

INSTRUMENT ENCLOSURES, JUNCTION BOXES, STOPPING PLUGS, TEMPERATURE ASSEMBLIES AND A WIDE RANGE OF INDICATORS, TRANSMITTERS AND BATCH CONTROLLERS



FM, CSA, ATEX, IECEx CERTIFIED

Jan 2021



INTERNATIONAL METAL ENGINEERING

COMPANY PROFILE

Established in 1991 by a group of engineers with a wealth of experience in instrument and process control, IME has developed a complete line of supportive products for a wide range of industry needs, ranging from highly demanding off shore exploration to the basic needs of the food and beverage industries. Our products range from valves and manifolds available for OEM and private labeling agreements to junction boxes, custom designed enclosures as well as a full range of temperature measuring instruments and accessories. Our products are economically priced and designed to meet the needs of our OEM's worldwide as well as end users with no compromise in quality.

In addition to an ISO 9001:2008 Quality award, IME has both a QAN (Quality Assurance Notification) and QAR (Quality Assurance Report) which allows us to design and manufacture products that meet the stringent requirements of the ATEX and IECEx directives. Fully equipped with state of the art manufacturing facilities and backed by a team of qualified and dedicated design and production engineers, IME is positioned to meet the ever changing demands of process industries worldwide.



INTERNATIONAL METAL ENGINEERING

JUNCTION BOX

Specifications

Explosion Proof Certified
Choice of Tempered Glass Cover or Blind Cover

Material of Construction

Copper free Aluminum or Stainless Steel (SS316)

Conduit Entries

1/2" NPT, 3/4" NPT, 1/2" BSP and M20X1.5P

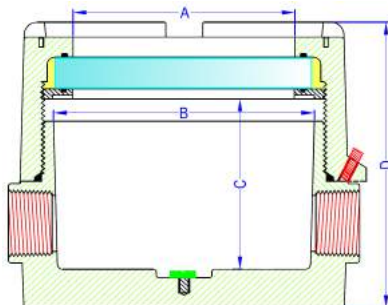
Surface Finish

Epoxy Painted for Aluminum and Electro Polished for SS316

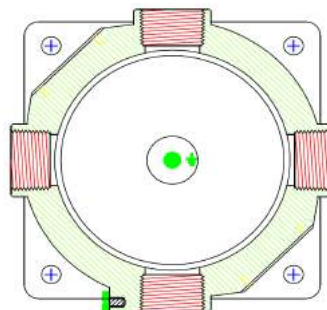


Dimensions (Based on Aluminum Version)

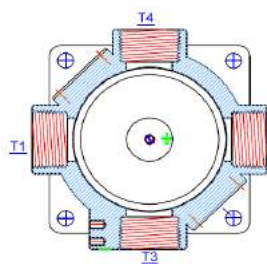
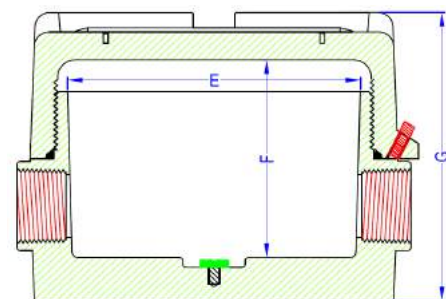
Cross Section View with Glass Cover



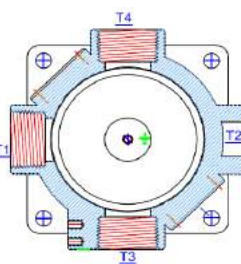
Top View of 4 Entries



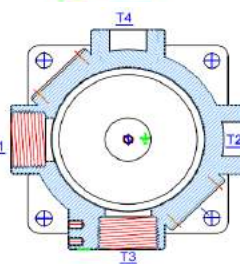
Cross Section View with Blind Cover



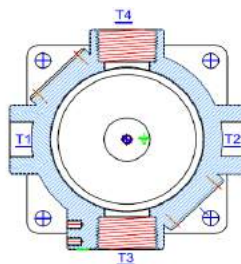
4 Entries



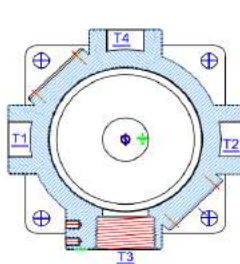
3 Entries



2 Entries at 90°



2 Entries at 180°



1 Entry

Dimensional Detail

MODEL	A	B	C	D	E	F	G
7080	55mm (2.2")	69mm (2.7")	41mm (1.6")	80mm (3.2")	69mm (2.7")	46mm (1.8")	73mm (2.9")
7092	84mm (3.3")	99mm (3.9")	69mm (2.7")	116mm(1.5")	99mm (3.9")	71mm (2.8")	103mm (4.1")
7100	85mm (3.3")	105mm (4.1")	70mm (2.7")	120mm(4.7")	105mm (4.1")	68mm (2.7")	104mm (4.1")
7117	106mm (4.2")	123mm (4.8")	69mm (2.7")	133mm (5.25")	123mm (4.8")	92mm (3.6")	133mm (5.25")

INTERNATIONAL METAL ENGINEERING





Ordering Information for Junction Box

Model	Description			
7080	7080 Junction Box (68mm)			
7092	7092 Junction Box (92mm) (SEE NOTE 1)			
7100	7100 Junction Box (100mm)			
7117	7117 Junction Box (117mm)			
	Code	Certification Details		
	SN	Stainless Steel Junction Box With Tempered Glass Cover, General Purpose		
	SE	Stainless Steel Junction Box With Tempered Glass Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66		
	ST	Stainless Steel Junction Box With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP68		
	SM	Stainless Steel Junction Box With Tempered Glass Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68		
	TN	Stainless Steel Junction Box With Blind Cover, General Purpose		
	TE	Stainless Steel Junction Box With Blind Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66		
	TT	Stainless Steel Junction Box With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP68		
	TM	Stainless Steel Junction Box With Blind Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/IP68		
	WN	Copper-Free Aluminum Junction Box With Tempered Glass Cover, General Purpose		
	WE	Copper-Free Aluminum Junction Box With Tempered Glass Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66		
	WT	Copper-Free Aluminum Junction Box With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP68		
	WM	Copper-Free Aluminum Junction Box With Tempered Glass Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68		
	AN	Copper-Free Aluminum Junction Box With Blind Cover, General Purpose		
	AE	Copper-Free Aluminum Junction Box With Blind Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66		
	AT	Copper-Free Aluminum Junction Box With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP68		
	AM	Copper-Free Aluminum Junction Box With Blind Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68		
		Code	Entries Description	
		00	1 Entry only	
		01	2 Entries at 180 Degree	
		02	2 Entries at 90 Degree	
		03	3 Entries	
		04	4 Entries	
			Code	Conduit Entry
			05	1/2" NPT
			07	3/4" NPT
			22	M20 x 1.5P (SEE NOTE 2)
			23	1/2" BSP (SEE NOTE 3)
7117	SM	04	07	
Typical Model Number				

Note:

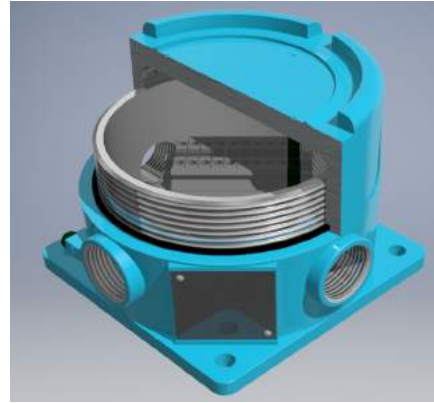
- 7092 Junction Boxes are not approved by FM and CSA, also it is certified for IP66 by ATEX & IECEx only.
- A temporary metric label is required when an M20 x 1.5P thread is selected. However this thread option is not allowed in Canada.
- 1/2" BSP thread is not approved by FM, CSA, ATEX & IECEx.

Certification System

	CLASS I, DIV I GROUPS B, C & D CLASS II/III, DIV I GROUPS E, F & G NEMA 4X, IP66
	CLASS I, DIV I GROUPS B, C & D CLASS II/III, DIV I GROUPS E, F & G NEMA 4X
	II 2 G D Ex db IIC Gb Ex tb IIIC Db IP68 Ta = -40°C to +85°C
	Ex db IIC Gb Ex tb IIIC Db IP68 Ta = -40°C to +85°C

MODEL 5092 TERMINAL ENCLOSURE

- EXPLOSION PROOF CERTIFIED
- EQUIPMENT CERTIFIED
- CHOICE OF SS316 AND COPPER-FREE ALUMINUM
- CHOICE OF TEMPERED GLASS COVER OR BLIND COVER
- WIDE SELECTION OF CONDUIT SIZES
- OPTION FOR A CUSTOMIZED SS NAMEPLATE



Introduction

Material of Construction:

SS316 and Copper-Free Aluminum

Certification:

ATEX & IECEx

Connections

1/2" NPT, 3/4" NPT, M20x1.5, 1/2" BSP, M25x1.5

Mounting Holes

As per requirement

Surface Finishing

Electro Polish For Stainless Steel

Epoxy Painted For Aluminum

"O" Ring

Nitrile

Weight

2.2 Kg (4.9 lbs) for Aluminum;

2.75Kg (6 lbs) for SS316

Accessories

Customized SS Nameplate

Certification System

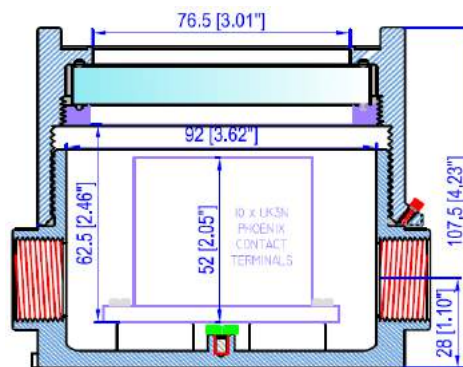


II 2 G D
Ex db IIC T6 Gb
Ex tb IIIC T85°C Gb IP66
Ta = -40°C to +70°C

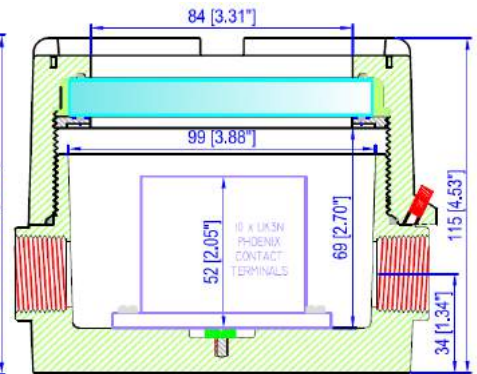


Ex db IIC T6 Gb
Ex tb IIIC T85°C Gb IP66
Ta = -40°C to +70°C

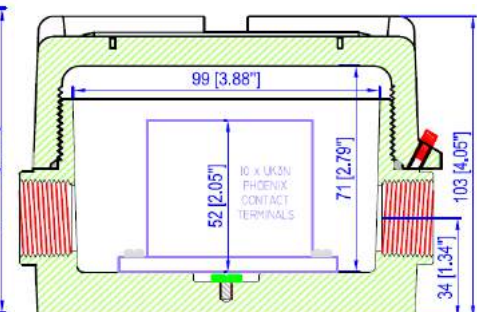
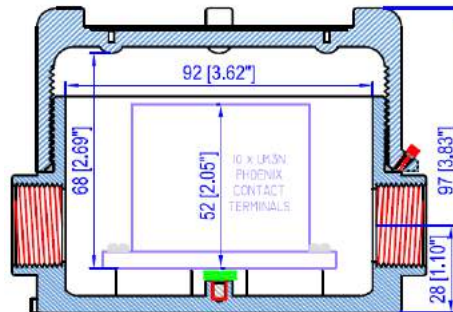
Dimensions For Stainless Steel



