INTERNATIONAL METAL ENGINEERING

INDICATING PID TEMPERATURE CONTROLLER WITH DUAL RELAYS   8080PR2

- INPUT PT100 RTD

- 4 - 20 MA DC PID CONTROL OUTPUT

- 4 DIGIT LED DISPLAY IN DEGREE C OR F

- RUGGED NEMA 4X ENCLOSURE

- CHOICE OF COPPER-FREE ALUMINUM OR SS316 DUAL COMPARTMENT ENCLOSURE

- EXPLOSION PROOF CERTIFIED

- INDEPENDENT SET-POINTS, TEMPERATURE HYSTERESIS & DEADBAND ADJUSTMENTS

- 12-28 VDC SUPPLY VOLTAGE IDEAL FOR UPS & REMOTE APPLICATIONS

Introduction

IME Model 8080PR2 allows 2 independent alarms to be assigned over the temperature range of the sensor. The unit will accept an input from a Pt100 RTD Sensor and provide an indication on a bright 4 digit LED. The unit serves a dual purpose since in addition to local indication of temperature, which is switch selectable to read Deg F or Deg C, it also serves as an accurate and repeatable temperature switch and a PID controller.

Description

IME Model 8080PR2 Temperature Indicator are designed for use in process industries where vibration, inclement weather and corrosive atmospheres prevail. The electronics are enclosed in a copper-free epoxy coated Aluminum housing. For more aggressive environments, a SS316 housing is also available. The housings meet the requirements of NEMA 4X, and are also certified Explosion Proof by CSA and ATEX/IECEx.

LED Meter

Model 8080PR2 has a 4 digit LED display. Choice of °C or °F, alarm settings etc can be adjusted via the membrane switches located in the front panel.

Mounting

A wide choice of stainless steel mounting brackets are available for mounting the Model 8080PR2 on either a 2" pipe or wall. (See detailed information of mounting bracket on pages 18,19 and 20)

Certification System

CSA®	CLASS I, DIV I GROUPS B, C AND D CLASS II/III, DIV I GROUPS E, F AND G NEMA 4X, T6
Ex (ATEX)	II 2G D Ex d IIC T6 Gb Ex tb IIIC T85°C Db IP68 Ta = -40°C to +60°C CE
IECEx	Ex d IIC T6 Gb Ex tb IIIC T85°C Db IP68 Ta = -40°C to +60°C

Functional Specifications

Indication Accuracy
0.1% of Calibrated range +/- 1 digit

Alarm Status Indication
LED on front panel

Alarm Set Point Accuracy
±0.5% of full scale.

Alarm Output
2 sets SPDT, 1 from C, rated 5A @ 230V AC, 50/60Hz
PID Control - Relay 1 on/off only
Heating/ Cooling Control - Relay 1/2 – On/Off only via Deadband

Display Height
10.0 mm (0.4") high

Input
RTD Pt100

Output Signal
4 to 20 mA DC PID Control

Supply Voltage
12 ~ 28 VDC

Operating Temperature
-40 - 60 °C

Weight
1.6Kg (3.5LBS) for Aluminum unit and 3.0Kg(6.4LBS) for SS316 Unit

Material of Construction
Enclosure epoxy coated Copper-Free Aluminum or SS316 as specified

O Rings
Nitrile

Optional Accessories
Mounting Brackets (Model 175PM, 175RC, 175NR & 175MM)
See pages 18,19 and 20

Warranty
3 Years Warranty

Ordering Information

See page 17 for complete ordering information.

