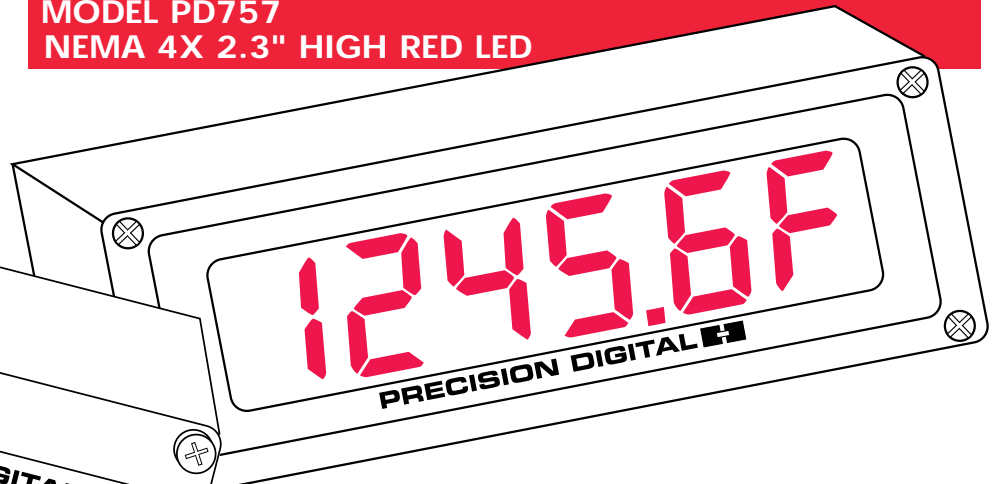
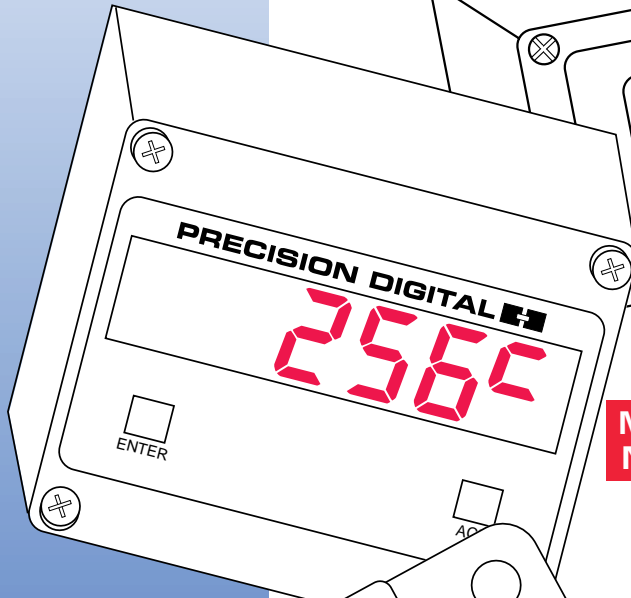


