LOW COST POLYCARBONATE ENCLOSURE FOR INDICATORS AND TRANSMITTERS

BATTERY OPERATED DIGITAL TEMPERATURE INDICATOR 108KN

Introduction

IME Model 108KN is a Battery Operated Digital Temperature Indicator which accepts a standard Pt100 RTD sensor and provides a crisp 4 digit LCD(approx height 12.5mm or 1/2"). When compared to the archaic Bimetallic indicators, operating costs are reduced since just one device covers the entire range of local temperature measurement(-100℃ to +700℃) with higher accuracy.

The 108KN is enclosed in a low cost UV resistant polycarbonate housing, which meets NEMA 4X and IP66/68 requirements.

Mounting

The Model 108KN can be either remotely mounted or mounted directly on the thermowell/nipple assembly. For mounting the unit on a wall or 2" pipe a wide choice of stainless steel brackets are also available. (See Page 5)

Functional Specifications

Display Units
℃ or ℉, switch selectable

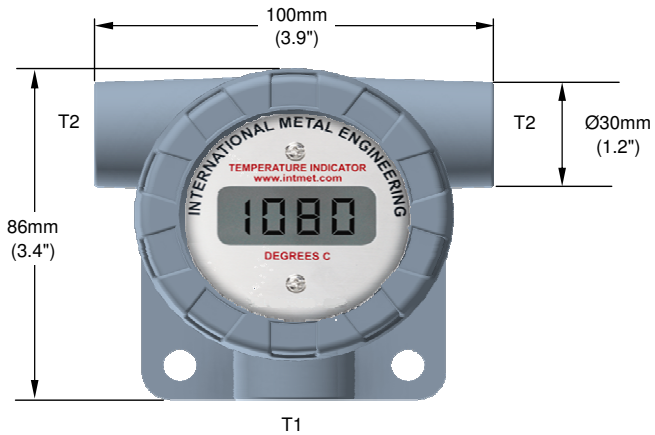
Battery Life
Approx. 24 Months using Lithium AA cells

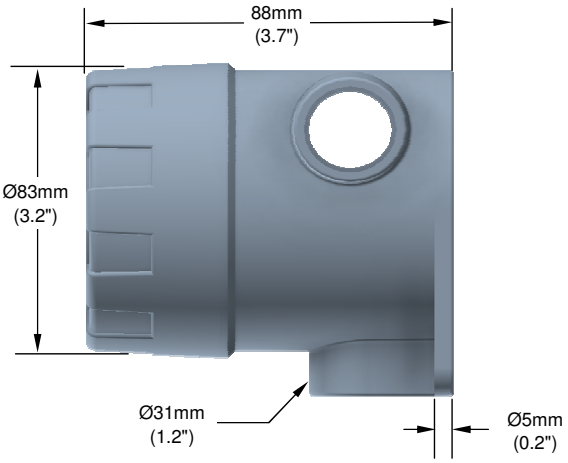
Calibration
Single point calibration for enhanced accuracy

Ordering Information

See page 6 for complete ordering information.

POLYCARBONATE ENCLOSURE DIMENSIONS





LOOP POWERED INDICATORS

LED LOOP POWERED INDICATOR 108MK

Introduction

IME Model 108MK Loop Powered Digital Indicators allow the process variable from any 4~20 mA current source to be monitored in engineering units. Since the unit derives its power from the loop, no additional power supply or wiring is needed. Because of its low voltage drop (3.7 Volts at 20mA), the model 108MK can be incorporated into almost any 2 wire loop, where local indication of a process variable is needed.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Calibration
Via membrane switches on front panel

Operating Temperature
-40℃ to +60℃

Mounting
Model 108MK can be mounted on a wall or 2" pipe (See page 5 for details).

