

TEMPERATURE/PROCESS LOOP CONTROLLERS

Universal Input, Dual Control Output, RS-485 Communication



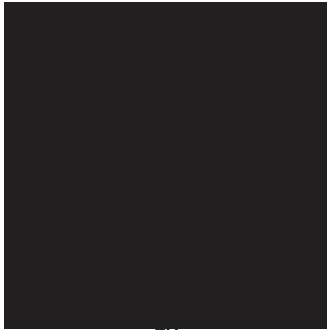
32B



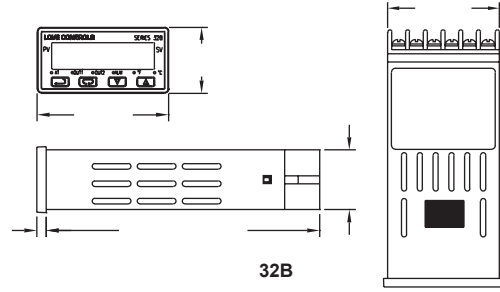
16B



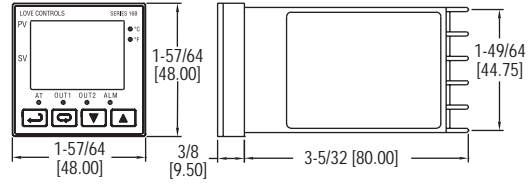
8B



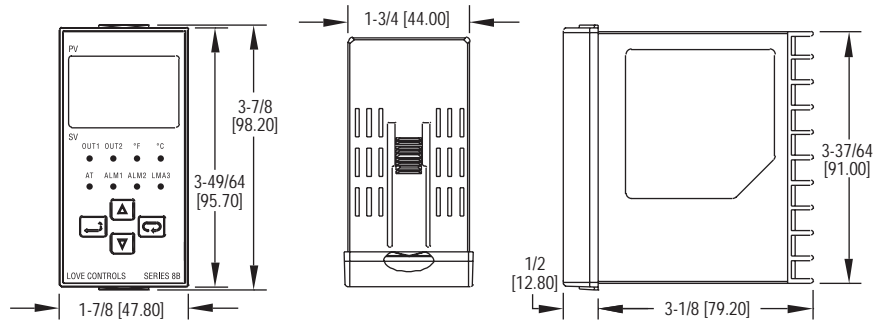
4B



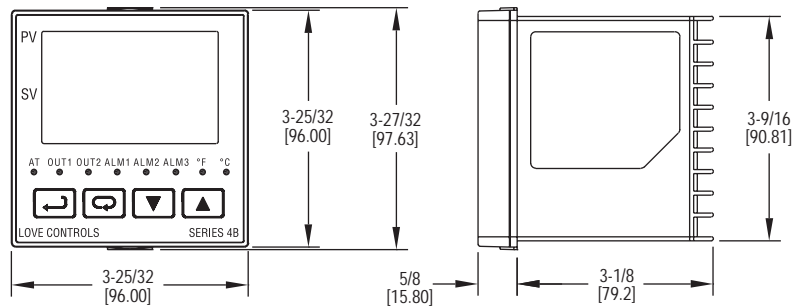
32B



16B



8B



4B

The **SERIES 32B, 16B, 8B, & 4B** Temperature/Process controllers offer advanced control features for the most demanding temperature or process applications. Offered in 4 standard DIN cutout housing sizes, these controllers are designed with dual, 4 digit LED displays for local indication of the process value, setpoint, and output conditions.

FEATURES/BENEFITS

- Universal input accepts process transmitters, RTD's or thermocouple signals
- On/off, PID, or manual output control
- RS-485 standard on all models
- Stage control program for up to 64 ramp/soak actions

APPLICATIONS

- Oven, boiler, or chiller control
- Environmental chambers
- Hot plates/melt pots
- Medical equipment
- Packaging equipment
- Food service equipment

SPECIFICATIONS

Inputs: Thermocouple, RTD, DC voltages or DC current.
Display: Two 4 digit, 7 segment LED's. PV: Red, SV: Green.
Accuracy: $\pm 0.05\% \text{ of reading}$
Power Requirements: 100 to 240 VAC, 50/60 Hz; Optional 24 VDC.
Power Consumption: 5 VA max.
Operating Temperature: 32 to 122°F (0 to 50°C).
Memory Backup: Nonvolatile memory.
Control Output Ratings: Relay: SPST, 3 A @ 250 VAC resistive for 32B; SPST, 5 A @ 250 VAC resistive for 16B; SPDT, 5 A @ 250 VAC resistive for 8B and 4B; Voltage pulse: 14 VDC (max. 40 mA); Current: 4 to 20 mA; Linear voltage: 0 to 10 V.
Communication: RS-485 Modbus® ASCII/RTU communication protocol.
Weight: 32B and 16B: 4 oz (114 g); 8B and 4B: 15 oz (425 g).
Front Panel Rating: IP56.
Agency Approvals: CE, cULus.