LARGE DISPLAY TEMPERATURE METERS

**MODEL PD757
NEMA 4X 2.3" HIGH RED LED**

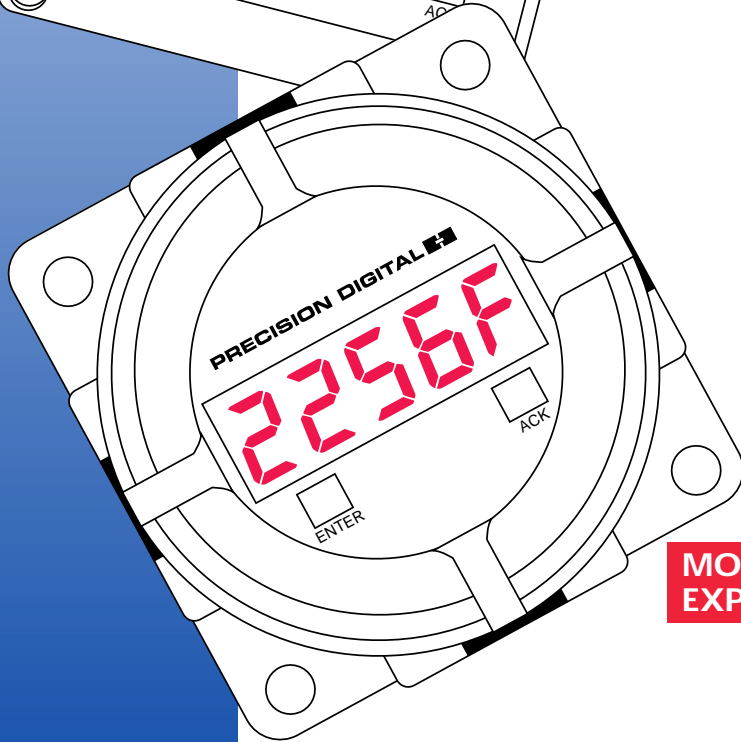


**MODEL PD755
NEMA 4X 1.0" HIGH RED LED**

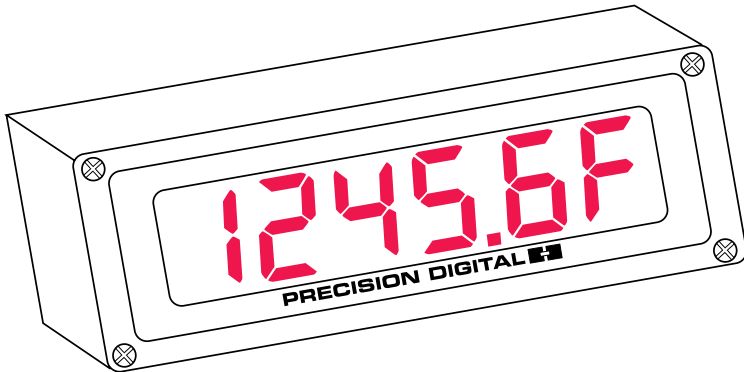


- Field Selectable J, K, T, E, R & S Thermocouples and 100 Ω Platinum RTD Inputs
- Can Act as Linearized Temperature Transmitter
- Max/Min Temperature Capture in Fahrenheit or Celsius
- 2 or 4 Relays + 4-20 mA Output Options
- Input Offset Adjustment

**MODEL PD756
EXPLOSION-PROOF 0.8" HIGH RED LED**



**MODEL PD757 NEMA 4X 2.3" HIGH RED LED
CAST ALUMINUM ENCLOSURE**



ORDERING INFORMATION

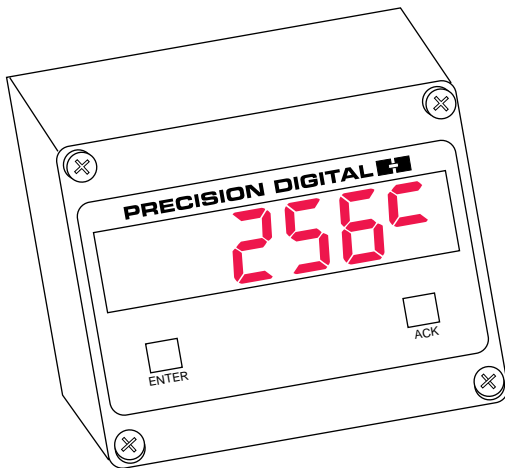
115/230 VAC MODEL	24 VDC MODEL	DESCRIPTION
PD757-N	PD757-2-N	No Options
PD757-34	PD757-2-34	2 Relays
PD757-35	PD757-2-35	4-20 mA Output
PD757-36	PD757-2-36	2 Relays + 4-20 mA Output
PD757-37	PD757-2-37	4 Relays
PD757-38	PD757-2-38	4 Relays + 4-20 mA Output

OPTION CARDS	
MODEL	DESCRIPTION
PD374	2 Relays
PD375	4-20 mA Output
PD376	2 Relays + 4-20 mA Output
PD377	4 Relays
PD378	4 Relays + 4-20 mA Output

ACCESSORIES	
MODEL	DESCRIPTION
PDA6504*	Panel Mounting Kit

**Does not provide NEMA 4X seal to panel.*

MODEL PD755 NEMA 4X 1.0" HIGH RED LED



ORDERING INFORMATION

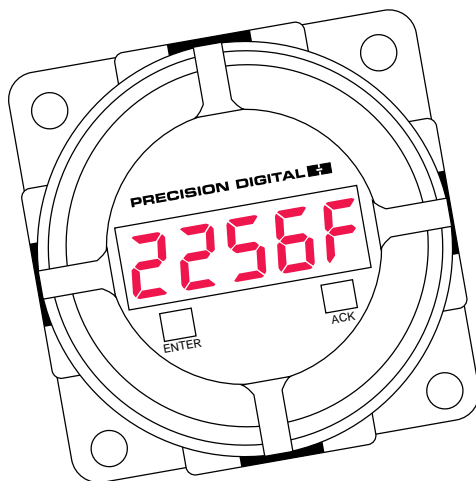
115/230 VAC MODEL	24 VDC MODEL	DESCRIPTION
PD755-N	PD755-2-N	No Options
PD755-44	PD755-2-44	2 Relays
PD755-45	PD755-2-45	4-20 mA Output
PD755-46	PD755-2-46	2 Relays + 4-20 mA Output
PD755-47	PD755-2-47	4 Relays
PD755-48	PD755-2-48	4 Relays + 4-20 mA Output