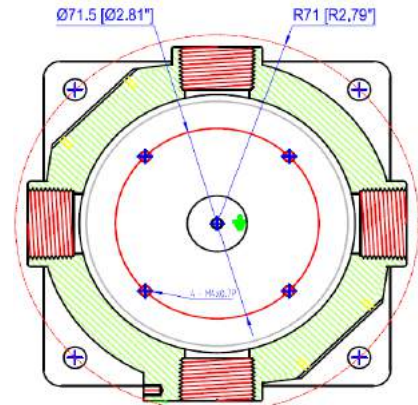
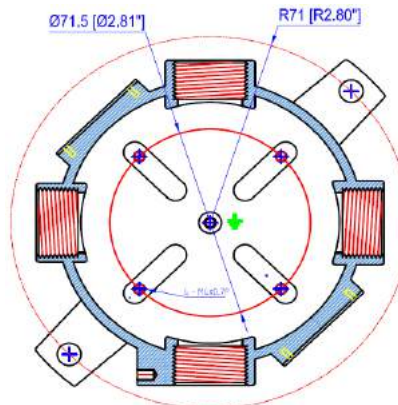
Dimensions For Aluminum



CROSS SECTION WITH GLASS COVER



CROSS SECTION WITH BLIND COVER



MOUNTING HOLES VIEW

INTERNATIONAL METAL ENGINEERING

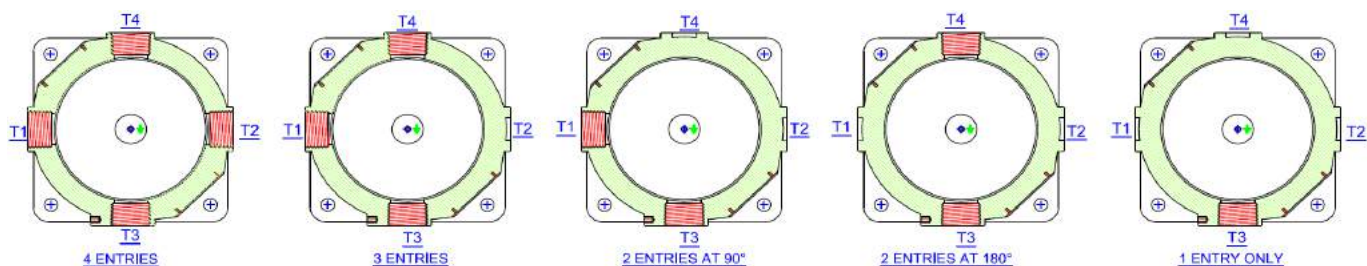
Ordering Information for 5092 Terminal Enclosure

Model		Description			
5092		5092 Junction Box with Terminal block installed			
		Code	Certification Details		
		SN	Stainless Steel Junction Box With Tempered Glass Cover, General Purpose		
		ST	Stainless Steel Junction Box With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP66		
		TN	Stainless Steel Junction Box With Blind Cover, General Purpose		
		TT	Stainless Steel Junction Box With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP66		
		WN	Copper-Free Aluminum Junction Box With Tempered Glass Cover, General Purpose		
		WT	Copper-Free Aluminum Junction Box With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP66		
		AN	Copper-Free Aluminum Junction Box With Blind Cover, General Purpose		
		AT	Copper-Free Aluminum Junction Box With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP66		
			Code	Entries Description	
	00		1 Entry only		
	01		2 Entries at 180 Degree		
	02		2 Entries at 90 Degree		
	03		3 Entries		
	04		4 Entries		
	Code		Conduit Entry		
	05		1/2" NPT		
	07		3/4" NPT		
	18		None		
	22		M20 x 1.5P (SEE NOTE 1)		
	23		1/2" BSP (SEE NOTE 2)		
	24		T1 & T3: 3/4" NPT; T2 & T4: M20 x 1.5 (SEE NOTE 1)		
	25		M25 x 1.5P (SEE NOTE 1)		
	5092		ST	04	07

Note:

1. A temporary metric label is required when an M20 x 1.5P and M25x1.5P threads are selected.
2. 1/2"BSP thread is not approved by FM, CSA, ATEX & IECEx.

Details of Entries Configuration



INSTRUMENT ENCLOSURE

IME Model : 8080



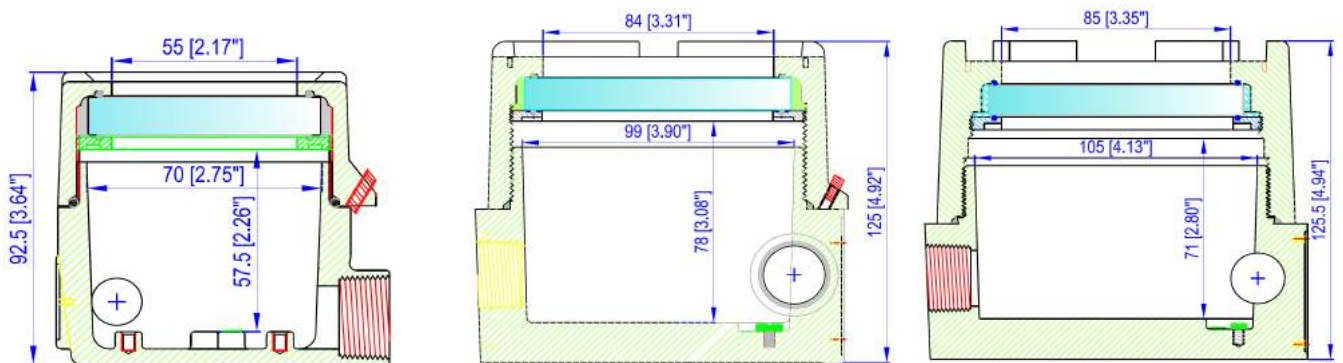
IME Model : 8092



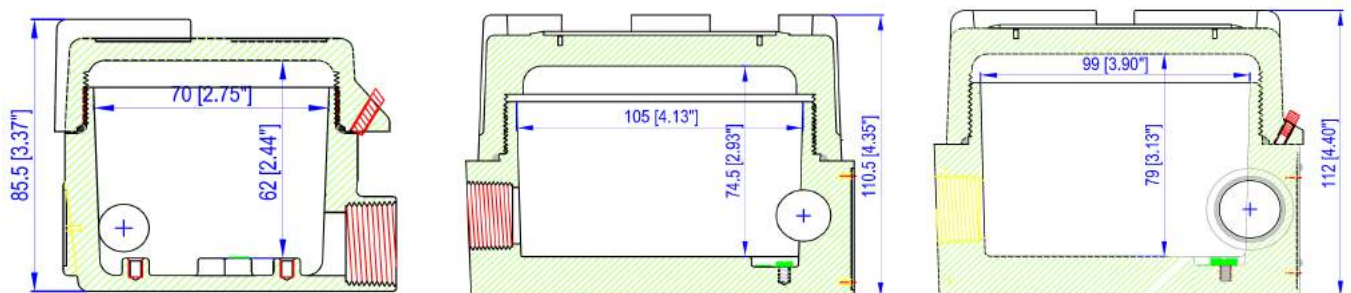
IME Model : 8100



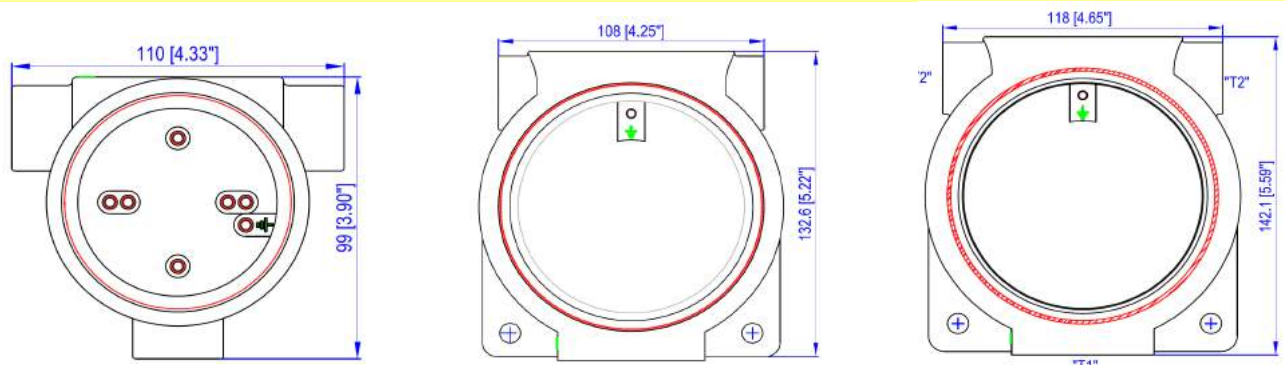
Cross Section with Tempered Glass Cover (Based on Aluminum)



Cross Section with Blind Cover (Based on Aluminum)



Top View of Housing (Based on Aluminum)



MODEL 8117 INSTRUMENT ENCLOSURE

- EXPLOSION PROOF CERTIFIED
- NEMA 4X OR IP66/68 CONSTRUCTION
- CHOICE OF SS316 AND COPPER-FREE ALUMINUM
- CHOICE OF TEMPERED GLASS COVER OR BLIND COVER
- WIDE SELECTION OF CONDUIT SIZES
- OPTION FOR A CUSTOMIZED SS NAMEPLATE



Introduction

Material of Construction:

SS316 and Copper-Free Aluminum

Certification:

FM, CSA, ATEX & IECEx

Connections

1/2" NPT, 3/4" NPT, 1/2" BSP, M20x1.5, M25x1.5, 1" NPT

Mounting Holes

As per requirement

Surface Finishing

Electro Polish For Stainless Steel

Epoxy Painted For Aluminum

"O" Ring

Nitrile

Weight

5.70Kg (12.5lbs) for SS316

4.1Kg (8.9lbs) for Aluminum

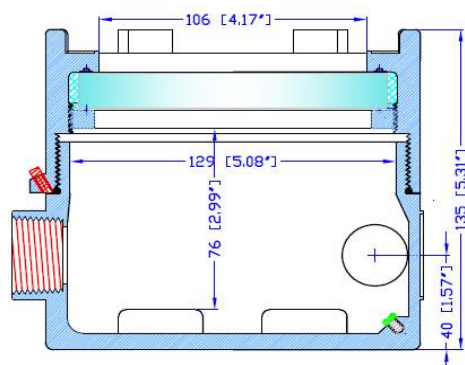
Accessories

Customized SS Nameplate

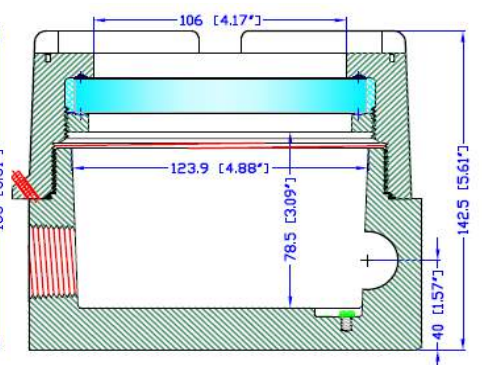
Certification System

	<p>Class I, Div 1, Groups B, C and D; Class II, Div 1, Groups E, F and G; Class III, NEMA 4X, IP66;</p>
	<p>Class I, Div 1, Groups B, C and D; Class II, Div 1, Groups E, F and G; Class III, Div 1; Type 4X;</p>
	<p>II 2 G D Ex db IIC Gb Ex tb Db IIIC IP68 Ta = -40°C to +85°C</p>
	<p>Ex db II C Gb Ex tb Db IIIC IP68 Ta = -40°C to +85°C</p>