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ORDERING INFORMATION FOR INDICATORS AND TRANSMITTERS

Model	Description					
8080PP	Field Mounted LCD Loop Powered Indicator					
8080MK	Field Mounted LED Loop Powered Indicator					
8080EL	Field Mounted LCD Loop Powered Indicator With Engineering Units					
8080MN	Field Mounted Process Indicator with Transducer Power Supply					
8080KN	Battery Powered Digital Temperature Indicator					
8080HT	Indicating Temperature Transmitter with HART®					
8080RR	Field Mounted Process Indicator With Dual Relays					
8080PR	Temperature Indicating Switch With Dual Relays					
8080PR1	Field Mounted Temperature Indicator with Dual Relays and 4- 20 mA Output					
8080PR2	Field Mounted Temperature Indicator with Dual Relays and 4 to 20 mA PID Control Output					
8080PR3	Field Mounted Dual Channel Indicating Temperature Switch					
8080FR	Field Mounted Flow Indicator With Dual Relays					
	Code	**Options, Housing**				
	A	Die cast Aluminum, Epoxy Coated				
	T	SS316, Electro Polished				
		Code	**Instrument Connection (T1)**	**Conduit Size (T2)**		
		01	M16 x 2P (See note 1)	¾" NPT		
		02	M16 x 2P (See note 1)	½" NPT		
		03	M16 x 2P (See note 1)	M20 x 1.5P (See note 2)		
		04	½" NPT	¾" NPT		
		05	½" NPT	½" NPT		
		06	½" NPT	M20 x 1.5P		
		07	¾" NPT	¾" NPT		
		08	¾" NPT	½" NPT		
		09	¾" NPT	M20 x 1.5P		
		10	½" BSP (See note 3)	¾" NPT		
		11	½" BSP (See note 3)	½" NPT		
		12	½" BSP (See note 3)	M20 x 1.5P (See note 2)		
		13	¾" NPT	None		
		14	M20 x 1.5P (See note 2)	None		
		16	½" BSP (See note 3)	None		
		17	½" NPT	None		
			Code	**Certification**		
			NN	None		
			E1	FM / CSA / ATEX / IECEx Explosion Proof Certified, NEMA 4X, IP68, T6		
				Code	**Accessories (See Pages 18, 19 and 20)**	
				RC	Model 175RC Mounting Bracket	
				PM	Model 175PM Mounting Bracket	
				NR	Model 175NR Mounting Bracket	
				MM	Model 175MM Mounting Bracket	
					Code	**2 Inch "U" Bolt with Nuts and Washers**
					00	None
					01	Model 17508, 1 Set (For Model 175RC)
					02	Model 17508, 2 Sets (For Model 175PM & 175NR)
8080PR	**A**	**02**	**E1**	**PM**	**02**	**Typical Model Number**

Note:
1   Ports with M16 x 2P thread are not through holes, they are for Mounting only.
2   A temporary metric label is required when an M20 x 1.5P thread is selected. However this thread option is not allowed in Canada.
3   1/2"BSP thread is not FM Approved.

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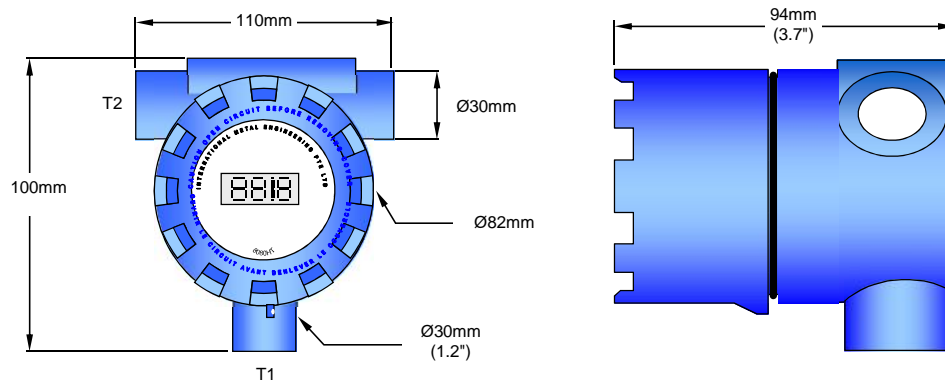
STAINLESS STEEL MOUNTING BRACKET FOR FIELD DEVICES

Mounting Bracket   175RC

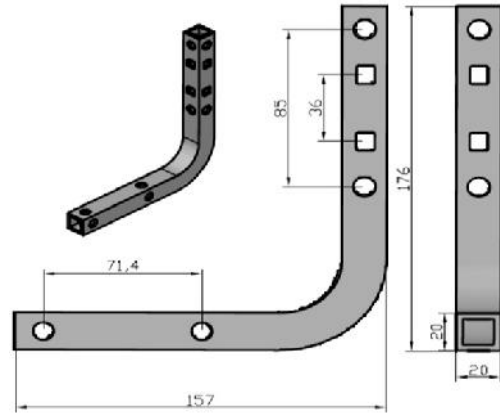#### Introduction

This simple hollow square mounting bracket constructed out of SS316 Stainless Steel, can be used to mount a variety of field devices, either on a wall or panel or a 2" Pipe.

When mounting on a 2" pipe, a "U" Bolt is required, which can be supplied optionally.