LCD LOOP POWERED INDICATOR 108PP

Introduction

IME Model 108PP Loop Powered Digital Indicators allow the process variable from any 4~20 mA current source to be monitored in engineering units. Since the unit derives its power from the loop, no additional power supply or wiring is needed. Because of its low voltage drop (4.2 Volts at 20mA), the model 108PP can be incorporated into almost any 2 wire loop, where local indication of a process variable is needed.

Functional Specifications

Display Height
12.5mm (1/2") high, 4 digit LCD

Calibration
Via membrane switches on front panel

Operating Temperature
-20℃ to +60℃

Mounting
Model 108PP can be mounted on a wall or 2" pipe (See page 5 for details).

BACKLIT LCD LOOP POWERED INDICATOR 108EL

Introduction

IME Model 108EL Loop Powered Digital Indicators allow the process variable from any 4~20 mA current source to be monitored in engineering units. Since the unit derives its power from the loop, no additional power supply or wiring is needed. Because of its low voltage drop (3.5 Volts at 20mA), the model 108EL can be incorporated into almost any 2 wire loop, where local indication of a process variable is needed.

BACKLIT LCD Glass Display

The process variable and other relevant information is displayed on a white backlit display approx 32 x 23mm, which is visible in a dark environment. The 5 digit, 7 segment main display(digit height of approx 8mm) displays the process variable. An additional display(digit height of approx. 5mm) allows different engineering units to be displayed such as µs, s, pH, ppm, ℉, ℃, PSI, MPa, Bar, KPa etc. The percentage of full scale is displayed both digitally and on a 52 bar meter with a 2% resolution.

Functional Specifications

Calibration
Via push buttons on the front panel

Operating Temperature
-20℃ to +60℃

Mounting
Model 108EL can be mounted on a wall or 2" pipe (See page 5 for details).

TEMPERATURE TRANSMITTERS

FIELD MOUNTED INDICATING TEMPERATURE TRANSMITTER 108PN

Introduction

IME Model 108PN is a two wire indicating transmitter which converts input from a Type J/K Thermocouple or Pt100 sensor into a load independent 4-20mA process signal. A 4 digit red LED allows for local indication of Temperature, which is switch selectable to read ℃ or ℉.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Calibration
Via membrane switches on front panel

Operating Temperature
-40℃ to +60℃

Mounting
Model 108PN can be mounted on a wall or 2" pipe (See page 5 for details).

FIELD MOUNTED INDICATING TEMPERATURE TRANSMITTER WITH HART® 108HT

Introduction

Model 108HT is a digital, PC/Hand-Held programmable, isolated 2-wire transmitter with HART® protocol. The unit converts 8 types of thermocouples; 8 types of RTDs, configured as 2, 3 and 4 wires; potentiometer, resistor and millivolt inputs into a 4-20mA process current loop.

Backlit LCD Glass Display

The process variable and other relevant information is displayed on a white backlit display approx 32 x 23mm, which is visible in a dark environment. The 5 digit 7 segment main display(digit height of approx 8mm) displays the temperature. An additional display(digit height of approx. 5mm) allows the sensor details(PT100, Type K etc.,) to be displayed. The percentage of full scale is also displayed on a 52 bar meter with a 2% resolution and also digitally(5mm height).

Functional Specifications

Sensor
Thermocouple Type B, E, J, K, N, R, S, T, Cu50, Cu100,
Pt100, Pt500, Pt1000

Output Signal
4~20mA with HART® (Specify Revision 5 or 7)

Isolation
2KV AC between input and output

Mounting
Model 108HT can be mounted on a wall or 2" pipe (See page 5 for details).

FIELD MOUNTED TEMPERATURE INDICATING SWITCH WITH DUAL RELAYS 108PR

Introduction

Model 108PR allows two independent alarms to be assigned over the temperature range of the sensor. The unit will accept an input from a Pt100 RTD or Type J or K thermocouple 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 ℃ or ℉, it also serves as an accurate and repeatable indicating temperature switch.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Operating Temperature
-40°C to +60 °C

Alarm Output
2 sets SPDT, 1 form C, rated 5A @ 230V AC, 50/60Hz

Output Signal
Relay + 4 to 20 mA

Mounting
Model 108PR can be mounted on a wall or 2" pipe (See page 5 for details).

