

# Electronic Accessories

# **HOFFER** **Flow Controls**

Perfecting Measurement™

## Digital Flow Computers & Transmitters for Measurement Applications



**HIT-4 SERIES & HRT1**

**HIT-4G**



Shown in Aluminum enclosure style

**HIT-4U**



Shown in NEMA 4X enclosure style

**HIT-4L**



Shown meter mounted NEMA 4X enclosure style

**HRT1**



Shown in Aluminum enclosure style

The **HIT-4 Series**: Compensated and uncompensated liquid and gas flow computers with rate indication, dual totalizers, MODBUS communications and Data Logging.

Key features include:

- Loop or battery powered indicator with data logger.
- 20 point linearization standard.
- Configurable thru the enclosure via magnetic pointer.
- Dual Set Point Alarm output for rate or total.
- Several enclosure options are available including the explosion-proof enclosure (North America, ATEX & IEX)

The **HRT1**: Rate Indicator and Totalizer with HART® communications protocol. The unit is supplied with loop powered 4-20mA output and features:

- DC or AC power options available.
- 20 point linearization standard.
- Alarm output for rate or total.
- RS 232 Port for Configuration and Monitoring.
- Windows configuration software.
- Several enclosure options are available including the explosion-proof enclosure (North America, ATEX & IEX)

FEATURES FOR SPECIFICATIONS AND ORDERING:	HIT-4U	HIT-4G	HIT-4L	HRT1
<b>Type:</b>				
Uncompensated Liquid Volume	•		•	•
Uncompensated Gas Volume	•	•		•
Temperature/Pressure Compensated Liquid (Standard)			•	
Temperature/Pressure Compensated Gas (Standard)		•		
Supercompressibility Compensation (Standard)		•		
Universal Viscosity Correction (Standard)			•	
<b>Enclosure Style Options:</b>				
*NEMA 4X Enclosure (Front Panel or Keypad mounted behind Clear Cover)	•	•	•	•
Aluminum Enclosure with Clear Cover (IP66)	•	•	•	•
NEMA 1 Enclosure (Mounted to Outside of Clear Cover)				•
NEMA 4X Enclosure (Mounted Behind Clear Cover with Sunshade)				•
*Stainless Steel Enclosure (All Conduit Ports Are 3/4" FNPT)	•	•	•	•
Panel Mount Enclosure (IP40)	•	•	•	•
Panel Mount Enclosure w/ Clear Door & Lock (IP40)	•	•	•	•
Panel Mount Enclosure w. Clear Flexible Front Cover (IP65 Front Only)	•	•	•	•
<b>Options for Enclosures Denoted with *</b>				
M20 Conduit Thread Ports (Not Allowed For Use in Canada)	•	•	•	•
Sunshade	•	•	•	•
<b>Power Supply Options:</b>				
Two-wire, 8 to 24 VDC Loop-Powered, 4-20 mA Output (Mag Coil Only)	•	•	•	
HART Protocol Two or Three-wire, 8 to 24 VDC, 4-20 mA Output				•
Battery Powered (Mag Coil Only)	•	•	•	
Three-Wire 12 to 24 VDC Powered (Includes 4-20 mA Output)	•	•	•	
100-240 VAC (Includes 4-20 mA Output) - Not Available in Ex-Proof	•	•	•	
<b>Pulse Input Options:</b>				
Magnetic Coil, Dry Contact	•	•	•	•
Isolated Pulse, RPM, RPR & Hall Effect Coils	•	•	•	•
Modulated Carrier Coil (12-24 VDC and AC Powered Options Only)	•	•	•	
<b>Pulse Output Options (Requires 3-Wire DC or AC Configuration):</b>				
Scaled 0 - 5V TTL/CMOS	•	•	•	•
Scaled Open Collector	•	•	•	•
Scaled 8-30 VDC With Pullup To VDC+	•	•	•	•
Raw Frequency Pulse Option for Any Pulse Output	•	•	•	•
<b>Alarm Options (Requires 3-Wire DC or AC Configuration):</b>				
0 - 5V TTL/CMOS	•	•	•	•
Open Collector	•	•	•	•
8-30 VDC With Pullup To VDC+	•	•	•	•
<b>Meter Mounting Options:</b>				
Remote Mounted	•	•	•	•
Meter Mounted	•	•	•	•
High or Low Temperature Meter Mounted	•	•	•	•
Remote Pipe Kit Mounting (2" Pipe Size Kit Standard)	•	•	•	•
<b>Hazardous Area Certification Options:</b>				
<b>Canada/US Zones HRT1 Only</b>				•
Ex db IIB+H2 T6; Gb; Ex tb IIIC T72°C Db: IP66				
Class I, Zone 1, AEx db IIB+H2 T6 Gb IP66				
Zone 21, AEx tb IIIC T72°C Db: IP66				
<b>ATEX/IECX - HRT1 Only</b>				•
II 2 G Ex db IIB+H2 T6 Gb IP66				
II 2 D Ex tb IIIC T72°C Db IP66				
T1 - T6 = -40°C to +70°C				
<b>Canada/US Zones HIT-4 Only</b>	•	•	•	
Ex db IIB T6; Gb; Ex tb IIIC T80°C Db: IP66				
Class I, Zone 1, AEx db IIB, T6 Gb IP66				
Zone 21, AEx tb IIIC T80°C Db: IP66				
Class I, Div 1, GR C, D; Class II, Div 1, GR. E, F, G; Class III, T6: Type 4X				
<b>ATEX/IECX - HIT-4 Only</b>	•	•	•	
II 2 G Ex db IIB T6 Gb IP66				
II 2 D Ex tb IIIC T80°C Db IP66				
<b>Communication Port: HIT-4 ONLY</b>				
Internal Terminal Block - RS485/MODBUS. Data Log/Configuration/Monitoring	•	•	•	
External USB Connector - RS485/MODBUS. Data Log/Config. - NEMA 4X Only.	•	•	•	

