



Badger Meter

Electronic Unscaled Transmitter

Models PEPT-1 and EPT-1XP

DESCRIPTION

The Models PEPT-1 and EPT-1XP transmitters are two-wire electronic, high resolution pulse transmitters designed for use with the Badger Meter Disc and OP meter lines.

The unscaled pulse output is equal to 21 pulses for every revolution of the flow meter's measuring element. A 1/2 in. OP meter with this transmitter will produce 1170 pulses for every gallon of fluid passing through the meter.

This output can be connected to almost any controller or device that has scaling capabilities and can provide 12...15V DC for operation of the transmitter. Scaling allows you to convert the unscaled pulse to standard engineering units, such as one pulse per gallon or ounce.

OPERATION

The flow of fluid through the meter causes an internal magnet to rotate. This magnet is coupled to an optical disc which is located in the transmitter housing.

The rotation of this disc is electronically sensed, producing pulses which are directly proportional to the quantity of fluid passing through the meter.

The pulses are sent to a signal processing board where they are conditioned and passed on to a controller or other scaling device. When used with the provided interface module, the amplitude of the output pulse alternates between 1.4 and 10V DC. This pulse is compatible with 12V CMOS devices such as the Badger Meter PC-100 controller.

APPLICATIONS

This transmitter will interface with any controller or flow computer with scaling capabilities that will accept a 10V DC pulse.

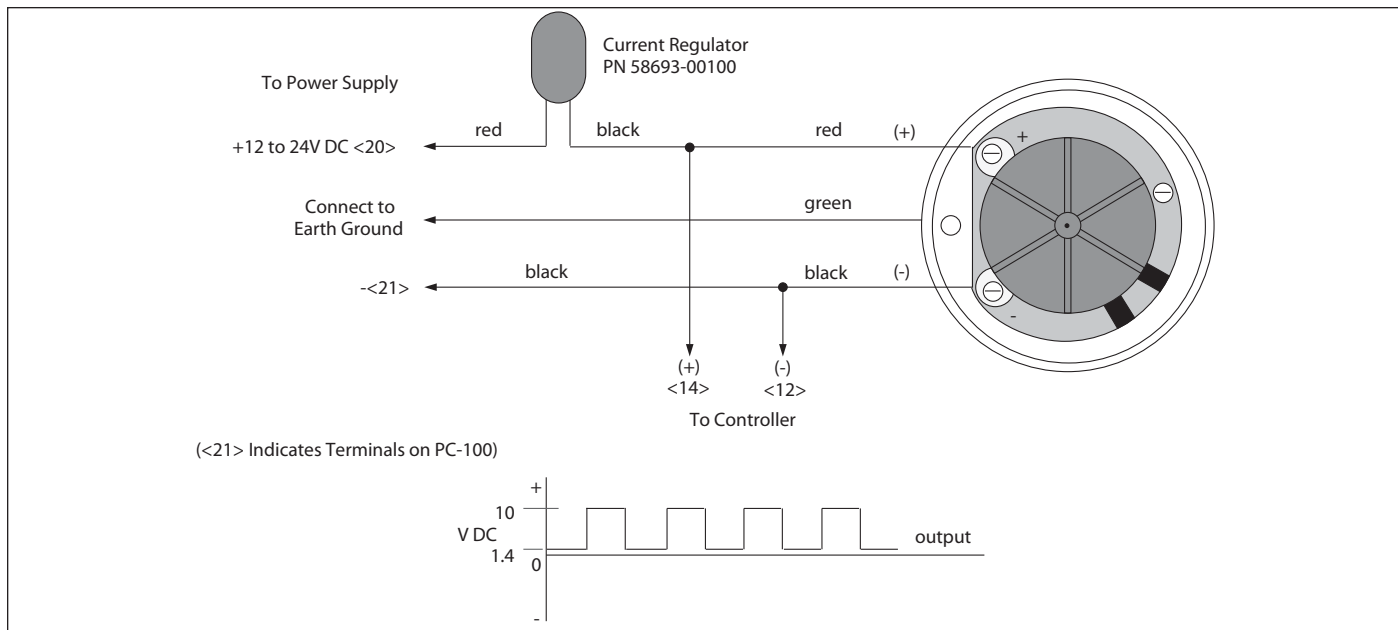
The transmitter can be used to provide counts to a controller in a batch operation to a counter for inventory control or to an indicator for flow rate control.



EPT-1XP (rear) and PEPT-1 (front)

FEATURES

- All solid-state circuitry, long life, high reliability
- High resolution (see chart on back page)
- EPT-1XP only: CSA listed Class I, Division 1, Group D
- Field retrofit to most Badger Meter flow meters
- Rugged, cast bronze housing (EPT-1XP only)
- Corrosion-resistant plastic enclosure (PEPT-1 only)
- Watertight, NEMA 4: EPT-1XP
NEMA 4X rating: PEPT-1
- Output compatible with most flow controllers



TRANSMITTER SPECIFICATIONS

Housing

Material	Cast bronze (EPT-1XP)
Mounting	Bayonet base
Connections	18-gauge stranded wire
Protection	Watertight, dust tight, NEMA 4, 7 & 9
CSA Listed	Class I, Division 1, Group D
Material	Corrosion-resistant plastic (PEPT-1)
Mounting	Bayonet base
Connections	18-gauge stranded wire
Protection	NEMA 4X

Operation

Type	Solid state
Pulse Generation	Infrared LED/ slotted optical disc
Resolution	21 pulses per revolution of disc
Operating Temperature	- 40...140° F (- 40...60° C)

Electric

Model EPT-1XP	Rated input 23 mA DC max., output 14V DC max.
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SCALE FACTOR CALCULATION

The scale factor equals:

$$\frac{\text{Desired number of pulses per gallon}}{\text{Transmitter output (pulses per gallon)}}$$

The following table lists meter factors for various types and sizes of meters that are compatible with this transmitter. These numbers are approximate. Refer to the number stamped on the transmitter when figuring scale factors.

Size (Inches)	Badger Meter Model	Max. Flow (GPM)	Transmitter Output (Pulse/Gal.)	Transmitter Output (Pulse/Liter)
1/2	OP	6	1170.54	309.22
1	OP	30	402.36	106.29
2	OP	100	107.94	28.51
5/8	M25 RCDL	25	1041.60	275.19
3/4	M35 RCDL	35	665.03	175.70
1	M40 RCDL	40	471.45	124.56
1	M70 RCDL	70	245.70	64.91
1-1/2	M120 RCDL	120	124.95	33.01
2	M170 RCDL	170	76.46	20.20

Control. Manage. Optimize.

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