

# FLOWMETERS BY HOFFER

Perfecting Measurement™



Conditioners-Amplifiers-Transmitters

Product Bulletin CAT3-002M

## TECHNICAL DATA SHEET

### OUTSTANDING FEATURES

- ◆ DC or AC powered.
- ◆ Pulse and analog output scaled per unit of measure.
- ◆ Optional Hi and Lo alarms.
- ◆ Flowmeter Linearization.
- ◆ Factory configured when purchased with a Hoffer flowmeter.
- ◆ Several Enclosure options.
- ◆ CE Compliant.
- ◆ Windows® Configuration Software

### SPECIFICATIONS

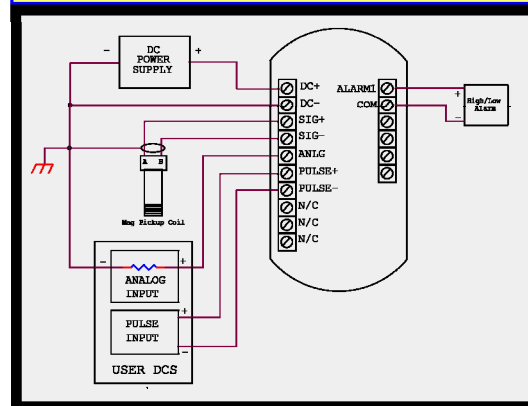
<b>Input Signal Type:</b>	Magnetic pickup, MCP pickup, Contact Closure, Pulse.
<b>Input Frequency Range:</b>	0.2 Hz to 4 KHz.
<b>Signal Level:</b>	10 mV rms to 30 Vdc.
<b>Power Supply:</b>	13-30 Vdc, 100-240 Vac. Reverse polarity protection.
<b>Analog Output:</b>	4-20mA, 1-5V.
<b>Analog Output Response Time:</b>	1/8 sec. (Limited by frequency and MST settings).
<b>Load Resistance:</b>	Max 650 Ohms at 24 Vdc.
<b>Accuracy:</b>	±0.02% of full scale.
<b>Temperature Drift:</b>	40 ppm/deg. C.
<b>Pulse Output:</b>	0-5V, 0-10V, Open Collector, AC Square. Internal pull up 2.7 k Ohms. Recommended minimum load resistance 50 k Ohms.
<b>Pulse Scaling:</b>	Divide by 1,10,100 per flow unit of measure.
<b>Hi/Lo Alarm:</b>	Relay (2A, 30Vdc), 0-5V, Open Collector (0.5A, 30V).
<b>Communications:</b>	RS232 port for configuration and diagnostics.
<b>Operating Temperature:</b>	T5 & STD: $-40^{\circ}\leq T_a\leq +85^{\circ}\text{C}$ . T6: $-40^{\circ}\leq T_a\leq +79^{\circ}\text{C}$ .
<b>Humidity:</b>	0-90% Non-Condensing.
<b>Enclosure:</b>	Extruded Aluminum, DIN Rail Mount, Explosion-Proof.
<b>Regulatory:</b>	CE Compliant.
<b>Up to 20 Point Linearization.</b>	
<b>Windows® configuration software for device configuration, diagnostics and monitoring.</b>	



### PRODUCT DESCRIPTION

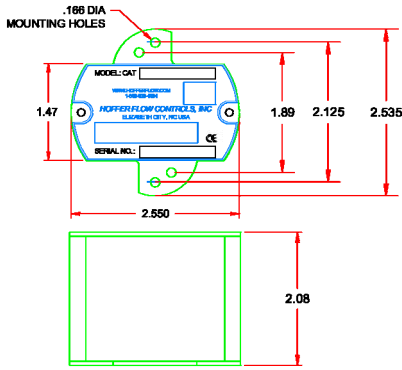
The CAT3 is a DC or AC powered, microprocessor controlled transmitter. It outputs a pulse scaled per unit of flow, and analog signal proportional to flow rate. The CAT3 can be configured with High and Low alarms.