TEMPERATURE TRANSMITTER WITH DUAL RELAYS

TEMPERATURE INDICATING TRANSMITTER WITH DUAL RELAYS 108PK

Introduction

IME Model 108PK 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. In addition a 4-20mA Output proportional to temperature is available, making the 108PK into an indicating transmitter.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Operating Temperature
-40°C to +60 °C

Alarm Output
2 sets SPDT, 1 form C, rated 5A @ 230V AC, 50/60Hz

Output Signal
Relay + 4- 20 mA, Proportional to Temperature

Mounting
Model 108PK can be mounted on a wall or 2" pipe (See page 5 for details).

INDICATING PID TEMPERATURE CONTROLLER WITH DUAL RELAYS 108PM

Introduction

IME Model 108PM 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.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Operating Temperature
-40°C to +60 °C

Alarm Output
2 sets SPDT, 1 form C, rated 5A @ 230V AC, 50/60Hz

Output Signal
Relay + 4 to 20 mA DC PID Control

Mounting
Model 108PM can be mounted on a wall or 2" pipe (See page 5 for details).

FIELD MOUNTED PROCESS INDICATOR WITH DUAL RELAYS 108RR

Introduction

IME Model 108RR Digital Indicator allows the 4-20mA two wire signal from any transmitter to be monitored in engineering units and two corresponding alarms to be assigned. Both alarms can be assigned either high or low within the selected range. In additiion the Model 108RR allows the re-transmission of the 4-20mA signal.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Operating Temperature
-40℃ to +60℃

Alarm Output
2 sets SPDT, 1 form C, rated 5A @ 230V AC, 50/60Hz

Output Signal
Relay + 4 to 20 mA

Mounting
Model 108RR can be mounted on a wall or 2" pipe (See page 5 for details).

FLOW INDICATOR AND PROCESS INDICATOR

FLOW INDICATOR WITH DUAL RELAYS (BATCH CONTROLLER) 108FR

Introduction

IME Model 108FR is a Digital flow indicator that accepts a 4 to 20 mA signal or pulse from a flow meter or flow transmitter and displays the flow rate and the totalized flow. Two independent alarms can be assigned to either the flow rate or the totalized flow, making the unit ideal for batch control. In addition the unit also provides a 4 to 20mA two wire load independent signal proportional to flow.

Functional Specifications

Display Height for Flow Rate
7.6mm (0.3"), 4 Digit LED

Display Height for Totalized Flow
7.6mm (0.3"), 6 Digit LED

Operating Temperature
-40℃ to +60℃

Alarm Output
2 sets SPDT, 1 form C, rated 5A @ 230V AC, 50/60Hz

Output Signal
Relay + 4 to 20 mA

Mounting
Model 108FR can be mounted on a wall or 2" pipe (See page 5 for details).

FIELD MOUNTED PROCESS INDICATOR 108MN

Introduction

IME Model 108MN Digital Process Indicator allows the process variable from any transmitter to be monitored in the field. Since the unit can also provide 24V DC to the transmitter, the unit can be used to power any 2-wire transmitter in the field.

Functional Specifications

Display Height
10mm (0.4") high, 4 digit LED

Calibration
Via membrane switches front panel

Operating Temperature
-40℃ to +60℃

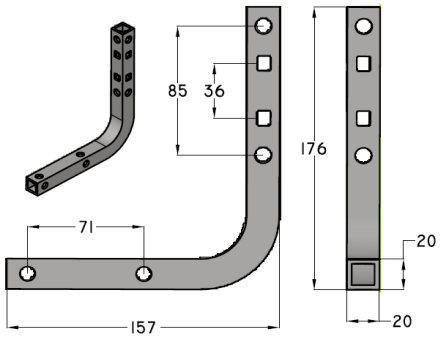
Mounting
Model 108MN can be mounted on a wall or 2" pipe (See page 5 for details).