OPTION CARDS	
MODEL	DESCRIPTION
PD474	2 Relays
PD475	4-20 mA Output
PD476	2 Relays + 4-20 mA Output
PD477	4 Relays
PD478	4 Relays + 4-20 mA Output

ACCESSORIES	
MODEL	DESCRIPTION
PDA6554	Panel Mounting Kit
PDA6545	2" Pipe Mounting Kit

**Does not provide NEMA 4X seal to panel.*

**MODEL PD756 EXPLOSION-PROOF
0.8" HIGH RED LED**



ORDERING INFORMATION

115/230 VAC MODEL	24 VDC MODEL	DESCRIPTION
PD756-N	PD756-2-N	No Options
PD756-44	PD756-2-44	2 Relays
PD756-45	PD756-2-45	4-20 mA Output
PD756-46	PD756-2-46	2 Relays + 4-20 mA Output
PD756-47	PD756-2-47	4 Relays
PD756-48	PD756-2-48	4 Relays + 4-20 mA Output

OPTIONS & ACCESSORIES	
MODEL	DESCRIPTION
PD474	2 Relays
PD475	4-20 mA Output
PD476	2 Relays + 4-20 mA Output
PD477	4 Relays
PD478	4 Relays + 4-20 mA Output
PDA-MAG	Magnet Assembly
PDA6545	2" Pipe Mounting Kit

CONTROL STATIONS		
MODEL	SWITCHES	LABELS
PDA2451-E	1	See Below
PDA2451-A	1	
PDA2452-EA	2	

*Labels:
E = Enter, A = Ack*

GENERAL FEATURES

The PD755, PD756, and PD757 are Large Display Temperature Meters with linearized temperature transmitter capabilities. Each accepts the common temperature inputs including J, K, T, E, R, and S thermocouples and 100 Ω platinum RTDs and displays these signals on a large, 4½ digit red LED display. All AC-powered units also provide an isolated 24 V power supply to drive the output loop. Options include up to 4 relays, as well as an isolated 4-20 mA transmitter output.

Key Features

- Field selectable J, K, T, E, R, and S thermocouples and 100 Ω platinum RTD inputs
- Can act as linearized temperature transmitter
- Max/Min temperature capture in Fahrenheit or Celsius
- 2 or 4 relays + 4-20 mA output options
- Cold junction reference is automatic, fixed, with no user calibration

Versatile, Rugged Enclosures

PD757 NEMA 4X

The PD757 is housed in a heavy-duty die-cast aluminum NEMA 4X, IP66/IP67 enclosure. This enclosure can be easily wall-mounted or panel-mounted and features four ½" conduit holes for easy installation.

PD755 NEMA 4X

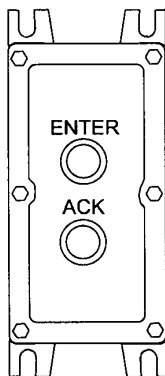
The PD755 is housed in a rugged, impact-resistant glass-filled polycarbonate, NEMA 4X, IP67 enclosure. This enclosure has four holes for wall-mounting and two ½" conduit holes are provided at the base. Panel mounting and 2" pipe mounting kits available.

PD756 Explosion-Proof

The PD756 is housed in a rugged, explosion-proof NEMA 4, IP66 sand-cast aluminum enclosure. Additionally, the PD756 has two reed switches located above the ENTER and ACK buttons. The reed switches allow the user to program and operate the meter without having to remove the enclosure cover. 2" Pipe Mounting Kit available.

