LOVE ®

Series PP45

Temperature/Process Indicator
Universal Input, 0.1% Accuracy, 6 Digit Display

CE c UL us

114.3 mm (4.500 in)
13.5 mm (0.530 in)
95.9 mm (3.774 in)

44.6 mm (1.756 in)
49.10 mm (1.934 in.)

AL1 AL2
888888

ALL DIMs IN mm (INCHES)

PANEL CUT-OUT DIMs: 45.00mm+0.6/-0.0 x 92.00mm+0.8/-0.0
(1.772 in.+0.024/-0.0 x 3.620 in.+0.032/-0.0)

Panel
Max. Panel Thickness
6.53 mm (0.250 in.)
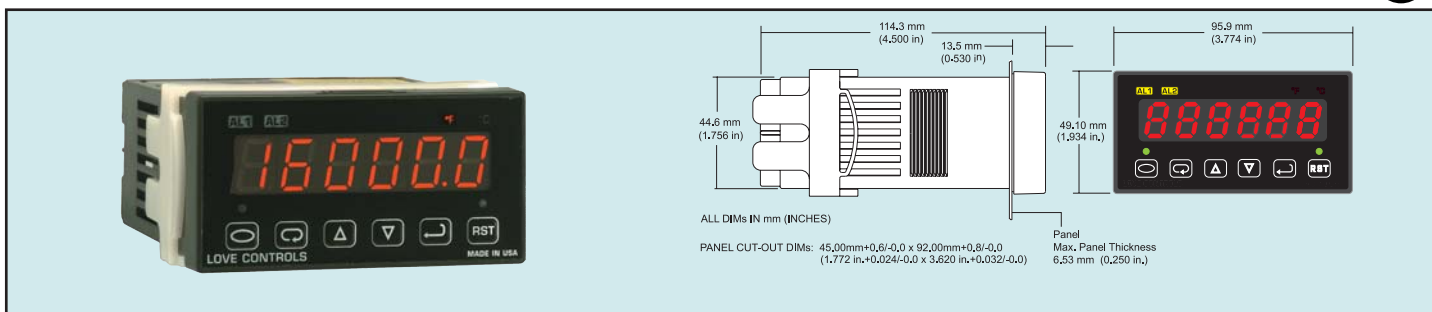
The Love PP45 Series Temperature/Process Indicators offer a high level of standard features in an economical 1/8 DIN package. Featuring universal input for thermocouples, RTDs, differential input, and process input; the PP45 Series offers easy setup for most temperature and process applications. A standard 24 Volt isolated, regulated power supply is included to power most standard 4 to 20 mA transmitters.

Standard features include peak and valley indication and one button tare setting. For process inputs the display is fully programmable from -32000 to +32000 with user placeable decimal point. Most thermocouple and RTD inputs can show whole or tenth degree display. The PP45 Series is available with dual alarm SPDT outputs rated at a full 10 Amps, and can be programmed for high, low, or guardband (high/low) operation. All outputs are isolated from the input. Other options include Analog Retransmission of the Process Variable and Digital Serial Communication for either RS-232 or RS-485.

The PP45 sets a new standard in quality, features, ease of use, and value. While having a high level of features and functions, program items only appear in the control menu when the function is selected.

For the best value in a high accuracy 1/8 DIN panel meter, the choice is the Love Controls PP45 Series.

INPUT RANGES

INPUT TYPE	RANGE °F	RANGE °C
Type J or L Thermocouple	-100 to +1607	-73 to +871
Type K Thermocouple	-200 to +2500	-129 to +1371
Type T Thermocouple	-350 to +750	-212 to +398
Type E Thermocouple	-100 to +1800	-73 to +982
Type R Thermocouple	0 to 3200	-17 to +1760
Type S Thermocouple	0 to 3200	-17 to +1760
Type B Thermocouple	+75 to +3308	+24 to +1820
Type C Thermocouple	0 to 4208	-17 to +2320
Type N Thermocouple	-100 to +2372	-73 to +1300
100 K Plt. 0.00385 DIN RTD	-328 to 1607	-200 to +875
100 K Plt. 0.00392 NIST RTD	-328 to 1607	-200 to +875
120 K Nickel 0.00628 US RTD	-112 to +608	-80 to +320
1000 K Plt. 0.00385 DIN RTD	-328 to +1607	-200 to +875
Current/Voltage/ O Voltage[1]	Scalable Units from -1999 to +9999	