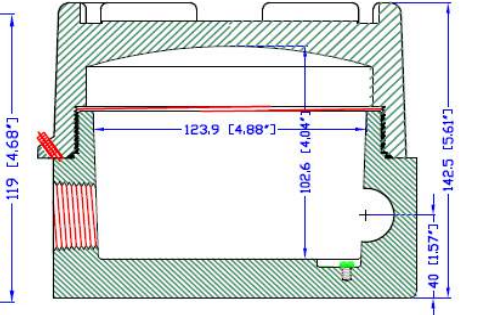
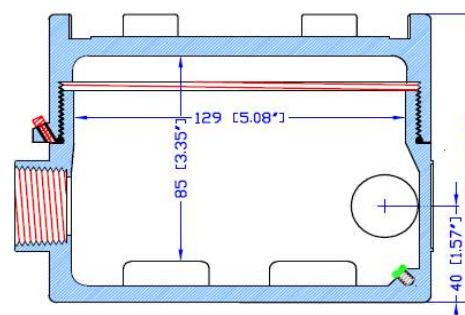
Dimensions For Stainless Steel



Dimensions For Aluminum

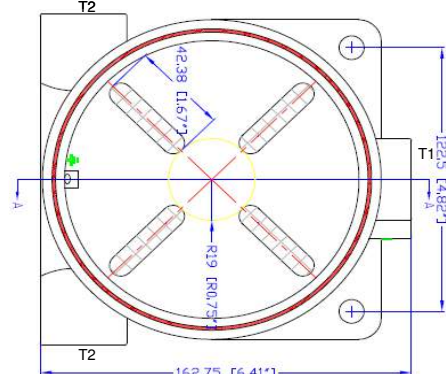


CROSS SECTION WITH GLASS COVER

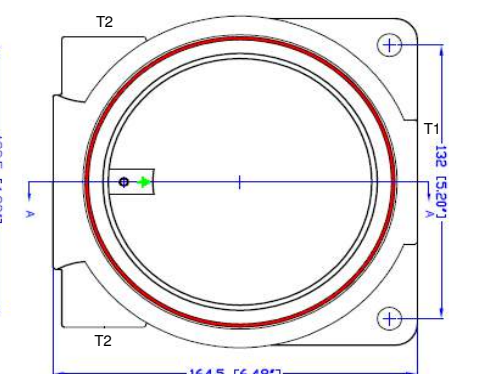


CROSS SECTION WITH BLIND COVER

M4 OR 6/32 MOUNTING HOLES TO BE DRILLED ANYWHERE ON FOUR RAISED MOUNTING LUGS



M4 OR 6/32 MOUNTING HOLES TO BE DRILLED ANYWHERE ON BASE



MOUNTING HOLES VIEW

INTERNATIONAL METAL ENGINEERING

Ordering Information for Instrument Enclosure

Model			Description					
8080	8080 3 Port Instrument Enclosure (68mm)							
8092	8092 3 Port Instrument Enclosure (92mm)							
8100	8100 3 Port Instrument Enclosure (100mm)							
8117	8117 3 Port Instrument Enclosure (117mm)							
			Certification Details					
			Code					
			SN	Stainless Steel Instrument Enclosure With Tempered Glass Cover, General Purpose				
			SE	Stainless Steel Instrument Enclosure With Tempered Glass Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66				
			ST	Stainless Steel Instrument Enclosure With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP68^				
			SM	Stainless Steel Instrument Enclosure With Tempered Glass Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68^				
			TN	Stainless Steel Instrument Enclosure With Blind Cover, General Purpose				
			TE	Stainless Steel Instrument Enclosure With Blind Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66				
			TT	Stainless Steel Instrument Enclosure With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP68^				
			TM	Stainless Steel Instrument Enclosure With Blind Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/IP68^				
			WN	Copper-Free Aluminum Instrument Enclosure With Tempered Glass Cover, General Purpose				
			WE	Copper-Free Aluminum Instrument Enclosure With Tempered Glass Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66				
			WT	Copper-Free Aluminum Instrument Enclosure With Tempered Glass Cover, ATEX & IECEx Explosion Proof Certified, IP68^				
			WM	Copper-Free Aluminum Instrument Enclosure With Tempered Glass Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68^				
			AN	Copper-Free Aluminum Instrument Enclosure With Blind Cover, General Purpose				
			AE	Copper-Free Aluminum Instrument Enclosure With Blind Cover, FM & CSA Explosion Proof Certified, NEMA 4X/ IP66				
			AT	Copper-Free Aluminum Instrument Enclosure With Blind Cover, ATEX & IECEx Explosion Proof Certified, IP68^				
			AM	Copper-Free Aluminum Instrument Enclosure With Blind Cover, FM, CSA, ATEX & IECEx Explosion Proof Certified, NEMA 4X, IP66/ IP68^				
						Model - 8080	Model - 8092 / 8100 / 8117	
			Code	Instrument Connection (T1)	Conduit Size (T2)	Instrument Connection (T1)	Conduit Size (T2)	
			01	M16 x 2P*	¾"NPT	-	-	
			02	M16 x 2P*	½"NPT	-	-	
			03	M16 x 2P*	M20 x 1.5P**	-	-	
			04	½"NPT	¾"NPT	½"NPT	¾"NPT	
			05	½"NPT	½"NPT	½"NPT	½"NPT	
			06	½"NPT	M20 x 1.5P**	½"NPT	M20 x 1.5P**	
			07	¾"NPT	¾"NPT	¾"NPT	¾"NPT	
			08	¾"NPT	½"NPT	¾"NPT	½"NPT	
09	¾"NPT	M20 x 1.5P**	¾"NPT	M20 x 1.5P**				
10	½"BSP#	¾"NPT	½"BSP#	¾"NPT				
11	½"BSP#	½"NPT	½"BSP#	½"NPT				
12	½"BSP#	M20 x 1.5P**	½"BSP#	M20 x 1.5P**				
13	¾"NPT	None	¾"NPT	None				
14	M20 x 1.5P**	None	M20 x 1.5P**	None				
16	½"BSP#	None	½"BSP***	None				
17	½"NPT	None	½"NPT	None				
18	-	-	None	None				
19	-	-	None	¾"NPT				
20	-	-	None	½"NPT				
21	-	-	None	M20 x 1.5P**				
22	-	-	M20 x 1.5P**	M20 x 1.5P**				
25	-	-	M25 x 1.5P**	½" NPT				
26	-	-	M25 x 1.5P**	¾" NPT				
27	-	-	M25 x 1.5P**	M20 x 1.5P**				
28	-	-	M25 x 1.5P**	M25 x 1.5P**				
30	-	-	M25 x 1.5P**	None				
31	-	-	½"NPT	M25 x 1.5P**				
32	-	-	¾"NPT	M25 x 1.5P**				
33	-	-	½"BSP#	M25 x 1.5P**				
34	-	-	M20 x 1.5P**	M25 x 1.5P**				
35	-	-	1" NPT##	M25 x 1.5P**				
36	-	-	NONE	M25 x 1.5P**				
37	-	-	1" NPT##	½" NPT				
38	-	-	1" NPT##	¾" NPT				
39	-	-	1" NPT##	M20 x 1.5P**				
40	-	-	1" NPT##	M25 x 1.5P**				
41	-	-	1" NPT##	1" NPT##				
42	-	-	1" NPT##	NONE				
43	-	-	½"NPT	1" NPT##				
44	-	-	¾"NPT	1" NPT##				
45	-	-	M20 x 1.5P**	1" NPT##				
46	-	-	M25 x 1.5P**	1" NPT##				
47	-	-	½"BSP#	1" NPT##				
48	-	-	NONE	1" NPT##				
			Code	Accessories - (Brackets - only for 8080 Series)				
			RC	IME Model 175RC Mounting Bracket				
			PM	IME Model 175PM Mounting Bracket				
			NR	IME Model 175NR Mounting Bracket				
			MM	IME Model 175MM Mounting Bracket				
			Code	2 Inch "U" Bolt with Nuts and Washers				
			00	None				
			01	IME Model 17508, 1 Set (For IME Model 175RC only)				
			02	IME Model 17508, 2 Set (For IME Model 175PM and 175NR)				
8080	SM	04	RC	01	Typical Model Number			

* M16 x 2P is not a thru hole and is used for mounting onto a Bracket only.

^ Model 8092 is rated for IP66 only by ATEX & IECEx.

** A temporary metric label is required when an M20 x 1.5P and M25x1.5P threads are selected. However these thread options are not allowed in Canada.

1/2"BSP thread is not approved FM, CSA, ATEX & IECEx. ## 1"NPT is not approved for T2 on Model 8092 and not approved by FM for T1 and T2 on Model 8100.

MODEL 9080 DUAL COMPARTMENT INSTRUMENT ENCLOSURE

- EXPLOSION PROOF CERTIFIED
- NEMA 4X OR IP66/68 CONSTRUCTION
- CHOICE OF SS316 AND COPPER-FREE ALUMINUM
- CHOICE OF TEMPERED GLASS COVER OR BLIND COVER
- WIDE SELECTION OF CONDUIT SIZES
- OPTION FOR A CUSTOMIZED SS NAMEPLATE



Introduction

Material of Construction:

SS316 and Copper-Free Aluminum

Certification:

FM (C + US), ATEX & IECEx

Connections

Instrument Connection (T1) :

1/2" NPT, 3/4" NPT, 1" NPT, M20x1.5P, M25x 1.5P

Conduit Size (T2) :

1/2" NPT, 3/4" NPT, M20x1.5P, M25x 1.5P

Mounting Holes

As per requirement

Surface Finishing

Electro Polish For Stainless Steel

Epoxy Painted For Aluminum

"O" Ring

Nitrile

Weight




2.00Kg (4.4lbs) for SS316

1.30Kg (2.9lbs) for Aluminum

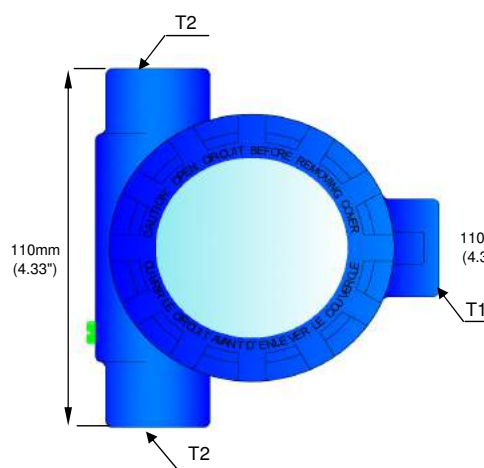
Accessories

Customized SS Nameplate and Mounting brackets

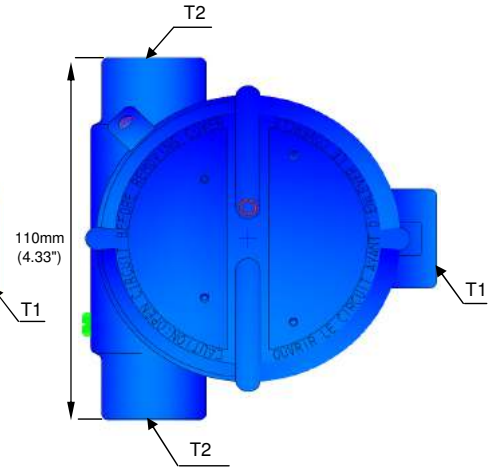
Certification System

	Class I, Div 1, Groups B, C and D; Class II, Div 1, Groups E, F and G; Class III, Div 1; NEMA 4X
	II 2 G D Ex db IIC Gb Ex tb Db IIIC IP68 Ta = -40°C to +85°C
	Ex db II C Gb Ex tb Db IIIC IP68 Ta = -40°C to +85°C