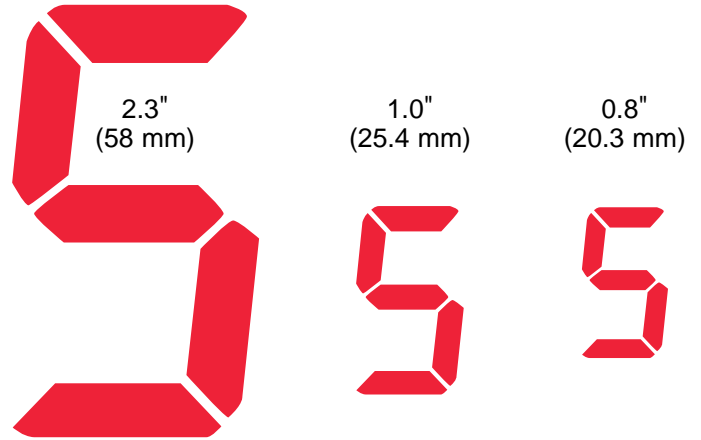
Explosion-Proof Control Station for the PD756

The explosion-proof control station can be used to control the PD756 while in operation in a hazardous area. Control stations may be ordered with one or two push buttons. The buttons can be labeled ENTER and ACK. External connections are available at J1 connector on the main PCB.



Large, Bright, High Efficiency Red LEDs

The large, bright, high efficiency red LED display of these Large Display Temperature Meters is designed to make it easy to read these displays from far away in a dimly lit process plant.

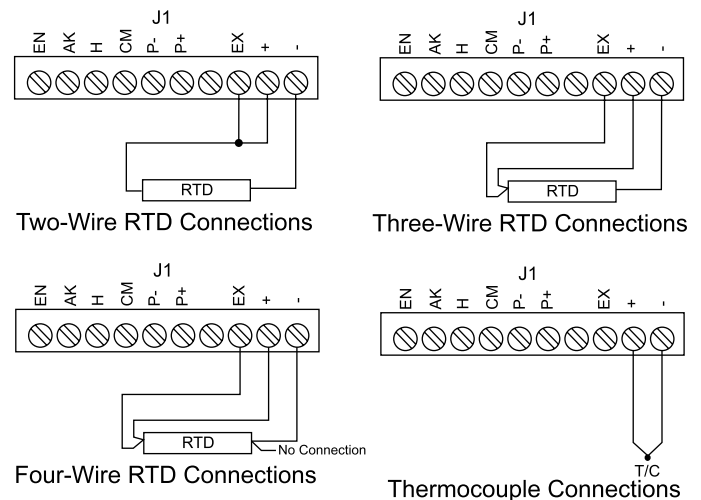


The PD757 2.3" high LEDs, PD755 1.0" high LEDs and PD756 0.8" high LEDs are 4½ digit displays with automatic lead zero blanking. All units can easily switch to display Fahrenheit or Celsius.

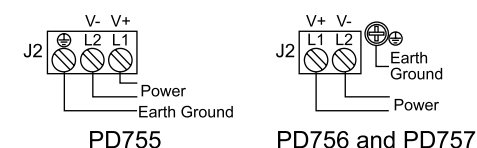
Max/Min Temperature Capture

The PD757, PD755, and PD756 each store maximum and minimum readings until they are reset or power is turned off.

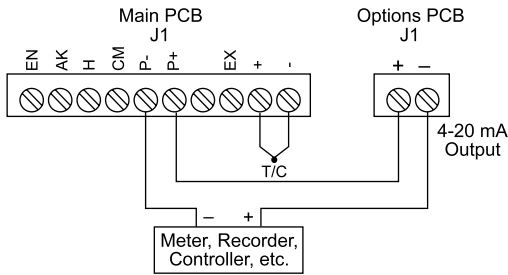
Signal Connections



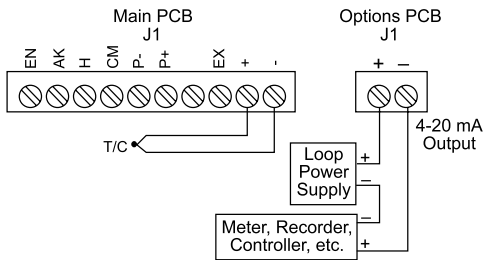
Input Power Connections



Output Loop Powered by Meter



Output Loop Powered from External Power Supply



Optional Relays & 4-20 mA Output Terminals

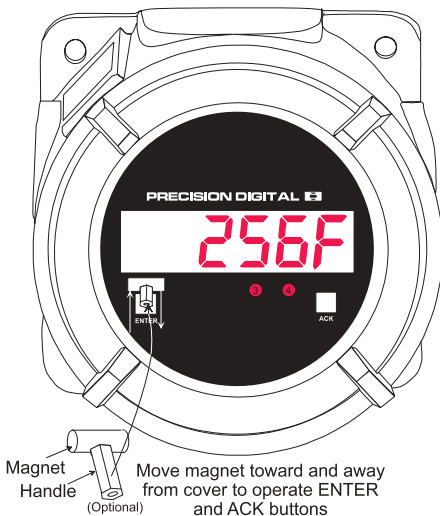
Pin: Function:

J1	1	Transmitter +	PD375 PD475	PD378 PD478
	2	Transmitter -		
J3	1	Relay #1 Common	PD376 PD476	
	2	Relay #1 NC		
	3	Relay #1 NO	PD374 PD474	
	4	Relay #2 Common		
	5	Relay #2 NC	PD377 PD477	
	6	Relay #2 NO		
J4	1	Relay #3 Common	PD376 PD476	
	2	Relay #3 NC		
	3	Relay #3 NO	PD374 PD474	
	4	Relay #4 Common		
	5	Relay #4 NC	PD377 PD477	
	6	Relay #4 NO		

Notes:

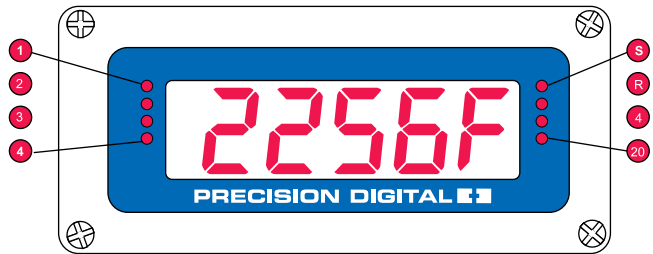
1. Alarm acknowledgement terminals (ACK and COM) are located on the meter Main PCB.
2. In the alarm condition, the NC contact is connected to common in the fail-safe mode.

Magnetic Reed Switch Operation



The PD756 has two magnetic reed switches located above the ENTER and ACK buttons. The reed switches allow the user to program and operate the meter without having to remove the enclosure cover.

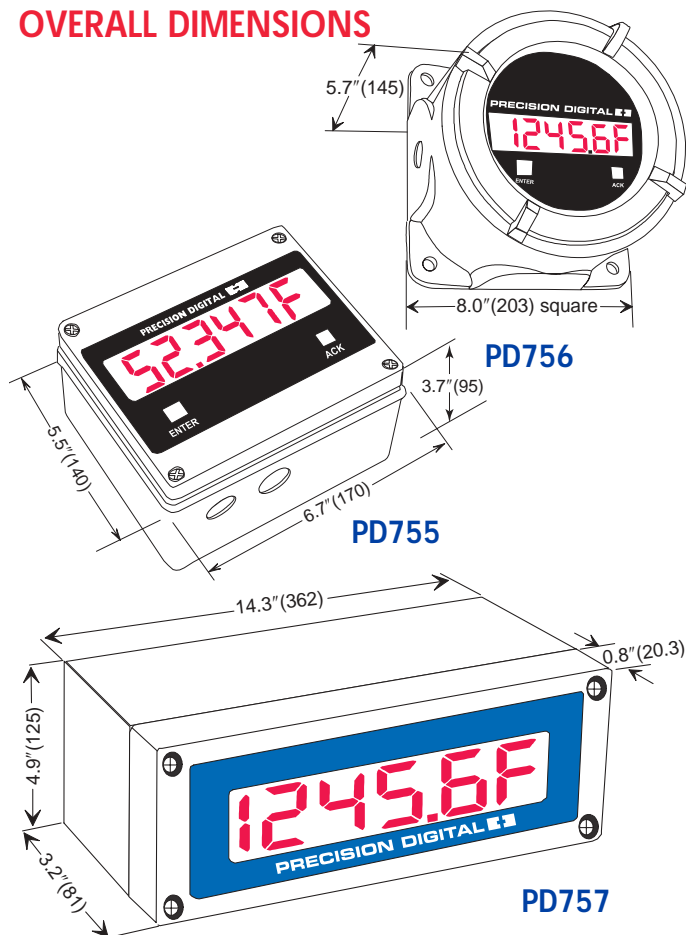
Front Panel LEDs for PD757



Front Panel LEDs Indicators

LED	During Programming	During Operation
1	Alarm 1	Alarm 1
2	Alarm 2	Alarm 2
3	Alarm 3	Alarm 3
4	Alarm 4	Alarm 4
S	Set Point Indicator	None
R	Reset Point Indicator	None
4	4 mA Output Indicator	None
20	20 mA Output Indicator	None

OVERALL DIMENSIONS



SPECIFICATIONS

Except where noted all specifications apply to operation at +25°C.

