

MLC 9000+ Three Loop + Heater Break Module



Each Three Loop + Heater Break Module is an independent PID controller with 3 loops of control and heater break detection input. Up to a maximum of eight Loop Modules can be configured for each Bus Module meaning it's possible to have 24 loops of control all with Heater Break detection. Mixed installations of Single, Three and Four 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
- Three Heater Currents Monitored with a single input
- Soft Start
- 100ms input sample rate
- Hot Swapping with auto loop Configuration



Technical Data

Process Input

Function	One loop temperature or DC process input. Type and scale user selectable
Thermocouple	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
RTD	3-Wire PT100, NI120 Spans from -199.9°C to +800.3°C (-327.3°F to 1472.5°F)
DC Linear	0-20mA, 4-20mA, 0-50mV, 10-50mV, 0-5V, 1-5V, 0-10V, 2-10V. Scaleable -32000 to +32000
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)

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 100A AC

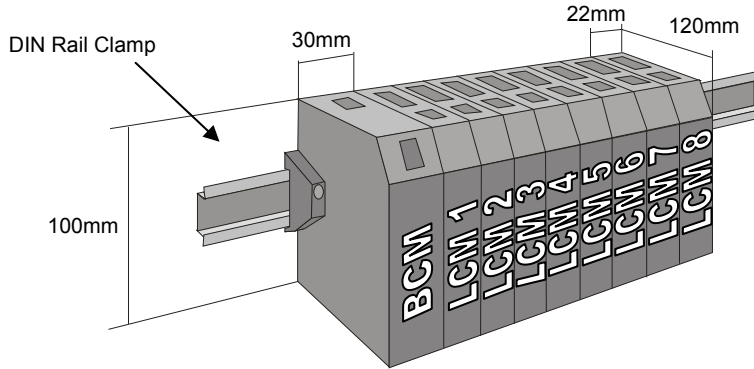
Outputs

Relay Outputs	Contact type: Single Pole Single Throw (SPST) Rating: 2A resistive @ 120/240VAC Lifetime: >500000 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.

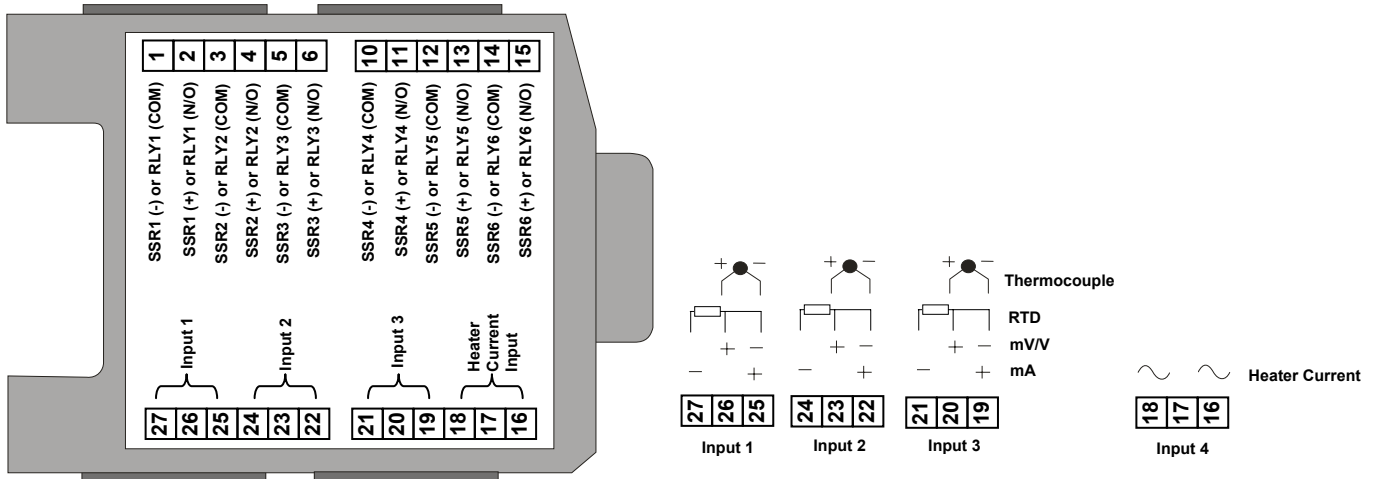
Environmental Specifications

Supply Voltage	Powered by BCM within its operating condition
Ambient Temperature	0C to 55C (32F to 131F)
Storage	-20C to 80C (-4F to 176F)
Relative Humidity	30% to 90% non condensing (operation and storage)
Dimensions	Width: 22mm, Height: 100mm, Depth: 120mm. Weight: 0.15kg
Mounting	DIN rail mounting via supplied interconnect module (EN50022, DIN46277-3)
Approvals & Certifications	EMC: Certified to EN61326. Safety: Complies with EN61010 and UL 3121-1

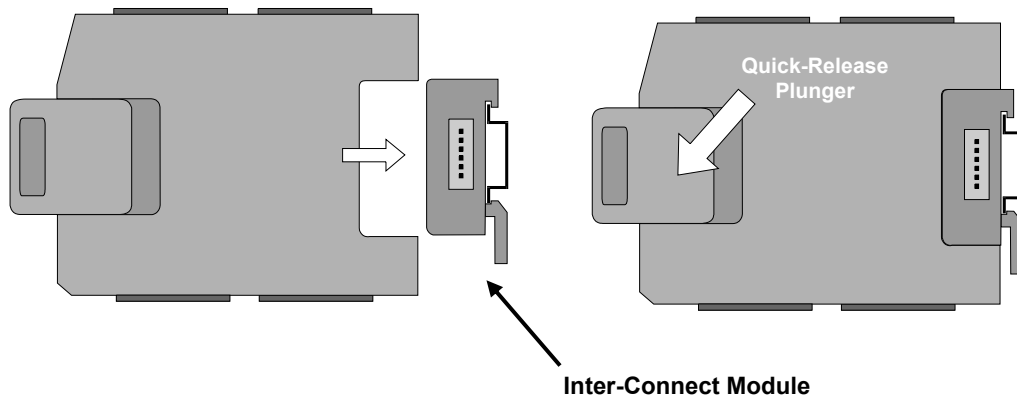
System Dimensions



Connection Details



LCM Mounting Details



Order Code

MLC 9000-Z3611
MLC 9000-Z3621

Three Universal inputs, one Heater Break input, six SSR outputs
 Three Universal inputs, one Heater Break input, six relay outputs

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