STAINLESS STEEL 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.

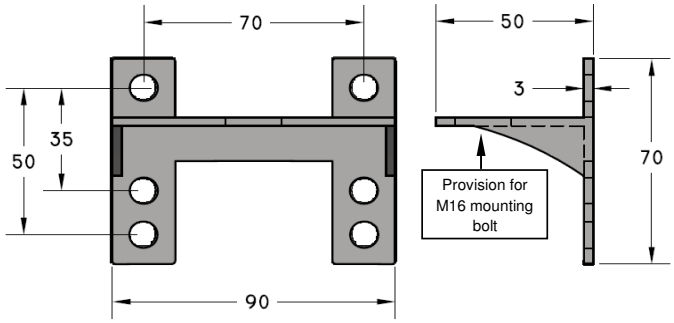


STAINLESS STEEL MOUNTING BRACKET 175PM

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, two "U" Bolts are required, which can be supplied optionally.



ORDERING INFORMATION FOR INDICATORS AND TRANSMITTERS

Model	Description
108KN	Field Mounted Battery Powered Digital Temperature Indicator
108MK	Field Mounted LED Loop Powered Indicator
108PP	Field Mounted LCD Loop Powered Indicator
108EL	Field Mounted LCD Loop Powered Indicator With Engineering Units
108PN	Field Mounted Indicating Temperature Transmitter
108HT	Field Mounted Indicating Temperature Transmitter with HART®
108PR	Field Mounted Indicating Temperature Switch With Dual Relays
108PK	Field Mounted Temperature Indicator with Dual Relays and 4- 20 mA Output
108PM	Field Mounted Temperature Indicator with Dual Relays and 4 to 20 mA PID Control Output
108RR	Field Mounted Process Indicator With Dual Relays
108FR	Field Mounted Flow Indicator With Dual Relays
108MN	Field Mounted Process Indicator With Power Supply For Transducer

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
04	½" NPT	¾" NPT
05	½" NPT	½" NPT
06	½" NPT	M20 x 1.5P
17	½" NPT	None
XX	OTHER(SPECIFY)	OTHER(SPECIFY)

Code	Size of Thread & Cable(mm) for Nylon Cable Glands
C00	No Cable Gland Required
C01	½" NPT, Cable Size 5-9mm dia, IME Model 108CG-N-01
C02	½" NPT, Cable Size 6-12mm dia, IME Model 108CG-N-02
C03	½" NPT, Cable Size 10-14mm dia, IME Model 108CG-N-03
C04	¾" NPT, Cable Size 9-16mm dia, IME Model 108CG-N-04
C05	¾" NPT, Cable Size 13-18mm dia, IME Model 108CG-N-05
C06	M20 x 1.5P, Cable Size 5-9mm dia, IME Model 108CG-N-06
C07	M20 x 1.5P, Cable Size 6-12mm dia, IME Model 108CG-N-07
C08	M20 x 1.5P, Cable Size 10-14mm dia, IME Model 108CG-N-08

Code	Accessories (See Page5)
RC	Model 175RC Mounting Bracket
PM	Model 175PM 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)

108PR	02	C02	RC	01	← Typical Model Number

Note:

1 Ports with M16 x 2P thread are not through holes, they are for Mounting only.

NYLON CABLE GLANDS 108CG

THREAD SIZE	CABLE SIZE(mm)	MODEL NO
½" NPT	5-9	108CG-N-01
	6-12	108CG-N-02
	10-14	108CG-N-03
¾" NPT	9-16	108CG-N-04
	13-18	108CG-N-05
M20 x 1.5P	5-9	108CG-N-06
	6-12	108CG-N-07
	10-14	108CG-N-08

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