# CONDITIONERS, AMPLIFIERS, TOTALIZERS

## CAT SERIES



Shown in General Purpose enclosure style

**CAT-1** The CAT1 is a microprocessor controlled 2-wire 4-20mA transmitter. The CAT1 converts a low level, frequency signal from a flowmeter sensor into an analog 4-20mA output. The output is proportional to the flow rate.

- Loop powered 4-20mA.
- 20-point linearization.
- Windows configuration software.

**CAT-2** The CAT2 is a versatile DC or AC powered transmitter that can be interfaced with any Hoffer flow sensor. It provides a pulse output and analog signal proportional to the flow rate. The CAT2 can be configured with high and low alarms.

- DC or AC powered transmitter.
- Pulse and analog output.
- Optional hi and low alarms.

**CAT-3** The CAT3 is a DC or AC powered, microprocessor controlled transmitter. The CAT3 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 and up to 20-point linearization.

- DC or AC powered transmitter.
- Pulse and analog output scaled per unit of measure.
- Flowmeter linearization.
- Optional hi and low alarms.
- Windows configuration software.

FEATURES FOR SPECIFICATIONS AND ORDERING:	CAT1	CAT2	CAT 3
<b>Pulse Input Options:</b>			
Magnetic Pickup Coil	•	•	•
RF Modulated Carrier Pickup Coil		•	•
Isolated Pulse and Hall Effect Type Coils		•	•
<b>Pulse Outputs:</b>			
0 - 5 VDC TTL/CMOS Pulse Output		•	•
Open Collector Output		•	•
Open Collector Output w/Pull Up to +V		•	•
AC Square Wave		•	•
0-10 VDC Square Wave		•	•
<b>Analog Output Options:</b>			
Loop-Powered, Two-wire 4-20 mA	•		
Three-wire 4-20 mA		•	•
Three-wire 0-5 VDC		•	•
Three-wire 0-10 VDC		•	•
Three-wire 1-5 VDC		•	•
<b>Flowmeter Linearization:</b>			
Up to 20 point	•		•
<b>Power Supply</b>			
Two-wire, 8 to 24 VDC Loop-Powered	•		
13-30 VDC		•	•
100-240 VAC (Alarm option not available when selected)		•	•
<b>Alarm Output Options:</b>			
High/Low Open Collector		•	•
High/Low TTL/CMOS		•	•
High/Low Relay Two SPDT, Rated to 2A @ 30V		•	•
High Open Collector		•	•
High Relay One SPDT, rated to 2A @ 30V		•	•
Low Open Collector		•	•
Low Relay One SPDT, Rated to 2A @ 30 V		•	•
<b>Enclosure Options:</b>			
General Purpose	•	•	•
DIN Rail Mounting	•	•	•
NEMA 4X, Aluminum	•	•	•
*Explosion-Proof	•	•	•
<b>Special Features:</b>			
CE Mark for European Union	•	•	•
*Explosion-Proof Meter Mounted	•	•	•
*Explosion-Proof Remote Mounted	•	•	•
<b>Hazardous Area Certification * :</b>			
Class I, Division 1, Groups BCD; Class II, Division 1, Groups EFG; Class III; Type 4X; Zones FP CAN: Ex d IIB+H2 T6/T5; Gb; Ex tb T80°C/T86°C IIIC Db: IP66	•	•	•
Zones FP USA: Class I, Zone 1, AEx db IIB+H2 T6/T5; Gb ; Class I, Zone 21, AEx tb T80°C/T86°C IIIC Db: IP66			
ATEX/IECEx: Ex db IIB+H2 T6/T5 Gb; Ex tb IIIC T80°/T86°C Db			