PD757 NEMA 4X 2.3" (58mm) High Red LED

DISPLAY: 2.3" (58mm) red LED, 4½ digit, automatic lead zero blanking, F or C can be selected to indicate Fahrenheit or Celsius.

ENCLOSURE: Die-cast aluminum, NEMA 4X, IP 66/IP 67. Corrosion resistant, copper content under 0.1%. color: gray (RAL 7001) polyester powder paint. Four holes for 1/2" conduit provided at base, 3 plugs provided.

MOUNTING: Enclosure contains four 1/4" (6.4 mm) holes for wall-mounting. Panel Mounting Kit available.

OVERALL DIMENSIONS: 4.9" x 14.3" x 3.2" (125 x 362 x 81 mm).

WEIGHT: 7.0 lbs (3.2 kg).

PD755 NEMA 4X 1.0" (25.4mm) High Red LED

DISPLAY: 1.0" (25.4mm) red LED, 4½ digit, automatic lead zero blanking, F or C can be selected to indicate Fahrenheit or Celsius.

ENCLOSURE: Impact-resistant glass-filled polycarbonate, NEMA 4X, IP 67 (IEC 529), color: gray (RAL 7035). Two holes for 1/2" conduit provided at base.

MOUNTING: Enclosure contains four holes for wall-mounting. Panel Mounting and 2" Pipe Mounting Kits available.

OVERALL DIMENSIONS: 6.7" x 5.5" x 3.7" (170 x 140 x 95 mm).

WEIGHT: 3.8 lbs (1.73 kg).

PD756 Explosion-Proof 0.8" (20.3mm) Red LED

DISPLAY: 0.8" (20.3mm) red LED, 4½ digit, automatic lead zero blanking, F or C can be selected to indicate Fahrenheit or Celsius.

ENCLOSURE: Explosion-proof sand-cast aluminum, 0.3% max. copper content, NEMA 3, 4, 7, 9, IP 66. For use in hazardous locations Class I Groups C & D, Class II Groups E, F & G; UL Classified, Class I, Zone 1. Two 3/4" NPT holes provided at opposite sides. Up to four holes can be provided for an additional charge.

MOUNTING: Enclosure contains four 7/16" (11.1 mm) holes for wall-mounting. 2" Pipe Mounting Kit available.

OVERALL DIMENSIONS: 8.0" x 8.0" x 5.7" (203 x 203 x 145 mm).

WEIGHT: 14.6 lbs (6.6 kg).

General

INPUTS: Field selectable: Type J,K,T,E,R, or S thermocouples with 1° resolution; type T to 0.1°; 100 Ω platinum RTD (0.00385 or 0.00392 curve) to 1° or 0.1° resolution.

COLD JUNCTION REFERENCE: Automatic, fixed, no user calibration needed.

INPUT OFFSET: Programmable to ±100% FS display. This parameter allows the user to apply an offset value to the input temperature being displayed.

SENSOR BREAK DETECTION: Open sensor circuit indicated by display flashing **BPEN**. All relays and alarm status LED go to alarm state.

MAX/MIN READINGS: Meter stores maximum and minimum readings until reset by user or power is turned off.

INPUT IMPEDANCE: Greater than 100 kΩ.

LOCKOUT: Jumper JP2, located on Main PCB, restricts modification of set values.

ACCURACY:

Input Type	Range	Accuracy
Type J T/C	-328° to 1382° F	±2°F
	-200° to 750°C	±1°C
Type K T/C	-328° to 2498°F	±2°F
	-200° to 1330°C	±1°C
Type T T/C	-330.0° to 760.0°F	±2°F
	-200.0° to 404.0°C	±1°C
Type E T/C	-328° to 1832°F	±2°F
	-200° to 1000°C	±1°C
Type R T/C	32° to 3214°F	±5°F
	0° to 1767°C	±3°C
Type S T/C	40° to 1768°F	±6°F
	4° to 1768°C	±3°C
100 Ω RTD	-328.0° to 1382.0°F	±0.7°F
	-200.0° to 750.0°C	±0.4°C

ALARM POINTS: Four, any combination of high or low alarms.

