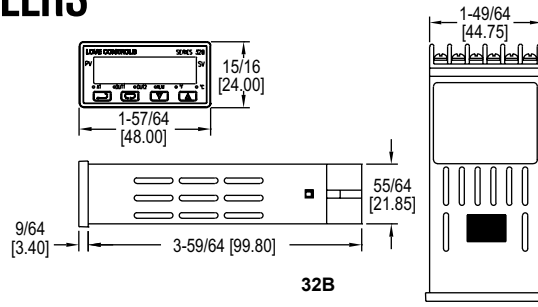


TEMPERATURE/PROCESS LOOP CONTROLLERS

Universal Input, Dual Control Output, RS-485 Communication



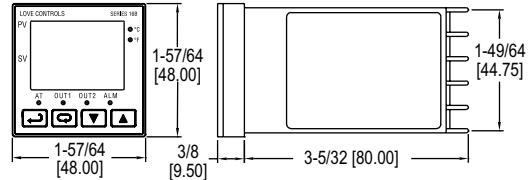
32B



32B



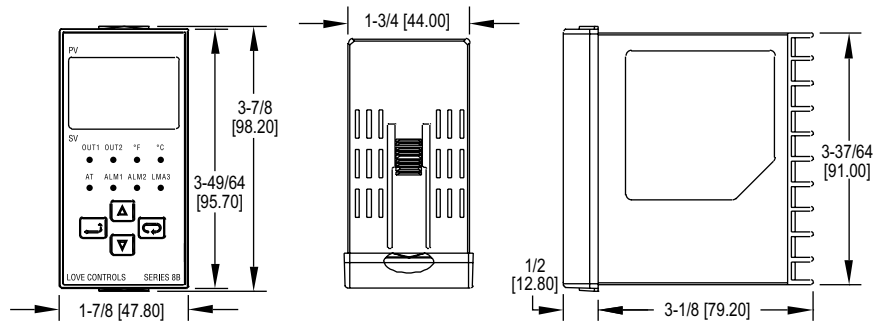
16B



16B



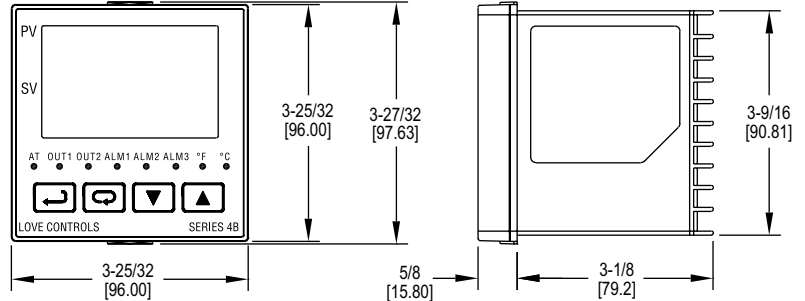
8B



8B



4B



4B

Temperature/
Process Controllers

The Series 32B, 16B, 8B, & 4B Temperature/Process Loop 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, set point, and output conditions.

BENEFITS/FEATURES

- 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: ±0.25% span, ±1 least significant digit.
Power Requirements: 100-240 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: 4-20 mA; Linear voltage: 0-10 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.
Compliance: CE, cULus.

TEMPERATURE/PROCESS LOOP CONTROLLERS

Universal Input, Dual Control Output, RS-485 Communication

| 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 | 100-240 VAC | Voltage pulse | Relay |
| 16B-23-LV | 24 VDC | Voltage pulse | Relay |
| 16B-33 | 100-240 VAC | Relay | Relay |
| 16B-33-LV | 24 VDC | Relay | Relay |
| 16B-53 | 100-240 VAC | Current | Relay |
| 16B-53-LV | 24 VDC | Current | Relay |
| 16B-63 | 100-240 VAC | Linear voltage | Relay |
| 16B-63-LV | 24 VDC | Linear voltage | Relay |

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

| MODEL CHART - 4B | | | |
|------------------|--------------|----------------|----------|
| Model | Supply Power | Output 1 | Output 2 |
| 4B-23 | 100-240 VAC | Voltage pulse | Relay |
| 4B-23-LV | 24 VDC | Voltage pulse | Relay |
| 4B-33 | 100-240 VAC | Relay | Relay |
| 4B-33-LV | 24 VDC | Relay | Relay |
| 4B-53 | 100-240 VAC | Current | Relay |
| 4B-53-LV | 24 VDC | Current | Relay |
| 4B-63 | 100-240 VAC | Linear voltage | Relay |
| 4B-63-LV | 24 VDC | Linear voltage | 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) |
| 0-5 V | -999 to 9999 |
| 0-10 V | -999 to 9999 |
| 0-20 mA* | -999 to 9999 |
| 4-20 mA* | -999 to 9999 |
| 0-0.50 mV | -999 to 9999 |

*Requires 250 Ω precision resistor across input terminals.

| ACCESSORIES | |
|-------------|---|
| Model | Description |
| 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 |
| MN-1 | Mini-Node™ RS-485 to USB converter |
| SCD-SW | Configuration software |

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