## FLOW CONDITIONERS AND CONVERTERS

### PET SERIES



Shown with ELBY enclosure style

The PET Series Converters receives frequency input and converts it to a proportional 4-20mA or 0-10V analog output. It has been designed to fit a compact "ELBY" enclosure. This series is designed for use with the Lo-Co Series of low cost flowmeter

The PET Series Mag Preamps are designed to convert low level sinusoidal signals into stable square wave pulses. The signal conditioners are built to fit a compact "ELBY" type enclosure.

### Digital to Analog Converter Mag Type

	FEATURES
PET-1	• 0 to 10 VDC analog output
PET-3	• 4 to 20 mA analog output 3 wire
PET-7	• 4 to 20 mA analog output 2 wire with improved EMI noise immunity

### Preamp Signal Conditioner Mag Type

	FEATURES
PET-4	• TTL/CMOS (0-5 VDC)
PET-5	• 0-10 VDC Square Pulse
PET-6	• Open Collector



Shown in Panel Mount enclosure style

## Nova-Flow Computers

### Nova-Flow Batch Controller

### Nova-Flow Energy Calculator

The Nova-Flow Series of flow computers are highly flexible, modular computers designed for your specific flow measurement needs. With more than 500,000 unique configurations possible, the potential applications for these devices are almost limitless. Below are three common configurations. For more information see our Nova-Flow Series brochure NF-XXXX. For assistance with full specification of a Nova-Flow computer for your exact application, please contact our local Hoffer Flow Controls' representative or the factory.

#### Volumetric or Mass Flow Computer Rate Indicator/Totalizer for Liquids and Gases

The Nova-Flow multi-channel modular flow computer.

Features:

- Up to four flow meter inputs.
- Two each temperature and pressure inputs.
- Two alarm/relay outputs.
- Two level password protection.
- Modbus Protocol.
- Temperature/Pressure/Density protocol.
- 20- Point linearization.

#### Volumetric or Mass Batch Controller Flow Computer for Liquids and Gases

The Nova-Batch modular flow computer for liquid and gas batch control.

Batch Controller Features:

- Two Stage Batch Control.
- One flowmeter input.
- One each temperature and pressure input.
- Local display of flow rate, accumulated total and batch total.
- Additional options available, depending on application requirements.

#### Volumetric or Mass Energy Calculator Flow Computer for Liquids and Gases

The Nova-Energy modular flow computer for energy measurement.

Energy Calculator Features:

- Two flowmeter inputs.
- Two each temperature and pressure inputs.
- Two alarm/relay outputs.
- Additional options available, depending on application requirements.

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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