ALARM POINT DEADBAND: 0-100% of full scale, user selectable.

ALARM STATUS INDICATION: Front panel LED.

EXTERNAL PROGRAMMING: The Enter-button functions can be controlled externally by wiring a switch across terminals EN and CM.

NON-VOLATILE MEMORY: All programming values are stored in non-volatile memory for a minimum of ten years if power is lost.

NORMAL MODE REJECTION: 64 dB at 50/60 Hz.

POWER: AC Power: 115 or 230 VAC (field select) ±10%, 50/60 Hz, 12 VA. DC Power: 22-28 VDC; 12 watts maximum.

ENVIRONMENTAL: Operational ambient temperature range: 0 to 65°C.

Storage temperature range: -40 to +85°C.

Relative humidity: 0 to 90% non-condensing.

For operation down to -40°C, see temperature drift data at predig.com, PD755-7 Web page.

CONNECTIONS: Removable screw terminal blocks, accepts 22 to 12 AWG wire.

RELAYS

RATING: 2 or 4 SPDT (form C); rated 2 Amp @ 30 VDC or 2 Amp @ 250 VAC resistive load; 1/14 HP @ 125 / 250 VAC for inductive loads. Built-in suppression.

RELAYS RESET:

User select via JP5 jumper array and **SEtUP** menu.

1. Automatic reset only.
2. Manual reset only, at any time.
3. Automatic plus manual reset at any time.
4. Manual reset only after alarm condition has been corrected.

Automatic reset: Relays will automatically reset when the input passes the reset point.

Manual reset: Performed via user supplied external contact closure at terminals AK and CM or front panel ACK button. Manual reset resets all manually resettable relays.

BUILT-IN SUPPRESSION: A built-in suppressor (snubber) to prolong the life of the relays protects each relay contact. The suppressor provides a degree of protection against electrical noise caused by inductive loads. Suppressor value, .01 μF/470 Ω, 250 VAC.

DEADBAND: 0-100% of full scale, user selectable.

FAIL-SAFE OPERATION: Relay coils are energized in non-alarm condition. In case of power failure, relays will go to alarm state. Fail-safe operation may be disabled by removing jumper J5 located on the Options PCB.

AUTO INITIALIZATION: When power is applied to the meter, the relays will always reflect the state of the input to the meter.

Isolated 4-20 mA Transmitter Output

CALIBRATION RANGE: The transmitter output can be calibrated so that a 4 mA output is produced for any number displayed on the meter. The 20 mA output may correspond to any other (larger or smaller) number displayed on the meter. However, best results are obtained with a 500 count difference between the 4 & 20 mA output displays. The output is linear.

(Ex. 4 mA = 0°, 20 mA = 1000°, output is 6 mA at 125°.)

ACCURACY: ± 0.1% F.S., ±.004 mA

NO EQUIPMENT NEEDED: The 4-20 mA output from the Temperature Meter is calibrated without the use of a calibrator.

OUTPUT LOOP POWER: 24 VDC ± 5% @ 20 mA, regulated. Maximum loop resistance is 1200 Ω. Isolated from input signal.

ISOLATION: 500 VDC or peak AC, input-to-output or input/output-to-power line.

EXTERNAL LOOP POWER SUPPLY: 35 VDC max.

OUTPUT LOOP RESISTANCE:

Power supply	Loop Resistance	
	minimum	maximum
24 VDC	10 Ω	600 Ω
35 VDC (external)	600 Ω	1000 Ω

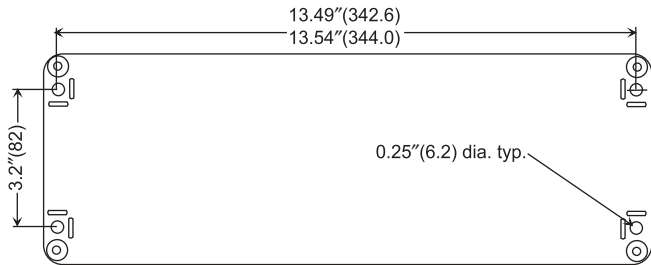
WARRANTY: One year parts and labor.

EXTENDED WARRANTY: Warranty may be extended for an additional 12 months by returning the Product Registration Form within 2 months from date of purchase. For online registration please go to www.predig.com.