SPECIFICATIONS

Inputs:
• Thermocouple = 3 megohms minimum.
• Voltage = 5000 ohms.
• Current = 10 ohms.
• RTD current = 200 μA maximum.
Display: 6 digit, 7 segment 0.5″ (12.7 mm) high. Resolution: 1° or 0.1°, or 1 count.
Accuracy: ±0.1% of span ±1 least significant digit.
Supply Voltage: 100 to 240 VAC nominal, +10% -15%, 50 to 400 Hz single phase; 132 to 240 VDC +10% -20%.
Power Consumption: 5 VA maximum.
Operating Temperature: 14 to 131°F (-10 to 55°C).
Memory Backup: Non-volatile memory. Has no batteries.
Alarm Output Relay Ratings: SPDT, 10 A at 240 VAC resistive, 1/2 hp @ 120 VAC, 1/3 hp @ 240 VAC.
Alarm On-Off Differential: 1° F, C, or 1 count.
Isolation: Alarm Relay outputs, 1500 VAC from all inputs and outputs.
Loop Power Supply: Isolated 24 VDC @ 50 mA, regulated.
Weight: 13 oz (369 g).
Front Panel Rating: IP66 (Type 4X).
Agency Approvals: CE, UL.

MODELS

Part Number	Features
PP450	Indicator without Alarms
PP451	Indicator with Alarms
PP451-932	Indicator w/ Alarms and 0 (4) to 20 mA Retransmission

[1] The 0 to 20 mADC, 4 to 20 mADC, 0 to 10 VDC, 2 to 10 VDC, and -10 to +10 mVDC inputs are fully scalable from a minimum of 100 counts span placed anywhere within the range of -32000 to +32000. Decimal point position is adjustable from the zero place (32000), tenths (3200.0), hundredths (320.00), thousandths (32.000), or ten thousandths (3.2000).

NEMA 4 (IP-65) Mounting Enclosure for 1/8 DIN controls and panel meters.

The 1007-ENCL8, IP-65 (NEMA 4) Mounting Enclosure for 1/8 DIN controls and panel meters, allows easy use in a compact semi-portable format. The enclosure has a standard 1/8 DIN cut-out and will accommodate a PP45, LCI108, LCI108J, LCI208, LCI308, LCI408, 8500 Series, 8600 Series, LCU108, or LCU208 indicators and controls.

Four rubber feet allow for secure positioning on most flat surfaces. The top easily removes with four screws to allow full access to the interior for wiring and installation.

1007-ENCL8 shown with PP45 mounted.

1007-ENCL8, Mounting Enclosure

Accessory mounting bracket for 1/8 DIN controls and panel meters.

The 1007-BRKT8 Accessory Mounting Bracket Kit for 1/8 DIN controls and panel meters allows easy mounting of an accessory directly to the rear of the PP45, D8500, or D8600 Series instruments. The kit includes the bracket, terminal insulator barrier, and screws.

The 1007-BRKT8 is designed to hold a Series 668 pressure transmitter, but may also be used for other transmitters or solid state relays.

1007-BRKT8 shown mounted on PP45 with Dwyer Series 668 pressure transmitter (wiring omitted).

1007-BRKT8, Mounting Bracket Kit

Note: When mounting a solid state relay, make sure that the load is small enough so that additional heat sinking is not necessary. Do not use a solid state relay on this bracket if the weight is more than 4 oz (125 g) or if the heat generated by the solid state relay will raise the ambient temperature of the bracket by more than 9°F (5°C).

Temperature