### INSTALLATION WIRING

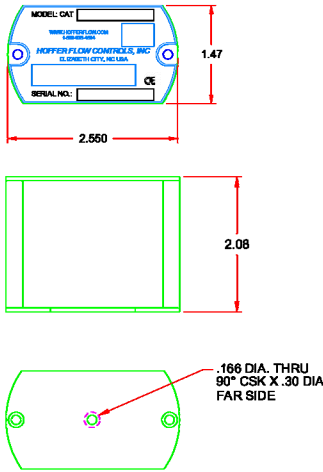


# ENCLOSURE OPTIONS

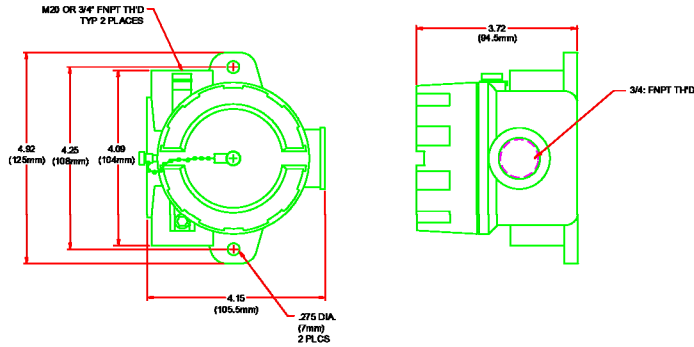
## General Purpose Enclosure



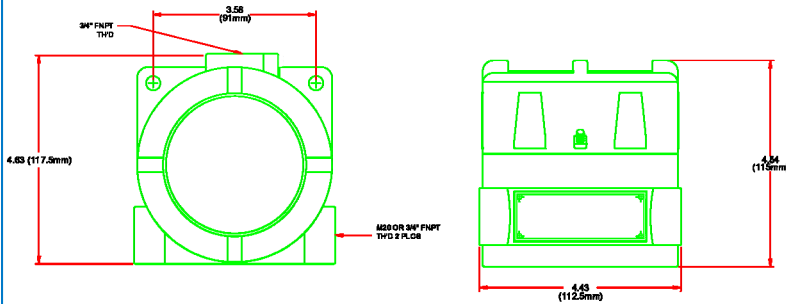
## Din Rail Enclosure



## E3 Enclosure



## E6 Enclosure



### Style E3 & E6 Certified Ratings

#### CSA/FM:

Divisions: Class I, Division 1, Groups BCD; Class II, Division 1, Groups EFG; Class III; Type 4X;  
Zones CAN: Ex d IIB+H<sub>2</sub> T6/T5; Gb; Ex tb T80°C/T86°C IIIC Db; IP66;  
Zones USA: Class I, Zone 1, AEx db IIB+H<sub>2</sub> T6/T5; Gb; Class I, Zone 21, AEx tb T80°C/T86°C IIIC Db; IP66

#### ATEX/IECEx:

II 2 G Ex db IIB+H<sub>2</sub> T6/T5 Gb  
II 2 D Ex tb IIIC T80°C/T86°C Db; IP66  
T6: -40°C ≤ Ta ≤ +79°C; T5: -40°C ≤ Ta ≤ +85°C

## ORDERING INFORMATION

Model CAT3 - ( ) - ( ) - ( ) - ( ) - ( ) - ( ) - ( )

### PULSE INPUT

- 1 MAG COIL, DRY CONTACT
- 2 MC3P
- 3 ISOLATED PULSE, RPM, RPR AND HALL EFFECT COILS

### LINEARIZED PULSE OUTPUT

- 1 0-5 TTL/CMOS
- 2 OPEN COLLECTOR
- 3 OPEN COLLECTOR WITH PULL UP TO V+
- 4 AC SQUARE WAVE
- 5 0-10V SQUARE WAVE

### LINEARIZED ANALOG OUTPUT

- 1 4-20MA
- 5 1-5 VDC

### POWER SUPPLY

- DC 13-30 VDC  
AC 100-240 VAC (ALARM OPTION NOT AVAILABLE WHEN (AC) IS SELECTED)

### ALARM OUTPUT

- 4 HIGH OPEN COLLECTOR
  - 5 HIGH TTL/CMOS
  - 6 HIGH RELAY ONE SPDT, CONTACT RATED @ 2A 30V
  - 7 LOW OPEN COLLECTOR
  - 8 LOW TTL/CMOS
  - 9 LOW RELAY ONE SPDT, CONTACT RATED @ 2A 30V
- NOTE: WHEN ALARM SELECTED, AC POWER IS NOT AVAILABLE.

### ENCLOSURE STYLE

- 1 GENERAL PURPOSE
  - D 2" LONG DIN RAIL MOUNT SINGLE UNIT. UP TO 20 CAT3 UNITS CAN BE MOUNTED ON A SINGLE RAIL
  - E3(\*) EXPLOSION-PROOF
  - E4 EXPLOSION-PROOF FOR USE WITH AC POWERED CAT ONLY (NOT Exd SYSTEM CERTIFIED)
  - E6(\*) STAINLESS-STEEL EXPLOSION-PROOF ENCLOSURE
- \* INSERT "M" FOR M20 THREAD. M20 THREAD NOT AVAILABLE IN CANADA FOR STYLE E6 ENCLOSURES.  
† FOR CERTIFIED SYSTEM SPECIFY "CFX" OPTION WHEN MOUNTED ON FLOWMETER OR "C" OPTION FOR REMOTE MOUNT.

### SPECIAL FEATURES

- CE MARK REQUIRED FOR EUROPE  
SP ANY SPECIAL FEATURES THAT ARE NOT COVERED IN THE MODEL NUMBER, USE A WRITTEN DESCRIPTION OF THE -SP  
MIL DESIGNED TO MEET EMC STDS EN55011-1992 AND EN61326-1:1997  
CFX 6.75" LONG RISER AND UNION FOR EXPLOSION-PROOF SYSTEM CERTIFIED ENCLOSURES MOUNTED ON TURBINE. USED WITH "X" RISER TURBINE OPTION. NOTE: IF PROCESS TEMP IS < -40°C OR > 79°C, EX-PROOF ENCLOSURE MUST BE MOUNTED REMOTELY.  
C REMOTE MOUNTED FOR EXPLOSION-PROOF SYSTEM CERTIFIED ENCLOSURE. NOTE: "X" RISER, CERTIFIED UNION, REDUCER AND ENCLOSURE (TO BE SPECIFIED) AND MOUNTED ON FLOWMETER.  
X NO SPECIAL FEATURES

### NOTES:

- 1) IF ENCLOSURE IS MOUNTED ON TURBINE FLOWMETER, RISER MUST BE SPECIFIED ON METER.
- 2) IF THE CAT IS SHIPPED UNCALIBRATED OR IS RECALIBRATED IN THE FIELD, THE WINDOWS BASED SETUP KIT MUST BE PURCHASED.
- 3) FOR UL LISTED EXPLOSION-PROOF ENCLOSURES CONTACT FACTORY.

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The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.



Hoffer Flow Controls Quality Management System