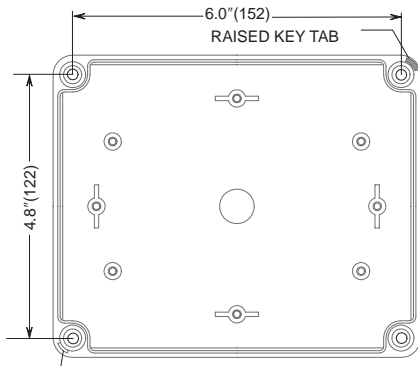
DISCLAIMER: The information contained in this document is subject to change without notice. Precision Digital makes no representations or warranties with respect to the contents hereof, and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose.

WALL MOUNTING

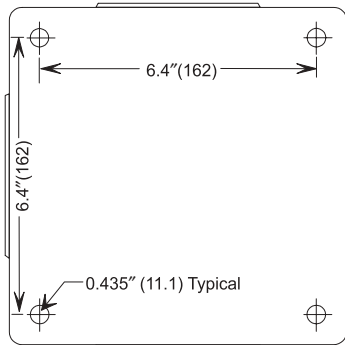
There are four mounting holes on the rear of the enclosure that are used to mount the instrument to a wall.



PD757 Wall Mounting



PD755 Wall Mounting



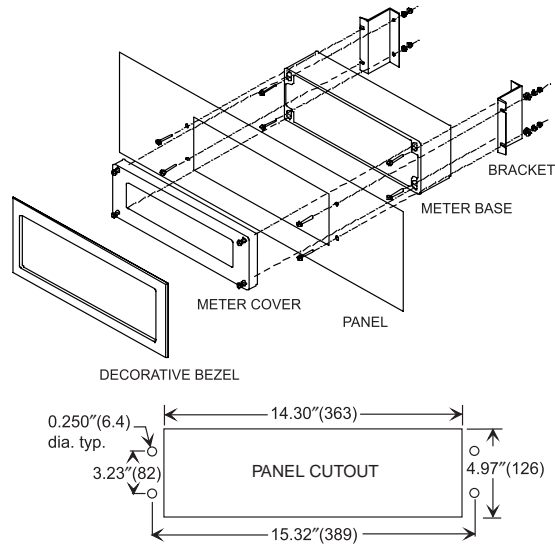
PD756 Wall Mounting

Designed for vertical or horizontal conduit entry.

YOUR LOCAL DISTRIBUTOR IS:

PANEL MOUNTING

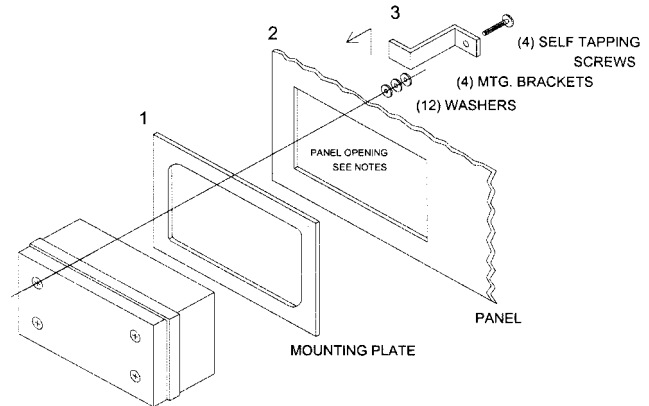
PD757 Panel Mounting Kit - PDA6504



NOTES:

- a. Allowable panel thickness: 0.06"–0.25" (1.5 mm – 6.4mm)
- b. Mounting space required: 7" x 17.5" x 4" (178 mm x 44 mm x 102 mm) (HxWxD)
- c. Panel Mounting Kit does not provide NEMA 4X seal to panel

PD755 Panel Mounting Kit - PDA6554



NOTES:

- a. Allowable panel thickness: 0.06"–0.125" (1.5 mm – 3.2 mm)
- b. Panel Cutout required: 6.57" x 5.40" (167 mm x 137 mm)
- c. Mounting space required: 7.6" x 6.4 x 2.8" (193 mm x 163 mm x 71 mm) (HxWxD) plus mounting brackets require 0.8" (20 mm) on either top or side of meter for installation
- d. Panel Mounting Kit does not provide NEMA 4X seal to panel

Please visit the Precision Digital website at
www.predig.com
 for complete information on the entire line of Precision Digital products, technical information and much more.

LDS755-7 Rev B 02/02