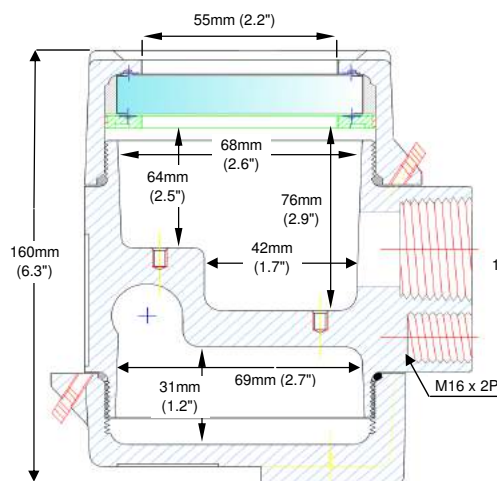
Dimension for Window version



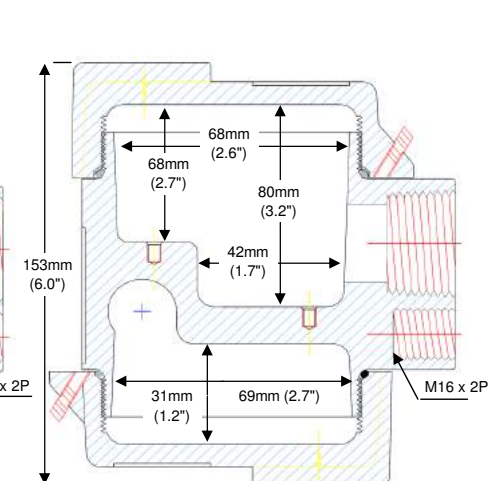
Dimension for Blind version



Cross sectional View



Cross sectional View

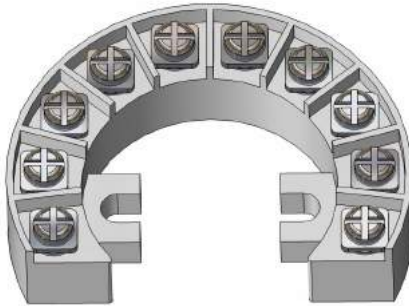


MODEL 9080 DUAL COMPARTMENT INSTRUMENT ENCLOSURE

Terminals



4 terminals



Upto 10 Terminals

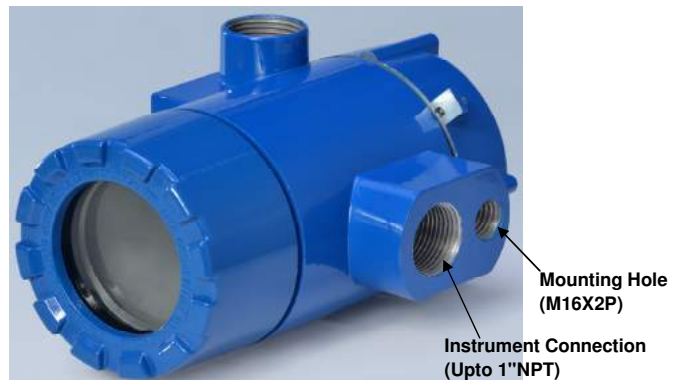
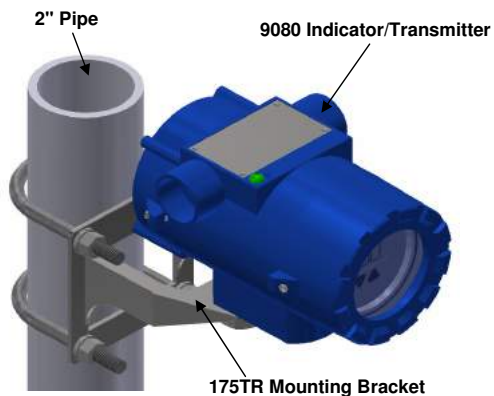


The Model 9080 comes with upto 10 terminals build into the terminal end. Also upto a maximum of 10 feed through wires are provided for connection to the sensor electronics

Mounting

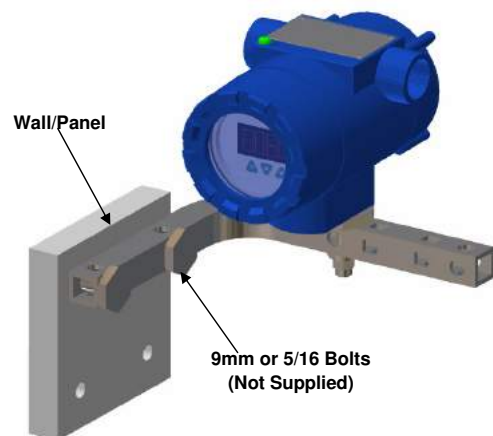
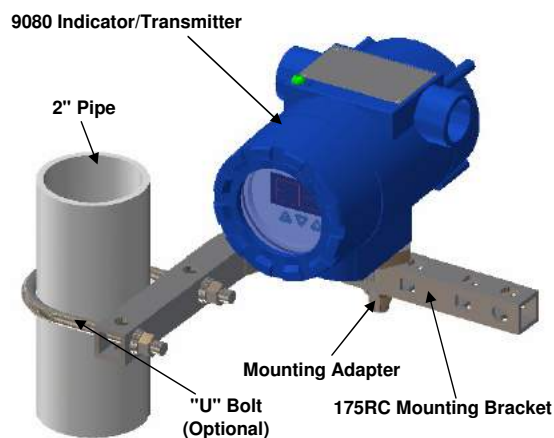
The Model 175 TR

Model 175TR mounting bracket is constructed out of SS316 Stainless Steel, that can be used to mount the 9080 Series of enclosures, either on a wall or panel or a 2" Pipe. When mounting on a 2" pipe, "U" Bolts are required, which can be supplied optionally.



The Model 175 RC

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



INTERNATIONAL METAL ENGINEERING

MODEL 9080 DUAL COMPARTMENT INSTRUMENT ENCLOSURE

IME Model 9080 Series Dual Compartment Instrument Enclosures are designed to accommodate circuit boards and devices having a maximum diameter of 68mm(2.6"). Specifically designed for explosion proof applications, the housing is available in either an epoxy painted Copper-Free Aluminum version or investment casted SS316 to withstand applications where aggressive atmospheres prevail. The housing can be ordered with either a tempered glass cover or blind cover. There is a wide choice of conduit, instrument entries, terminal blocks and mounting brackets.

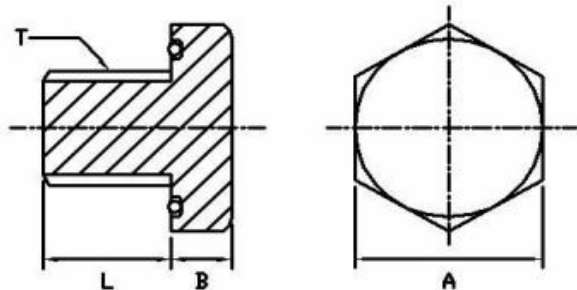
Ordering Information for 9080 Dual Compartment Instrument Enclosure

Model	Description				
9080AN	General Purpose, Die Cast Aluminum, Dual Compartment Enclosure With Blind Cover				
9080AE	FM (C + US) Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Blind Cover				
9080AT	ATEX/IECEx Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Blind Cover				
9080AM	FM (C + US)/ATEX/IECEx Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Blind Cover				
9080WN	General Purpose, Die Cast Aluminum, Dual Compartment Enclosure With Tempered Glass Window				
9080WE	FM (C + US) Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Tempered Glass Window				
9080WT	ATEX/IECEx Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Tempered Glass Window				
9080WM	FM (C + US) /ATEX/IECEx Explosion Proof Certified, Die Cast Aluminum, Dual Compartment Enclosure With Tempered Glass Window				
9080TN	General Purpose, SS316, Dual Compartment Enclosure With Blind Cover				
9080TE	FM (C + US) Explosion Proof Certified, SS316, Dual Compartment Enclosure With Blind Cover				
9080TT	ATEX/IECEx Explosion Proof Certified, SS316, Dual Compartment Enclosure With Blind Cover				
9080TM	FM (C + US) /ATEX/IECEx Explosion Proof Certified, SS316, Dual Compartment Enclosure With Tempered Blind Cover				
9080SN	General Purpose, SS316, Dual Compartment Enclosure With Tempered Glass Window				
9080SE	FM (C + US) Explosion Proof Certified, SS316, Dual Compartment Enclosure With Tempered Glass Window				
9080ST	ATEX/IECEx Explosion Proof Certified, SS316, Dual Compartment Enclosure With Tempered Glass Window				
9080SM	FM (C + US) /ATEX/IECEx Explosion Proof Certified, SS316, Dual Compartment Enclosure With Tempered Glass Window				
	Code	Instrument Connection, T1		Conduit Size, T2	
	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		¾"NPT	
	11	½"BSP		½"NPT	
	12	½"BSP		M20 x 1.5P	
	13	¾"NPT		None	
	14	M20 x 1.5P		None	
	16	½"BSP		None	
	17	½"NPT		None	
	18	None		None	
	19	None		¾"NPT	
	20	None		½"NPT	
	21	None		M20 x 1.5P	
	22	M20 x 1.5P		M20 x 1.5P	
	23	½"BSP		½"BSP	
	25	M25 x 1.5P		½" NPT	
	26	M25 x 1.5P		¾" NPT	
	27	M25 x 1.5P		M20 x 1.5P	
	28	M25 x 1.5P		M25 x 1.5P	
	30	M25 x 1.5P		None	
	31	½"NPT		M25 x 1.5P	
	32	¾"NPT		M25 x 1.5P	
	33	½" BSP		M25 x 1.5P	
	34	M20 x 1.5P		M25 x 1.5P	
	35	1" NPT		M25 x 1.5P	
	36	NONE		M25 x 1.5P	
	37	1" NPT		½" NPT	
	38	1" NPT		¾" NPT	
	39	1" NPT		M20 x 1.5P	
	40	1" NPT		M25 x 1.5P	
	42	1" NPT		None	
		Code	Terminal Block Type		
		00	None		
		04	Terminal Block With 4 Terminals		
		10	Terminal Block With 10 Terminals		
		Code	Number of Wires		
		00 - 10	Up to Maximum of 10 Wires		
			Code	Mounting Bracket	
			TR	175TR Mounting Bracket	
			RC	175RC Mounting Bracket	
9080WM	08	10	09	RC	← Typical Model Number

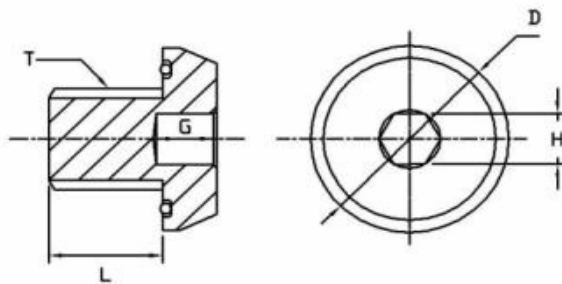
STOPPING PLUGS

Stopping plugs are used to blank off entries into housings and enclosures while maintaining Explosion Proof Certifications. Hexagonal Head and Domed Head Stopping Plugs, having metric threads are provided with 'O' ring provision to enhance ingress protection.

