

West MLC 9000 4 Loop Controller Module



Each Four Loop Controller Module (LCM), provides four PID control loops. Up to 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 Loop and Four Loop LCMs are possible. Each LCM can be removed and replaced (Hot Swapped) whilst the process is running.

- Four Independent PID control loops per module
- RaPID fuzzy logic control
- 100ms Scan Time
- Fully user configurable via Software
- Hot Swap with auto loop configuration
- Up to 32 loops per BCM



Technical Data

Inputs (C460 & C462)

Thermocouple	B,N,J,R,K,S,L,T Spans from -240 to + 1759°C (-400 to +3198°F) dependant on T/C type
RTD	3-wire PT100 -199.9°C to +800.3°C (-327.3°F-1472.5.3°F)
DC Linear	0 to 50mV, 10 to 50mV. Scaleable -32000 to +32000
Measuring Accuracy	DC = ± 0.1% of span, ±1 LSD. RTD = ± 0.2% of span, ±0.3°C. Thermocouple = ± 0.2% of span, ±1°C for CJC, ±0.3°C for 0.1°C resolution ranges, or 1°C for 1° resolution ranges
Sample Rate	10Hz (100msec)
Sensor Break Detection	Break detected within two seconds. Control outputs for that loop turn off (0% power). All alarms on that loop activate.

Inputs (C461 & C463)

DC Linear	0 to 20mA, 4 to 20mA, 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V. Scaleable -32000 to +32000
Measuring Accuracy	± 0.1% of span, ±1 LSD
Sample Rate	10Hz (100msec)
Sensor Break Detection	Break detected within two seconds (on non-zero based ranges only). Control outputs for that loop turn off (0% power). All alarms on that loop activate.

Outputs (C460 & C461)

Relay Outputs	Two, single pole single throw (SPDT). Rating: 2A resistive @120/240VAC Lifetime: >500,000 operations at rated voltage/current
SSR Drive Outputs	Four, drive capability: 12VDC nominal (10VDC minimum), at up to 20mA Isolation: Isolated from process input and relay outputs. Not isolated from each other, other similar outputs in the same system
Output Usage	Any output can be assigned as any control or alarm output for any of the four loops

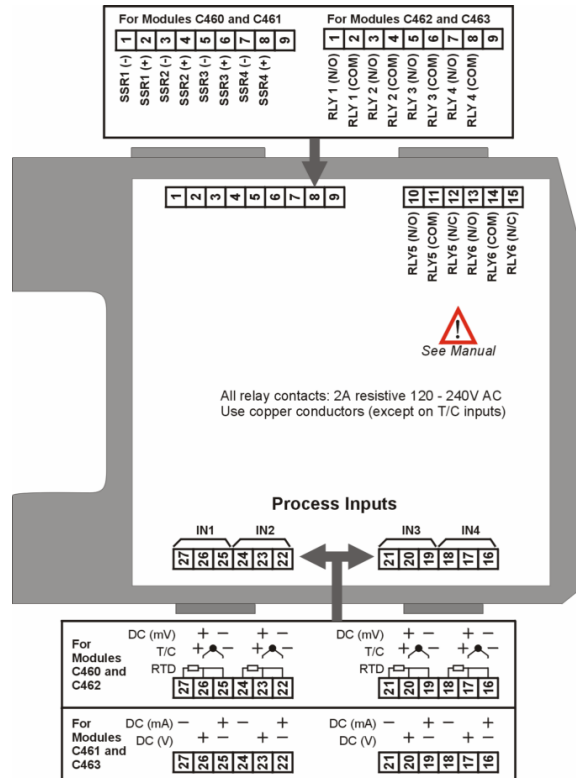
Outputs (C462 & C463)

Relay Outputs	Two, single pole double throw (SPDT). Rating: 2A resistive @120/240VAC Four, single pole single throw (SPST). Rating: 2A resistive @120/240VAC Lifetime: >500,000 operations at rated voltage/current
Output Usage	Any output can be assigned as any control or alarm output for any of the four loops

Environmental

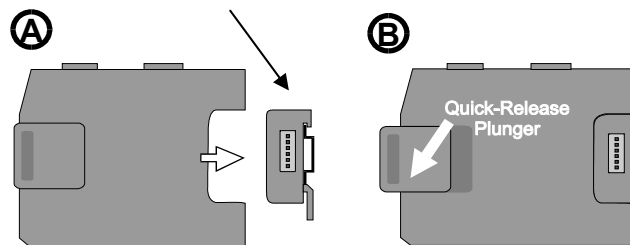
Supply voltage	Powered by BCM within its operating condition
Ambient Temperature	0°C to 55°C (32°F to 131°F)
Storage	-20°C to 80°C (-4°F to 176°F)
Relative Humidity	30% to 90% non condensing (operation and storage)
Dimensions	Width 22mm, Height 100mm, Depth 120mm. Weight 0.15kg
Mounting	DIN rail mounting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

Connecting to the LCM



LCM Mounting Details

Interconnect Module



Order Codes

MLC 9000-C460	4 Temperature/DC mV inputs with 6 Outputs Input types independently selectable as RTD, Thermocouple or DC mV 4 DC pulse for SSR and 2 SPDT Relay outputs
MLC 9000-C461	4 DC mA/Voltage inputs with 6 Outputs Input types independently selectable as DC Volts or DC mA 4 DC pulse for SSR and 2 SPDT Relay outputs
MLC 9000-C462	4 Temperature/DC mV inputs with 6 Outputs Input types independently selectable as RTD, Thermocouple or DC mV 4 SPST Relay and 2 SPDT Relay outputs
MLC 9000-C463	4 DC mA/Voltage inputs with 6 Outputs Input types independently selectable as DC Volts or DC mA 4 SPST Relay and 2 SPDT Relay outputs

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