Portable Pulse Transmitter
Model PE-P
Bulletin SS01061 Issue/Rev. 0.4 (12/97)

Smith Meter® Transmitters

The Smith Meter® Model PE-P Transmitter is a photo-electric rotary transmitter that attaches to a right-angle drive installed in the meter stack and provides a digital pulse signal for proving and/or remote totalizing.

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<th>Features</th>
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<td>• High Resolution – 1,000 pulses per revolution for optimum meter proving accuracy.</td>
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<td>• Portable – Attaches easily to the Smith Meter® Right-Angle Drive for use as required.</td>
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Principle of Operation

The PE-P Portable Transmitter incorporates a precisely-slotted disk which rotates through an optical switch containing an infrared LED light source and a light sensitive diode. The diode detects the passage of slots by infrared light transmission through the disk slots. The resultant light pulses are then converted into a positive square wave output.

Applications

The Smith Meter® Model PE-P Transmitter is used to transmit a high-resolution pulse train from a positive displacement meter to an electronic proving counter (e.g., Smith Meter® Model CPC-22). The transmitter is normally connected to a portable mechanical displacement prover equipped with the proving counter and is attached to a right-angle drive mounted on the meter.

Use only with 99% meter gearing and standard calibrator (standard for meters with mechanical accessories), with 100% meter gearing and dummy calibrator (optional), or with ATG (not ATC).

Specifications

Electrical Characteristics

Input Power:
- Voltage: +12 Vdc ±10%.
- Maximum Operating Current: 100 mA.

Output Characteristics

Pulse Output Signal: 1,000 pulses per revolution of the input shaft, 0-12 Vdc square wave, 10 mA sink.
Prover Signal: 1 pulse per revolution of the input shaft, 0-12 Vdc square wave, 10 mA sink.
On Time: 50%.

Mechanical Characteristics

Operating Speed: 0 to 1,200 rpm (0 to 20 kHz).
Typical Running Torques: 5 in/oz maximum.
Housing: Designed to NEMA 4 standards, watertight, dust-tight.

Environment

Relative Humidity: 95%.
Temperature Range: -32°F to 131°F (-0°C to 55°C).

Note: The PE-P Transmitter is not approved for use in hazardous locations; it is to be used only in areas that are known to be non-hazardous.
Dimensions
Inches (Millimeters)
Dimensions — Inches to the nearest tenth (millimetres to the nearest whole mm), each independently dimensioned from respective engineering drawings.

![Diagram of PE-P Transmitter and Right-Angle Drive]

Figure 1

Installation
1. The PE-P Transmitter must be installed on a right-angle drive attachment, Part Number 550408-003 (1:1) or 550408-002 (1:2 overdrive) (Figure 1), not supplied.
2. Be sure the output coupling matches the one in Figure 3; if not, order the correct coupling (P/N 514082-002) and groove pin (006317-002) from Smith Meter® parts.
3. Align the shaft and pin with the output coupling of the right-angle drive. Push all the way in. Do not force.
4. Slide the hex nut on the transmitter up to the male fitting of the right-angle drive and tighten.
5. Connect the output of the transmitter to the desired device. The transmitter output connector is an Amphenol, four-in, female, MS-3102-A-14S-2-S (Figure 2) which mates with an MS-3106-A-14S-2-P mating straight plug.
6. See Figure 4 for typical output circuit and signal.

![Diagram of Electrical Connections]
Figure 2 – Electrical Connections

![Diagram of Output Coupling for PE-P Portable Pulser]
Figure 3 – Output Coupling for PE-P Portable Pulser

![Diagram of Output Circuit]
Figure 4 – Output Circuit

Revisions included in SS01061 Issue/Rev. 0.4 (12/97):
Page 1: Specified standard and optional configurations in Applications section.
March 2019 - Updated branding and contact information.
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