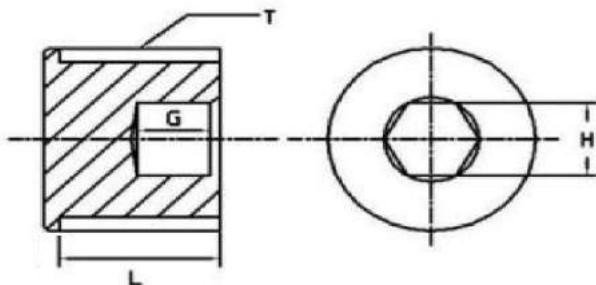
IME MODEL 86, HEXAGONAL HEAD PLUG



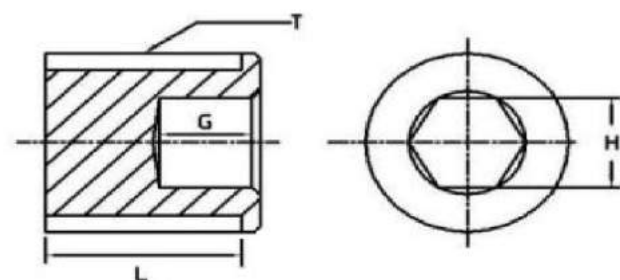
IME MODEL 87, EXTERNALLY ACCESSIBLE DOME PLUG



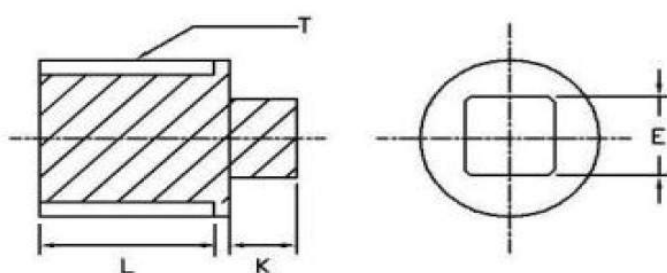
IME MODEL 88, INTERNALLY ACCESSIBLE PLUG



IME MODEL 89, EXTERNALLY ACCESSIBLE PLUG



IME MODEL 83, SQUARE HEAD PLUG



INTERNATIONAL METAL ENGINEERING

Dimensional Details

CODE	T	L	B	H	A	D	E	G	K
11	M16 x 1.5	15mm (0.59")	8mm (0.31")	8mm (0.31")	25mm (1.00")	25mm (1.00")	10mm (0.39")	8mm (0.31")	6mm (0.24")
12	M20 x 1.5	15mm (0.59")	8mm (0.31")	10mm (0.39")	30mm (1.18")	30mm (1.18")	12mm (0.47")	10mm (0.39")	6mm (0.24")
13	M25 x 1.5	17mm (0.67")	8mm (0.31")	12mm (0.47")	35mm (1.38")	35mm (1.38")	16mm (0.63")	12mm (0.47")	6mm (0.24")
19	1/2" NPT	17mm (0.67")	8mm (0.31")	10mm (0.39")	25mm (1.00")	25mm (1.00")	12mm (0.47")	10mm (0.39")	6mm (0.24")
20	3/4" NPT	18mm (0.71")	10mm (0.39")	12mm (0.47")	35mm (1.38")	35mm (1.38")	16mm (0.63")	12mm (0.47")	6mm (0.24")
21	1" NPT	22.5mm (0.9")	10mm (0.39")	14mm (0.55")	40mm (1.57")	40mm (1.57")	18mm (0.71")	14mm (0.55")	6mm (0.24")


Dimensions may vary from the above table depending on the material availability.


Ordering Information for Stopping Plugs


Model	Description	
83	Square Head Plug	
86	Hexagonal Head Stopping Plug	
87	Dome Head Stopping Plug	
88	Internally Accessible Stopping Plug	
89	Externally Accessible Stopping Plug	
	Code	Material of Construction
	T	Stainless Steel 316
	A	Aluminum 6082, Clear Anodized
	R	Nickel Plated Brass
	Code	Size and Type of Thread
	011	M16 x 1.5
	012	M20 x 1.5
	013	M25 x 1.5
	019	1/2" NPT
	020	3/4" NPT
	021	1" NPT
	Code	Certifications
	E	FM (US & CANADA)
	C	ATEX & IECEx
	M	FM (US & CANADA), ATEX & IECEx
	N	None
88	T	20
		M
Typical Model Number		

Ordering Information for Stopping Plugs


For Aluminum


	CLASS I, DIV I GROUPS B, C & D CLASS II/III, DIV I GROUPS E, F & G NEMA 4X
---	--


	II 2 G D Ex d IIC, Ex e II Ex tD A21 IP6X
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	Ex d IIC, Ex e II Ex tD A21 IP6X
---	-------------------------------------

For Stainless Steel and Brass

	CLASS I, DIV I GROUPS B, C & D CLASS II/III, DIV I GROUPS E, F & G NEMA 4X
--	--

	II 2 G D / I M2 Ex d I/IIC, Ex e I/II Ex tD A21 IP6X
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	Ex d IIC, Ex e II Ex tD A21 IP6X
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STAINLESS STEEL MOUNTING BRACKET FOR FIELD DEVICES

Mounting Bracket

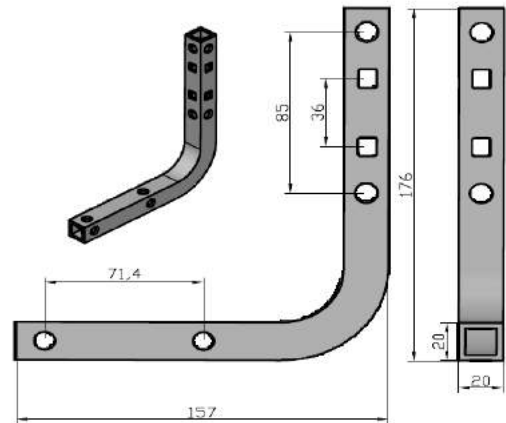
175RC

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

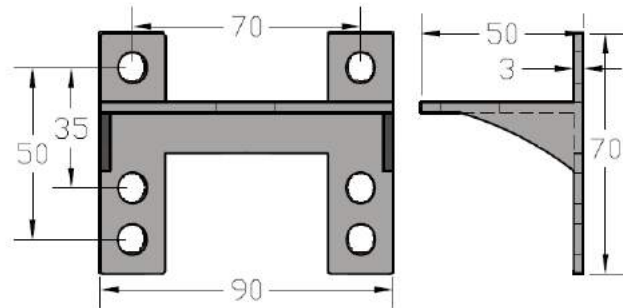
175PM

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

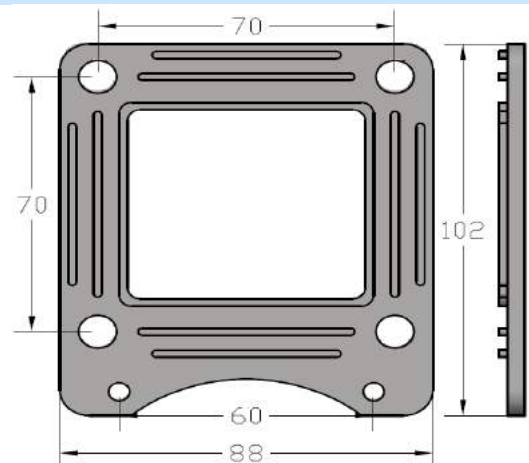
175NR

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 symmetrical, so it can be rotated 90° to suit the viewing position of the Indicator/Transmitter.



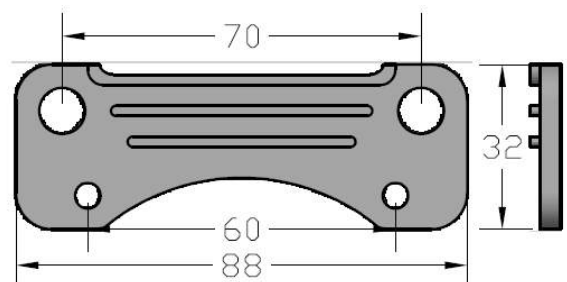
Mounting Bracket

175MM

Introduction

IME MODEL 175MM is Stainless Steel Mounting Brackets made exclusively for IME MODEL 8080 Instrument Enclosure to mount on wall.

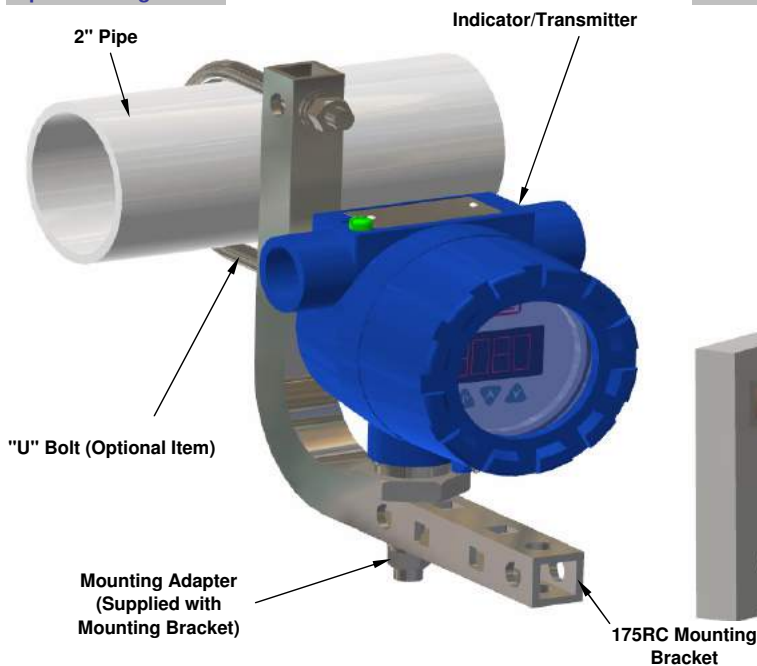
This low cost Bracket is available for customers who require all 3 ports on the enclosure for other purposes.