IME Model 17508 consists of a complete assembly of a 2" U bolt along with the nuts and washers required.
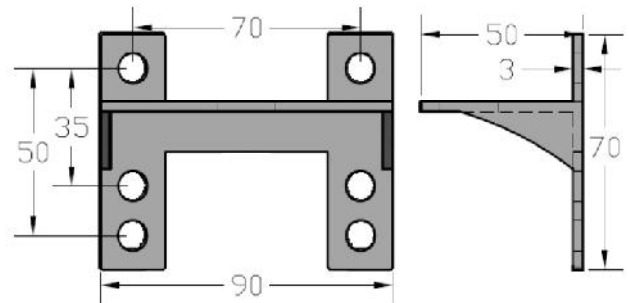
Mounting Bracket   175PM

Introduction

This simple "L" Shape mounting bracket constructed out of SS316 Stainless Steel, can be used to mount a variety of field devices, either on a wall or panel or on a 2" pipe.

When mounting on a 2" pipe, a "U" Bolt is required, which can be supplied optionally.

IME Model 17508 consists of a complete assembly of a 2" U bolt along with the nuts and washers required.

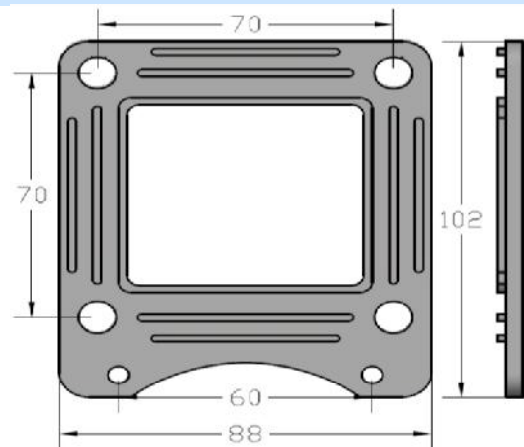### Mounting Bracket   175NR

Introduction

IME MODEL 175NR is Stainless Steel Mounting Brackets made exclusively for IME MODEL 8080 Instrument Enclosure to mount on a 2 " Pipe.

This Bracket is available for customers who require all 3 ports on the enclosure for other purposes.

The 175NR is symetrical, so it can be rotated 90° to suit the viewing position of the Indicator/Transmitter.

