two SSR/relay outputs and one Linear output or three SSR/SP relay outputs

In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.

MLC 9000+ Single Loop Module - 05/04