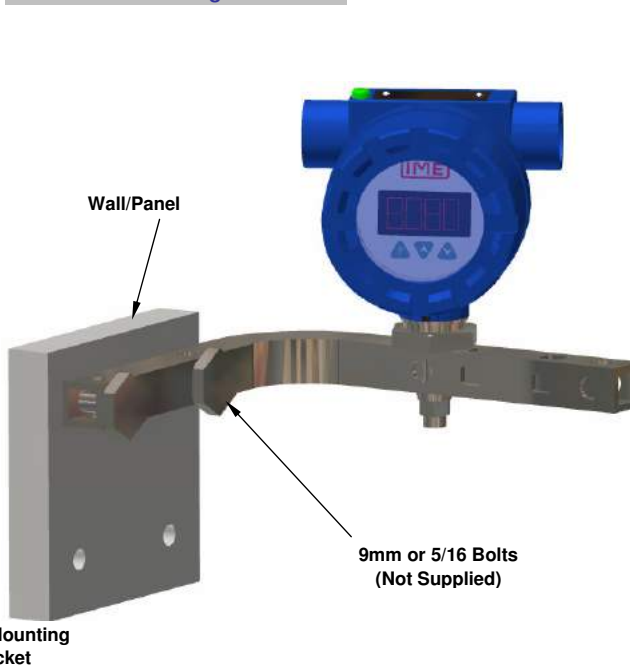
MOUNTING BRACKETS FOR INDICATORS AND TRANSMITTERS

Mounting Methods For Model 175RC

Pipe Mounting

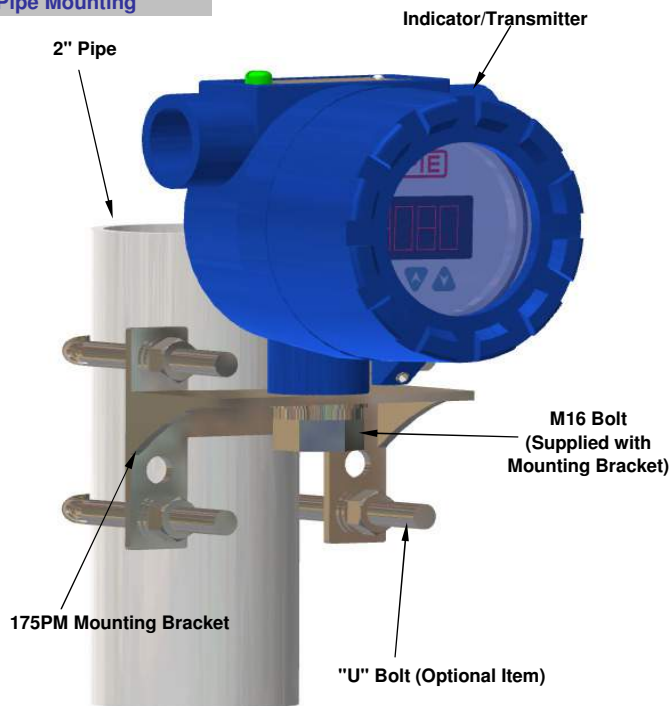


Wall / Panel Mounting

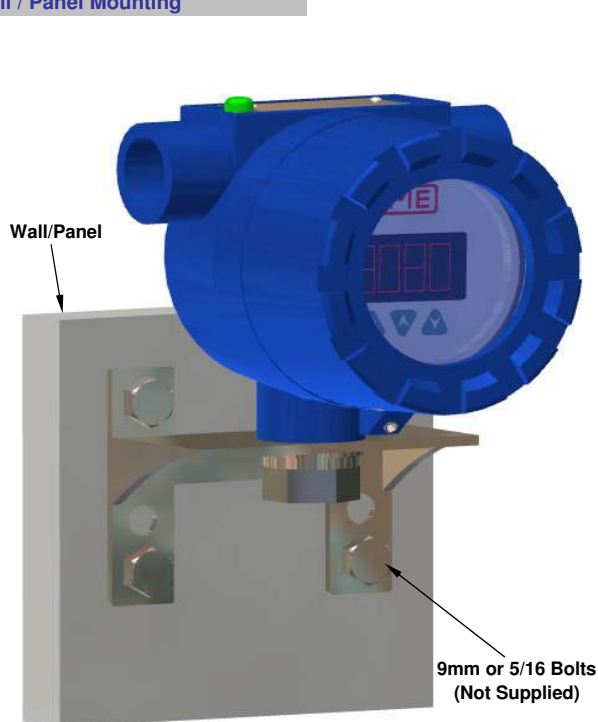


Mounting Methods For Model 175PM

Pipe Mounting



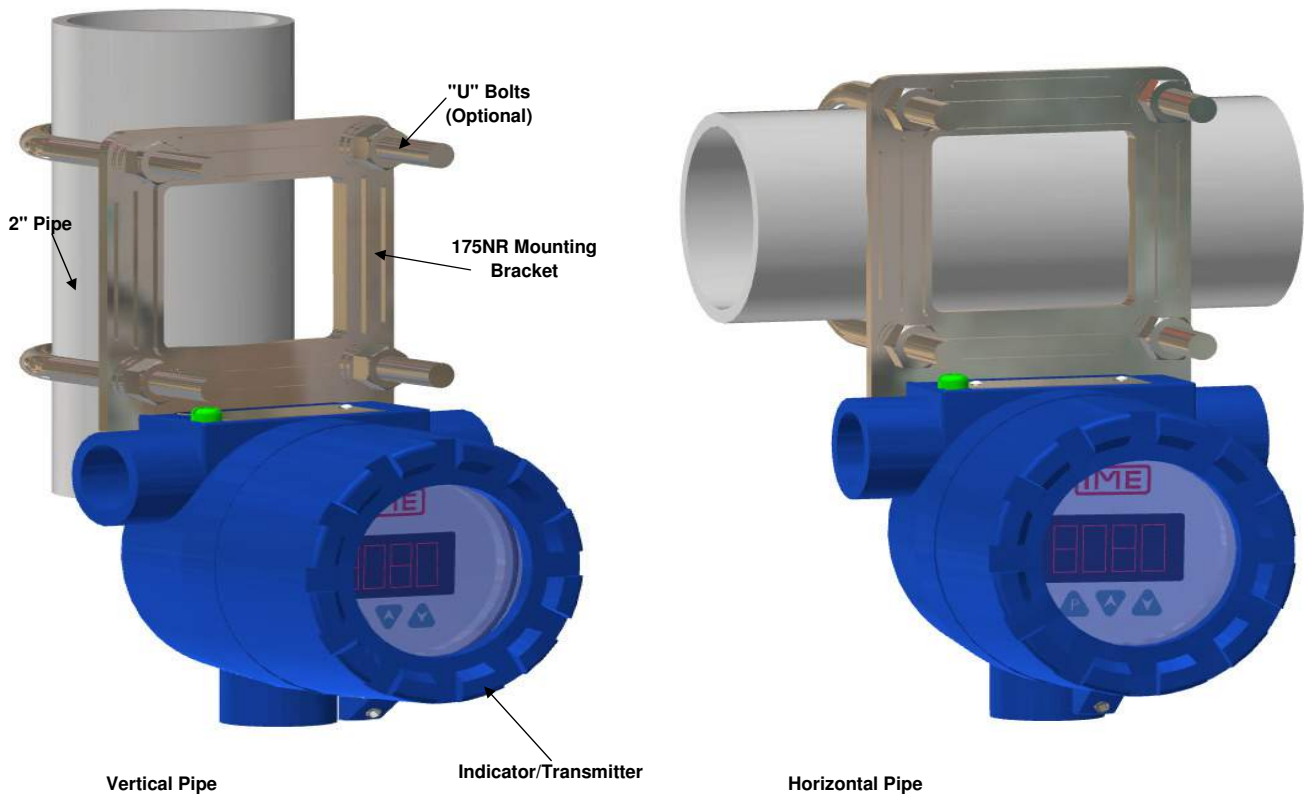
Wall / Panel Mounting



MOUNTING BRACKETS FOR INDICATORS AND TRANSMITTERS

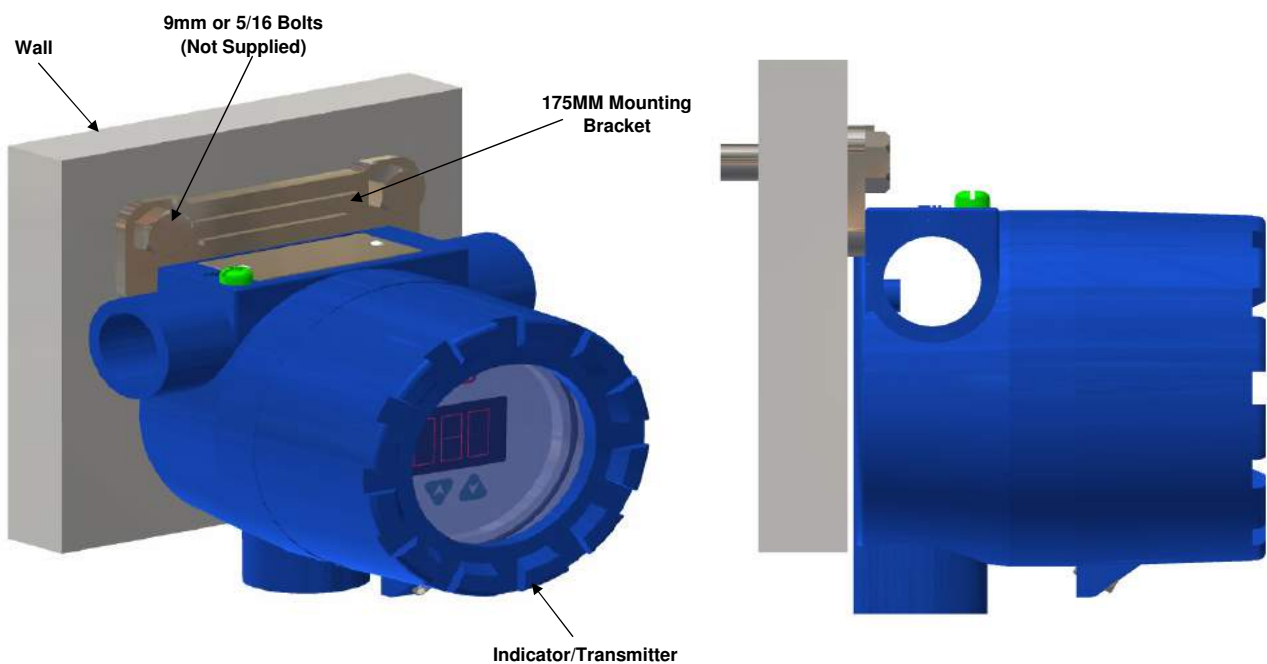
Mounting Methods For Model 175NR

Pipe Mounting



Mounting Methods For Model 175MM

Wall/Panel Mounting





These units are Cast Schedule 160 size pipes, with internal reinforced ribs. They have been tested to pressure above 6500psi and can be safely used up to pressures of 6000psi at elevated temperatures. The units are available in SS316. All process connections are 1/2" NPT. Other sizes and materials are available on request.

The design and manufacture of these units meet CSA-51 Boiler Code requirements and Canadian Registration Numbers (CRN) have been applied for. Once available, The appropriate CRN Number will be stamped on the assembly when requested.

Specifications

Material of Construction

Stainless Steel (SS316)

Surface Finish

Electro Polished

Connections

1/2"NPT

Pipe Size

Schedule 160

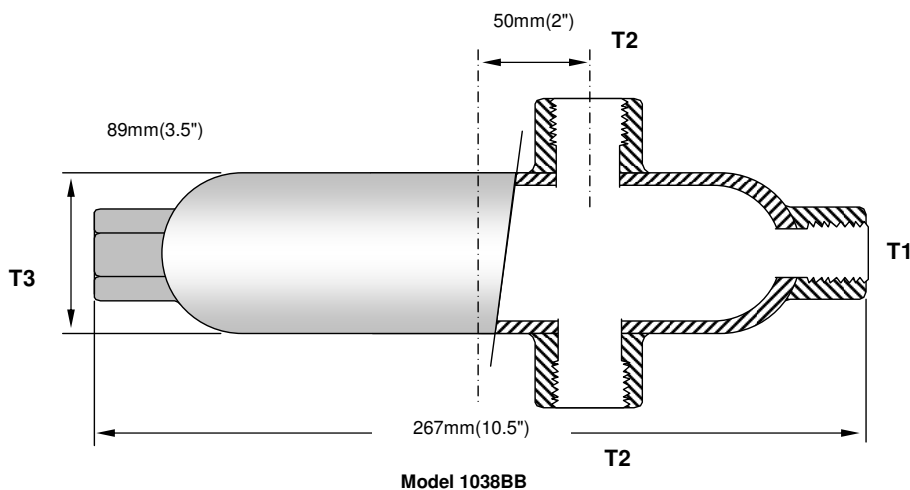
Maximum Pressure

6000psi at elevated temperature.