Mounting Bracket   175MM

Introduction

IME MODEL 175MM is Stainless Steel Mounting Brackets made exclusively for IME MODEL 8080 Instrument Enclosure to mount on wall.
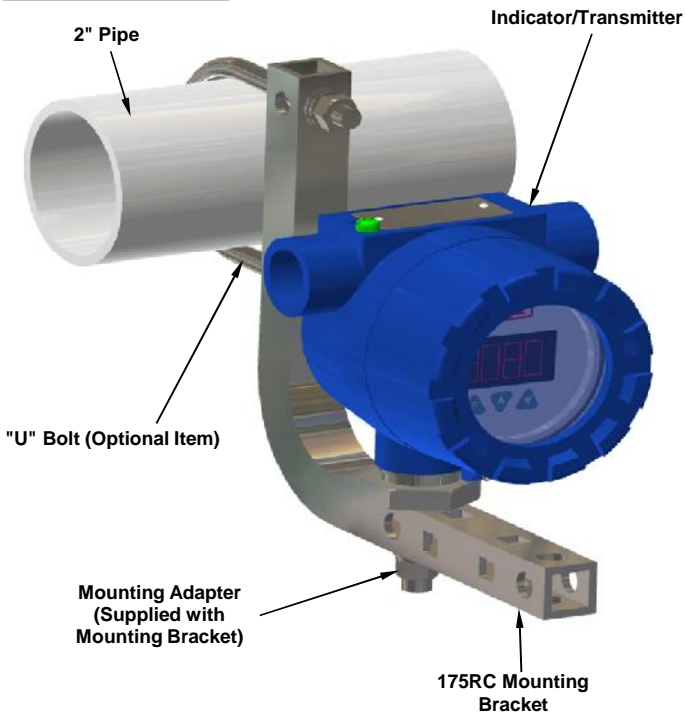
This low cost Bracket is available for customers who require all 3 ports on the enclosure for other purposes.
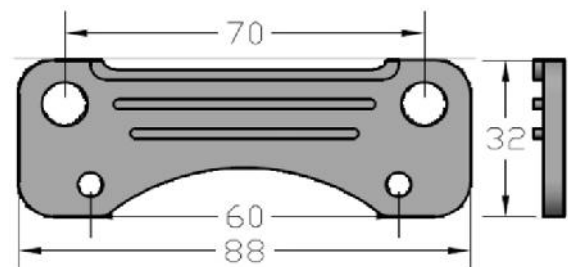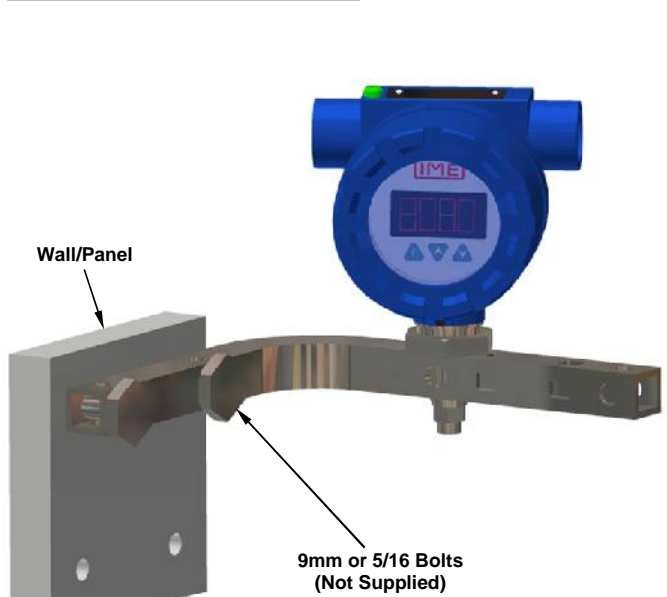
MOUNTING BRACKETS FOR INDICATORS AND TRANSMITTERS
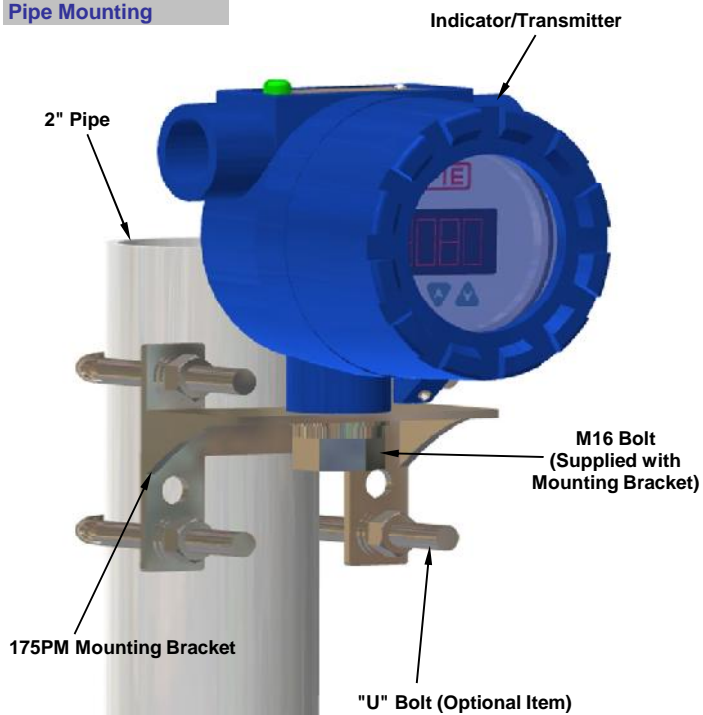
Mounting Methods For Model 175RC
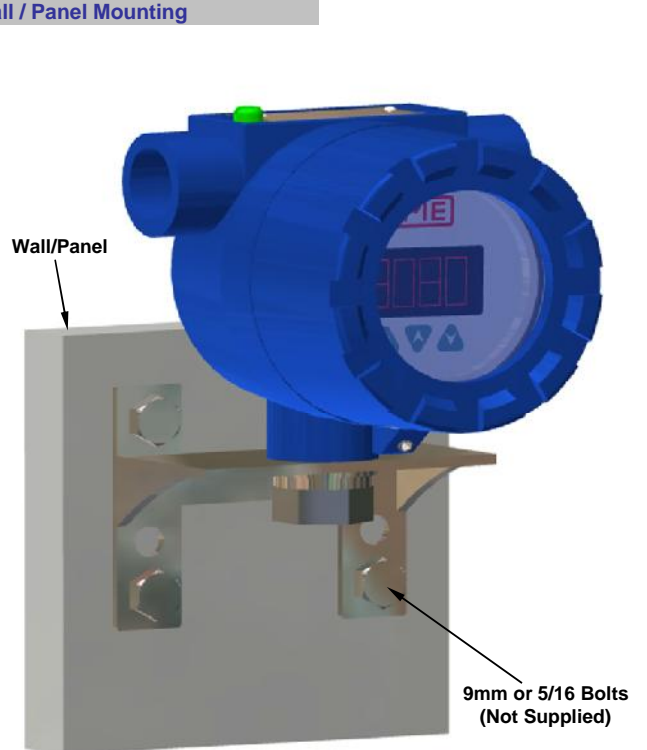
Pipe Mounting