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TEMPERATURE/PROCESS LOOP CONTROLLERS

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MODEL CHART - 32B			
Model	Supply Power	Output 1	Output 2
32B-23	100 to 240 VAC	Voltage pulse	Relay
32B-23-LV	24 VDC	Voltage pulse	Relay
32B-33	100 to 240 VAC	Relay	Relay
32B-33-LV	24 VDC	Relay	Relay
32B-53	100 to 240 VAC	Current	Relay
32B-53-LV	24 VDC	Current	Relay

MODEL CHART - 16B			
Model	Supply Power	Output 1	Output 2
16B-23	100 to 240 VAC	Voltage pulse	Relay
16B-23-LV	24 VDC	Voltage pulse	Relay
16B-33	100 to 240 VAC	Relay	Relay
16B-33-LV	24 VDC	Relay	Relay
16B-53	100 to 240 VAC	Current	Relay
16B-53-LV	24 VDC	Current	Relay
16B-63	100 to 240 VAC	Linear voltage	Relay
16B-63-LV	24 VDC	Linear voltage	Relay

MODEL CHART - 8B			
Model	Supply Power	Output 1	Output 2
8B-23	100 to 240 VAC	Voltage pulse	Relay
8B-23-LV	24 VDC	Voltage pulse	Relay
8B-33	100 to 240 VAC	Relay	Relay
8B-33-LV	24 VDC	Relay	Relay
8B-53	100 to 240 VAC	Current	Relay
8B-53-LV	24 VDC	Current	Relay
8B-63	100 to 240 VAC	Linear voltage	Relay
8B-63-LV	24 VDC	Linear voltage	Relay

MODEL CHART - 4B			
Model	Supply Power	Output 1	Output 2
4B-23	100 to 240 VAC	Voltage pulse	Relay
4B-23-LV	24 VDC	Voltage pulse	Relay
4B-33	100 to 240 VAC	Relay	Relay
4B-33-LV	24 VDC	Relay	Relay
4B-53	100 to 240 VAC	Current	Relay
4B-53-LV	24 VDC	Current	Relay
4B-63	100 to 240 VAC	Linear voltage	Relay
4B-63-LV	24 VDC	Linear voltage	Relay
4B-33-986/U	120 VAC	Relay	Relay

INPUT RANGES	
Input Types	Range
K Type TC	-328 to 2372°F (-200 to 1300°C)
J Type TC	-148 to 2192°F (-100 to 1200°C)
T Type TC	-328 to 752°F (-200 to 400°C)
E Type TC	32 to 1112°F (0 to 600°C)
W Type TC	-328 to 2372°F (-200 to 1300°C)
R Type TC	32 to 3092°F (0 to 1700°C)
S Type TC	32 to 3092°F (0 to 1700°C)
B Type TC	212 to 3272°F (100 to 1800°C)
L Type TC	-328 to 1562°F (-200 to 850°C)
U Type TC	-328 to 932°F (-200 to 500°C)
JPt 100 RTD	-4 to 752°F (-20 to 400°C)
Pt 100 RTD	-328 to 1562°F (-200 to 850°C)
0 to 5 V	-999 to 9999
0 to 10 V	-999 to 9999
0 to 20 mA*	-999 to 9999
4 to 20 mA*	-999 to 9999
0 to 50 mV	-999 to 9999

*Requires 250 Ω precision resistor across input terminals

ACCESSORIES	
Model	Description
MN-1	Mini-Node™ RS-485 to USB converter
SCD-SW	Configuration software
A-277	250 Ω precision resistor
A-600	R/C snubber
A-900	Weatherproof front mount enclosure
A-901	Weatherproof internal mount enclosure with window

Application Note:

When using a relay output to operate a contactor or solenoid an R/C snubber should be installed across the coil to prevent damage to the controller relays.



A-600



MN-1



A-900



A-901



4B-33-986/U Benchtop Controller