Optional Accessories

1/2"NPT Plugs (Refer to page no.11 & 12)

Dimensions



SUNSHADE FOR PROCESS INSTRUMENT

1200 SERIES

- UV Resistant Glass Fibre Reinforced Plastic or Stainless Steel
- Tested to Withstand UV Exposure Equivalent for up to 20 Years
- Drip Lip for draining snow and rain
- Easy Access to Instrument
- 2 "U" bolts allow for secure mounting
- Colors similar to RAL 7035 (Light Grey)*

* Other colors on request

Introduction

This simple instrument sunshade is designed to protect the instruments from Sunlight, Rain, Snow, Dust accumulation and Mechanical damages. It can be easily mounted on a 2 Inch Pipe using the mounting accessories provided

The Model 1200 provides excellent corrosion resistant and long life even under the hardest environmental conditions ranging from the blazing heat in the Middle East to the Freezing temperatures in the Frozen North. The unit has been tested to NIST traceable standards for up to 20 years equivalent.

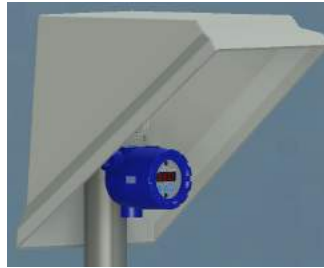
The Sunshade can be mounted behind the pipe stand or between the instrument and pipe stand depending on the height of the 2" mounting pipe. Two Stainless Steel "U" bolts along with 2 sets of SS316 IME Model 17524 Pipe Mounting Retainers are provided with each Sunshade. A mounting plate assembly IME Model no 1200MP-51-A1/A2, can also be provided depending on the application. Custom designed mounting plates and brackets are available on request.

Available Dimension

Standard Type

Model	Material			
1200P	Glass Fibre Reinforced Plastic			
1200T	Stainless Steel (SS316), Electro-Polished			
	Code	Dimension(mm)		
	xx	W	L	H
	-01	180	300	120
	-02	190	380	330
	-03	230	300	180
	-04	250	260	315
	-05	250	275	100
	-06	265	250	240
	-07	300	300	250
	-08	320	420	370
	-09	360	420	370
	-10	360	300	120
	-11	400	450	320
	-12	440	690	440
	-13	450	450	275
	-14	500	300	250
	-15	560	680	470
	-16	875	425	450
	-17	400	320	250
	-18	600	300	300
	-19	300	600	120
	-20	450	450	150
	-51	210	360	120

* W Dimension is 10mm approximately smaller than the above table due to taper



Specifications

Material of Construction

Stainless Steel (SS316, Electro Polished) or GRP
(See table below)

Temperature Range. Ambient

-30°C (22°F) to +85°C (185°F)

Density

1.8-1.9 g /cm³

Accelerated UV Test

ASTM G155 for equivalent of 20 years

Flame Retardant

UL HB

Water absorption

JB3961 15mg

Tensile Strength

GB1043 45 Mpa

Flexural Strength

GB3961 145 Mpa

Dielectric strength

GB1048 12.6 Kv/mm

Drip Lip

Designed with Drip Lip to allow rain and snow to run off.

Mounting Method

2 Inch Pipe Mounting or Wall Mounting.

Thickness of the Sunshade

Approximately 3mm for SS and 3-6mm for GRP based on the size

Accessories (All Stainless Steel)

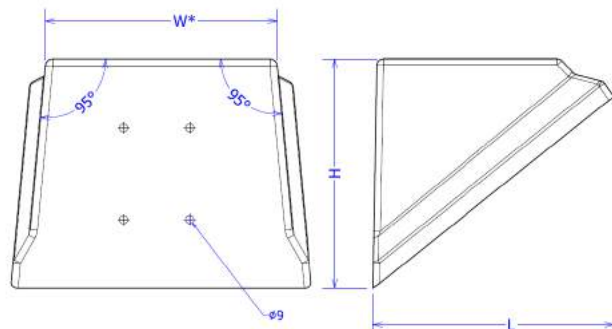
2 Inch Pipe Retainer (IME P/N : 17524)

2 Inch "U" Bolt, Nuts and Washers (IME P/N :17508)

Mounting Plate assembly (IME P/N: 1200MP-51-A1 or A2)

Storage

Tapered walls allow for space saving during Transportation and storage



MOUNTING ACCESSORIES FOR SUNSHADE

2" Pipe Retainer

This simple 2 Inch Pipe Retainer (IME P/N 17524) constructed out of SS316 Stainless Steel, is used to mount the Sunshade on 2 Inch Pipe.

IME Model 17508 consists of a complete assembly of a "U" bolt along with the nuts and washers will be supplied with 2 Inch Pipe Retainer.

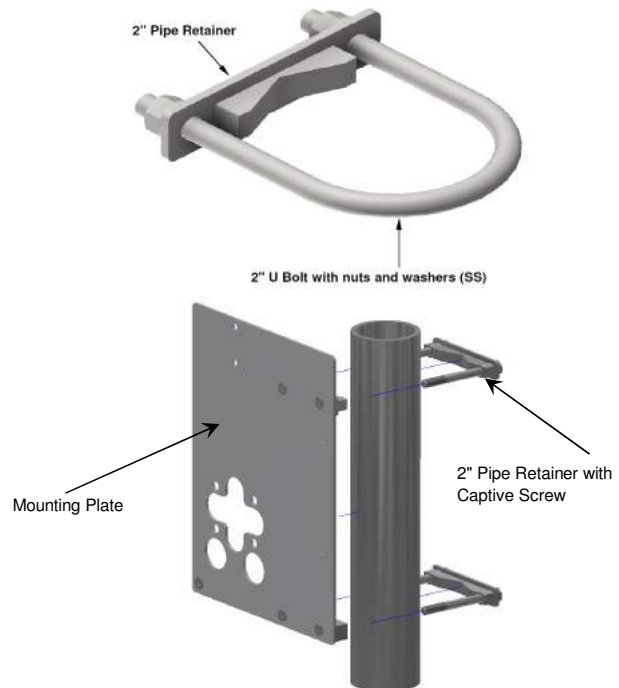
Mounting Plate Assembly

This 3mm SS316 universal mounting plate can be used to mount any kind of instrument on the 2" pipe. There is additional provision to mount any sunshade on the mounting plate.

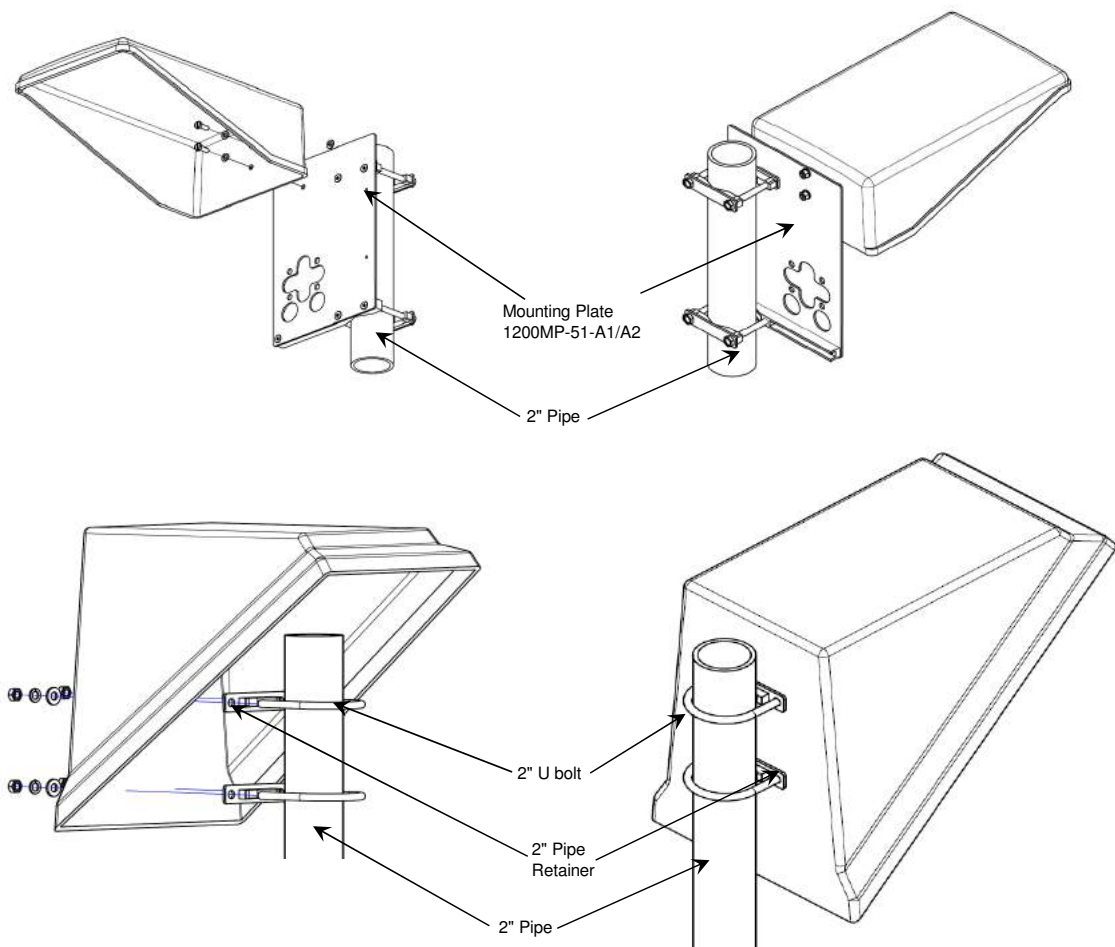
Retainer Brackets are made in SS316 casting

M8 Captive screws are used easy handling.

IME Model 1200MP-51-A1 & 1200MP-51-A2 consist of complete assembly with 2" pipe retainers, Bolts and Mounting Plate. Request IME for dimensions of the mounting plate.



Mounting Example



Note: 2" PIPE STAND CAN BE MOUNTED EITHER INSIDE THE SUNSHADE OR OUTSIDE AS SHOWN ABOVE

SEALING NIPPLES

MODEL 2011/2012

- 600 V_{RMS}, 5 x 18AWG WIRE SIZE
- STAINLESS STEEL
- EXPLOSION PROOF CERTIFIED
- 3 YEAR WARRANTY

Introduction

The sealing nipples are suitable to be mounted on flameproof enclosures and junction boxes. They are made of stainless steel nipples containing cables where the sealing is made by means of flame retardant resin around each conductor. The coupling between the sealing nipple and the apparatus enclosure is made by means of threaded joints.