Wall / Panel Mounting

- 2" Pipe
- Indicator/Transmitter
- "U" Bolt (Optional Item)
- Mounting Adapter (Supplied with Mounting Bracket)
- 175RC Mounting Bracket

- Wall/Panel
- 9mm or 5/16 Bolts (Not Supplied)

Mounting Methods For Model 175PM

Pipe Mounting

Wall / Panel Mounting

- Indicator/Transmitter
- 2" Pipe
- M16 Bolt (Supplied with Mounting Bracket)
- 175PM Mounting Bracket
- "U" Bolt (Optional Item)

- Wall/Panel
- 9mm or 5/16 Bolts (Not Supplied)

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MOUNTING BRACKETS FOR INDICATORS AND TRANSMITTERS

Mounting Methods For Model 175NR

Pipe Mounting

2" Pipe

"U" Bolts
(Optional)

175NR Mounting
Bracket

Indicator/Transmitter

Vertical Pipe

Horizontal Pipe
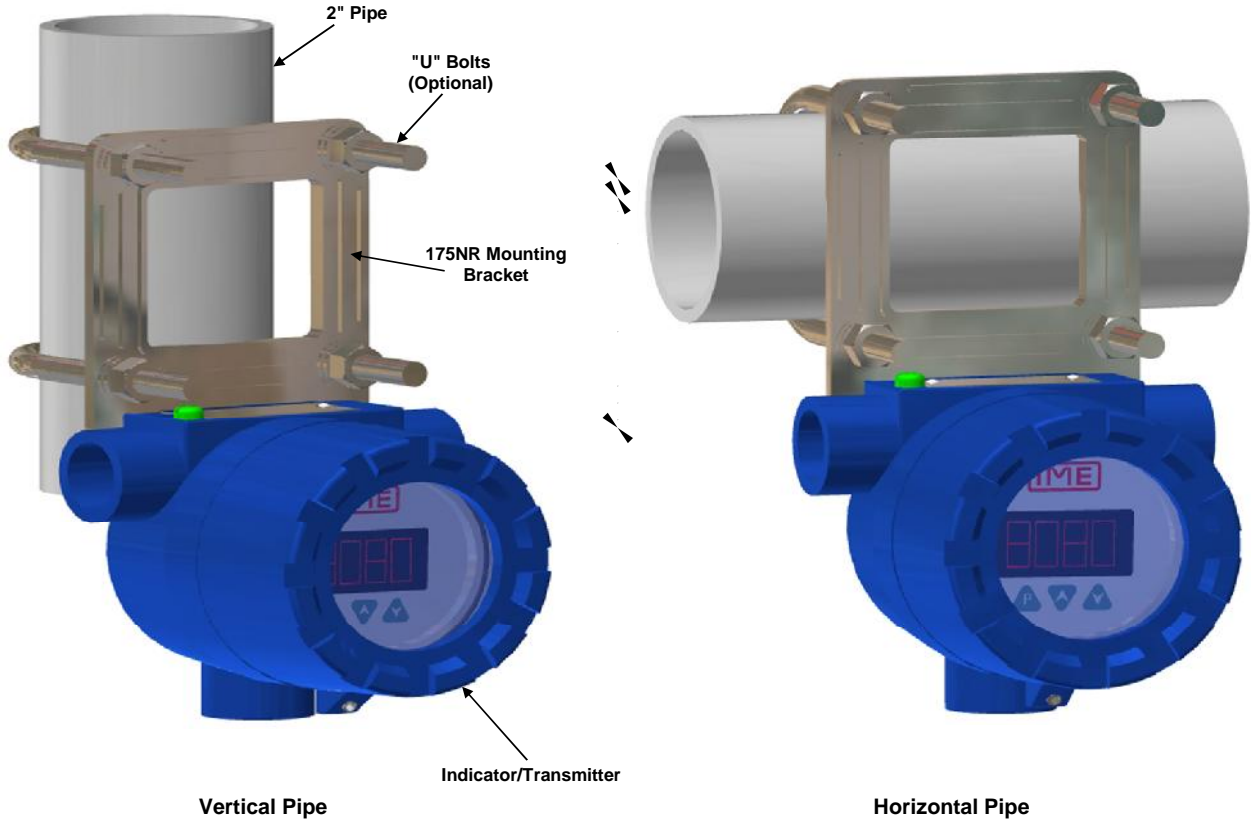
Mounting Methods For Model 175MM

Wall/Panel Mounting

9mm or 5/16 Bolts

175MM Mounting
Bracket

Wall

Indicator/Transmitter