Functional Specifications

Thread Size

M20 x 1.5P/M20 x 1.5P (Model 2011) or M20 x 1.5P / 1/2"NPT (Model 2012)

Rated Voltage

600 V_{RMS}

Operating Temperature

-40 °C to +85 °C

Weight

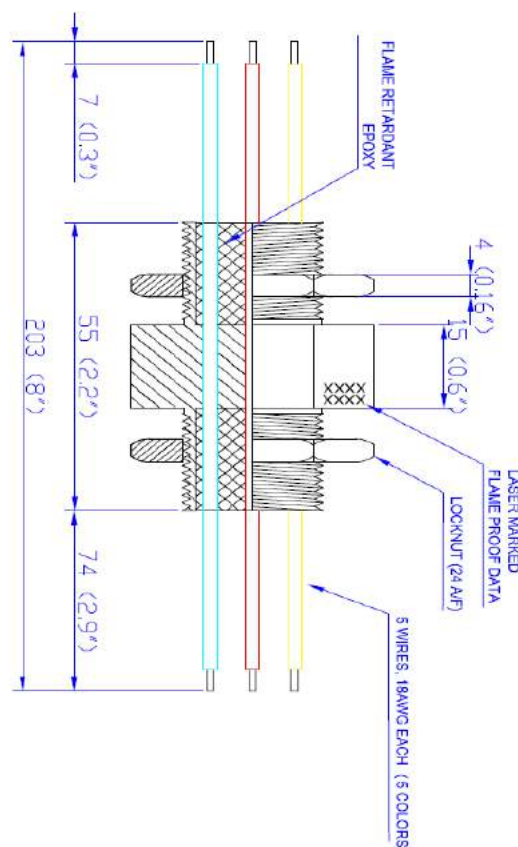
98 grams

Material of Construction

SS316

Optional Accessories

Stainless Steel Locknut



Certification System

	<p>II 1/2 GD Ex d IIC Gb; Ex tb IIIC Db IP66, Ex ia IIC Ga; Ex ta IIIC Da IP66, Ta = -40 °C to +85 °C</p>	
	<p>Ex d IIC Gb; Ex tb IIIC Db IP66, Ex ia IIC Ga; Ex ta IIIC Da IP66, Ta = -40 °C to +85 °C</p>	

EXPLOSION PROOF FIELD MOUNTED INDICATORS AND TRANSMITTERS



Selection Matrix for Indicators and Transmitters

Field Mounted Indicator Series (Explosion Proof)

IME MODEL NO	DISPLAY	INPUT	POWER	POWER FOR TRANSMITTER	OUTPUT	ALARM	ADJUSTMENT
8080PP	4 DIGIT LCD	4 - 20 mA	Loop	NO	NO	NO	PUSH BUTTONS
8080MK	4 DIGIT LED	4 - 20 mA	Loop	NO	NO	NO	PUSH BUTTONS
8080EL	5 DIGIT LCD	4 - 20 mA	Loop	NO	YES	YES	PUSH BUTTONS
8080MN	4 DIGIT LED	4 - 20 mA	18 to 28 VDC	YES	NO	NO	MEMBRANE SWITCHES
8080KN	4 DIGIT LCD	Type J/K TC or RTD Pt100	Battery	NO	NO	NO	MEMBRANE SWITCHES

Field Mounted Temperature Transmitter Series (Explosion Proof)

IME MODEL NO	DISPLAY	INPUT	POWER	POWER FOR TRANSMITTER	OUTPUT	ALARM	ADJUSTMENT
8080HN	NONE	SMART	7.5 to 45 VDC	NO	4-20 mA	NO	PC OR HAND-HELD
8080HH	NONE	SMART	7.5 to 45 VDC	NO	4-20 mA+HART®	NO	PC OR HAND-HELD
8080HT	5 DIGIT LCD	SMART	10.5 to 45 VDC	NO	4-20 mA+HART®	NO	PC OR HAND-HELD

Field Mounted Indicator With Relays (Explosion Proof)

IME MODEL NO	DISPLAY	INPUT	POWER	POWER FOR TRANSMITTER	OUTPUT	ALARM	ADJUSTMENT
8080RR	4 DIGIT LED	4 - 20 mA	18 to 28 VDC	YES	NO	YES	MEMBRANE SWITCHES
8080PR1	4 DIGIT LED	Type J/K TC or RTD Pt100	12 to 28 VDC	NO	4-20 mA	YES	MEMBRANE SWITCHES
8080PR2	4 DIGIT LED	Type J/K TC or RTD Pt100	12 to 28 VDC	NO	4-20 mA (PID Controller)	YES	MEMBRANE SWITCHES
8080FR	4 DIGIT LED + 6 DIGIT LED	4 - 20 mA or Pulse	18 to 28 VDC	NO	4-20 mA	YES	MEMBRANE SWITCHES

Field Mounted Indicating Pressure Transmitter And Miscellaneous Indicators

IME MODEL NO	DISPLAY	INPUT	POWER	POWER FOR TRANSMITTER	OUTPUT	ALARM	ADJUSTMENT
8080PA	4 DIGIT LCD	Pressure	9 to 45 VDC	NO	4-20 mA+HART®	NO	PC OR HAND-HELD
8080PG	4 DIGIT LCD	Various	9 to 45 VDC	NO	4-20 mA+HART®	NO	PC OR HAND-HELD
8080TFM	4 DIGIT LED + 6 DIGIT LED	Flow	18 to 28 VDC	NO	4-20 mA	YES	MEMBRANE SWITCHES

FIELD MOUNTED LOOP POWERED INDICATOR

8080EL, 8080PP & 8080MK

Loop powered Indicators 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 and for more aggressive environments, a SS316 housing is optionally available. The housings meet the requirements of NEMA 4X & IP68 and are also certified Explosion Proof by FM/CSA/ATEX/IECEX.

8080 Series Explosion Proof Field Mounted Loop Powered Indicator

8080EL Explosion Proof Field Mounted Loop Powered Indicator

Input

4 - 20 mA

Display Height

8mm (0.3") high

Display Type

5 Digit LCD Display with wide choice of engineering units

Response Time

Digital damping 0 to 100s (step 0.1 seconds)

Voltage Drop

3.5V at 20mA

Operating Temperature

-20 °C to +60 °C



8080EL

8080PP Explosion Proof Field Mounted Loop Powered Indicator

Input

4 - 20 mA

Display Height

12.5mm (0.5") high

Display Type

4 Digit LCD Display

Response Time

Typically 75ms

Voltage Drop

4.2V at 20mA

Operating Temperature

-20 °C to +60 °C



8080PP

8080MK Explosion Proof Field Mounted Loop Powered Indicator

Input

4 - 20 mA

Display Height

10mm (0.4") high

Display Type

4 Digit LED Display

Response Time

Typically 20ms

Voltage Drop

3.7V at 20mA

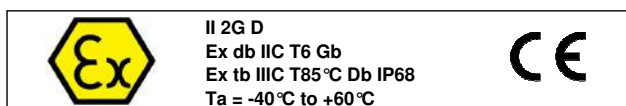
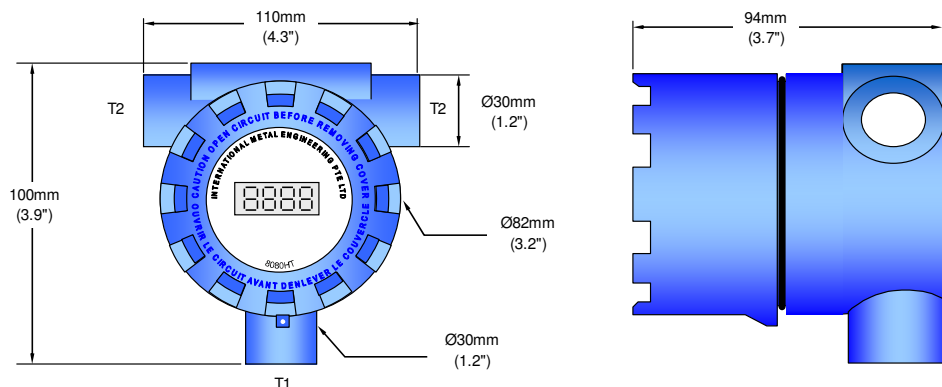
Operating Temperature

-40 °C to +60 °C

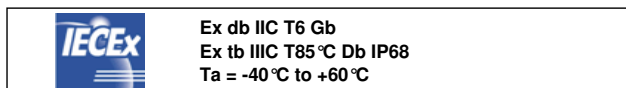


8080MK

Dimensions



II 2G D
Ex db IIC T6 Gb
Ex tb IIIC T85°C Db IP68
Ta = -40 °C to +60 °C



Ex db IIC T6 Gb
Ex tb IIIC T85°C Db IP68
Ta = -40 °C to +60 °C

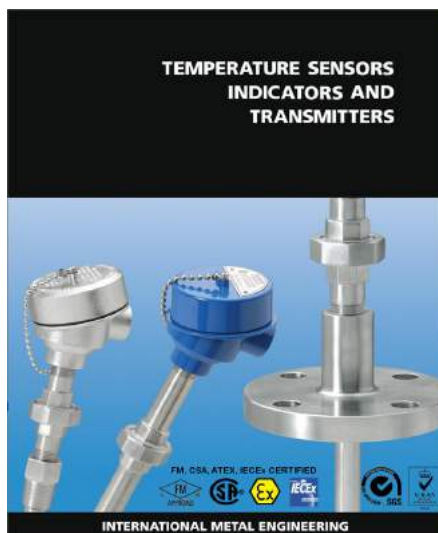
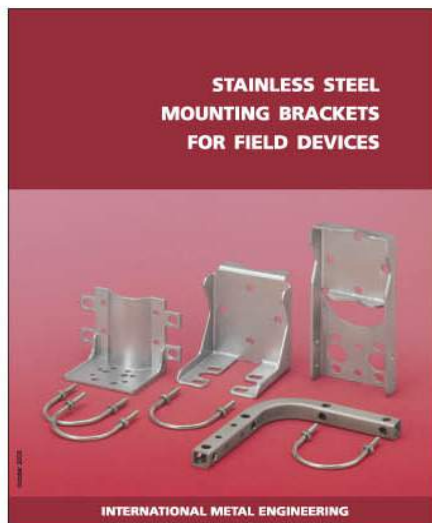
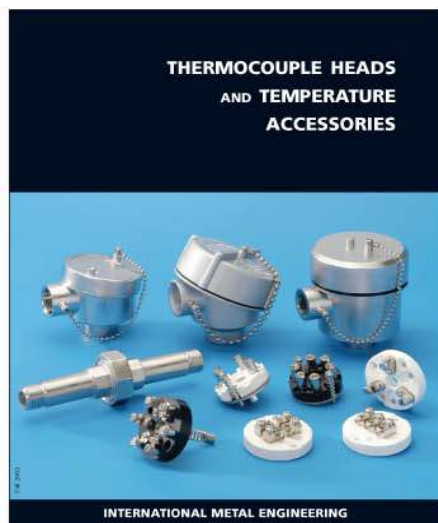


CLASS I, DIV I GROUPS B, C AND D
CLASS II/III, DIV I GROUPS E, F AND G
NEMA 4X, T6



CLASS I, DIV I GROUPS B, C AND D
CLASS II/III, DIV I GROUPS E, F AND G
NEMA 4X, T6

OUR OTHER PRODUCTS



INTMET.COM
INTERNATIONAL METAL ENGINEERING

Singapore

Blk13, Toa Payoh Lorong 8
#06-05 Braddell Tech Park
Singapore 319261
Tel: +65-63536506
Fax: +65-63536281
website: www.intmet.com
E-mail: sales@intmet.com