

Electro-Sensors

Installation & Operating Instructions

Totalizer Counter

PT-700

The model PT-700 is a complete totalizer counter system that provides visual count indication up to seven digits with reset through use of a front panel push button. The compact DIN panel-mount package provides easy installation with standard 115Vac, optional 220Vac or 12/24Vdc. Division prescale 1-99 can be field set on rotary BCD switches.

Production Totalizing

A pulse signal is generated as a shaft rotates. A transducer picks up the pulse and transmits it to the counter circuitry where it is converted to units of production (feet, gallons, pounds, parts, etc.), displayed as a production total.

Optional Inputs

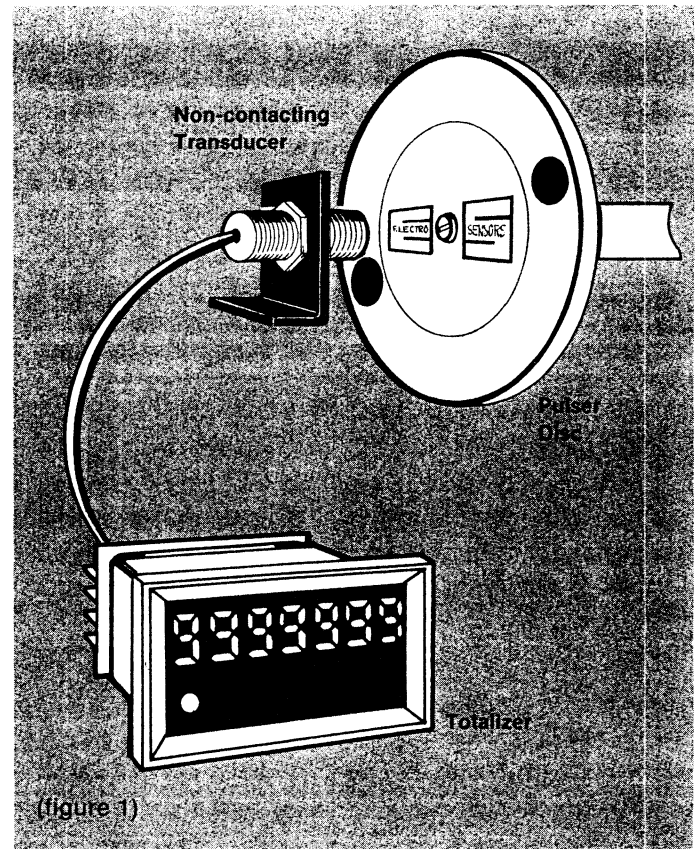
Open Collector/Contact Closure

The optional inputs provide single event totalizing capability.

INSTALLATION INSTRUCTIONS

Pulser Disc

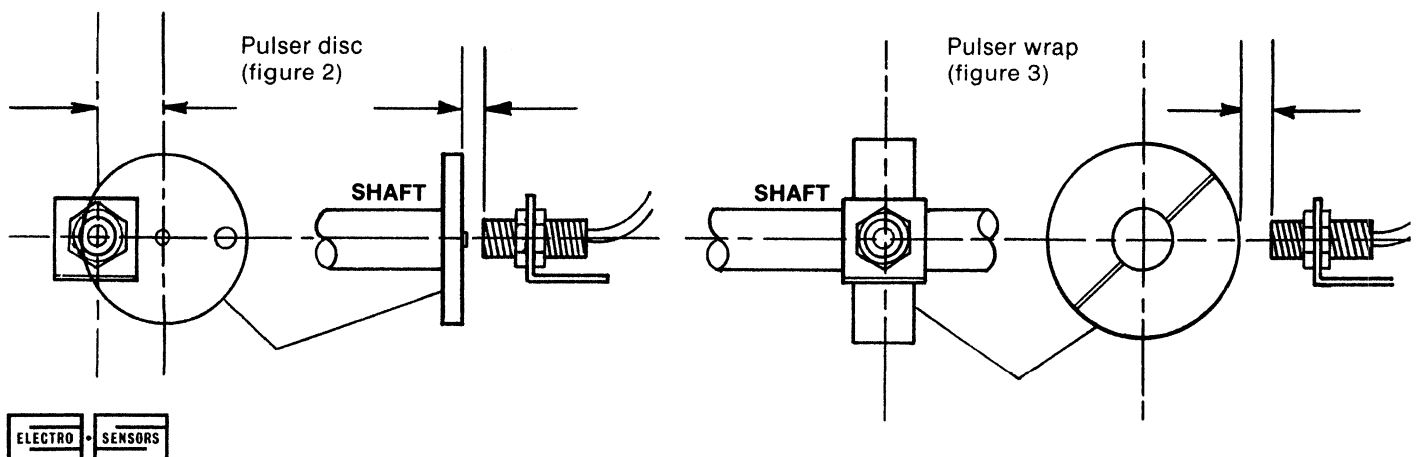
The end of the shaft to be monitored must be center drilled to a depth of 1/2" with a No. 21 drill and tapped for 10-32UNF. After applying Loctite® or a similar adhesive on the threads to keep the pulser disc tight, the pulser disc should be attached, decal side out, with a 10-32UNF machine screw. (See figure 2.)



(figure 1)

Pulser Wrap

When the wrap is shipped, four allen-head cap screws hold the two halves of the wrap together. These screws must be removed so that the wrap is in two halves. Place the halves around the shaft and screw together so the wrap fits the shaft tightly. Wraps are custom made to fit a specific diameter. (See figure 3.)

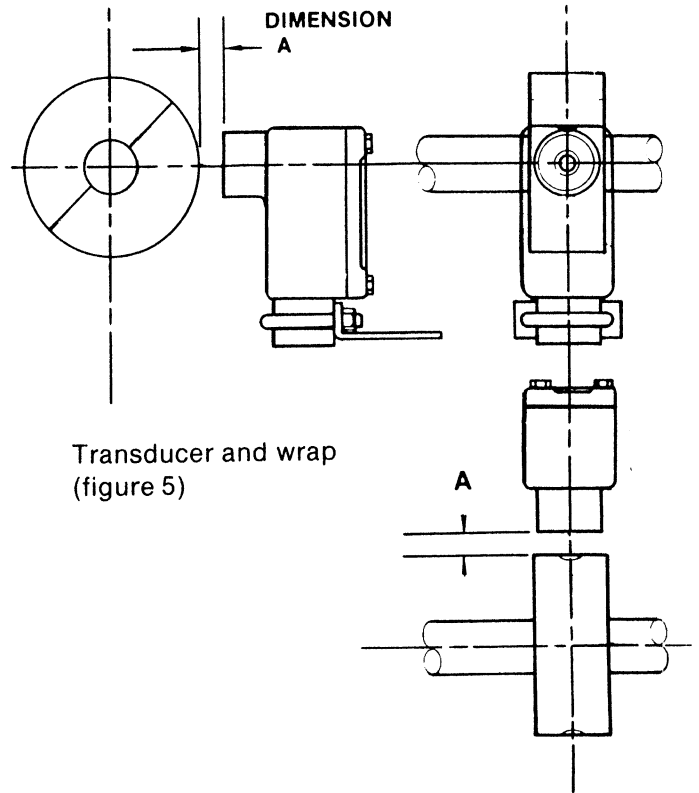


Transducer Installation

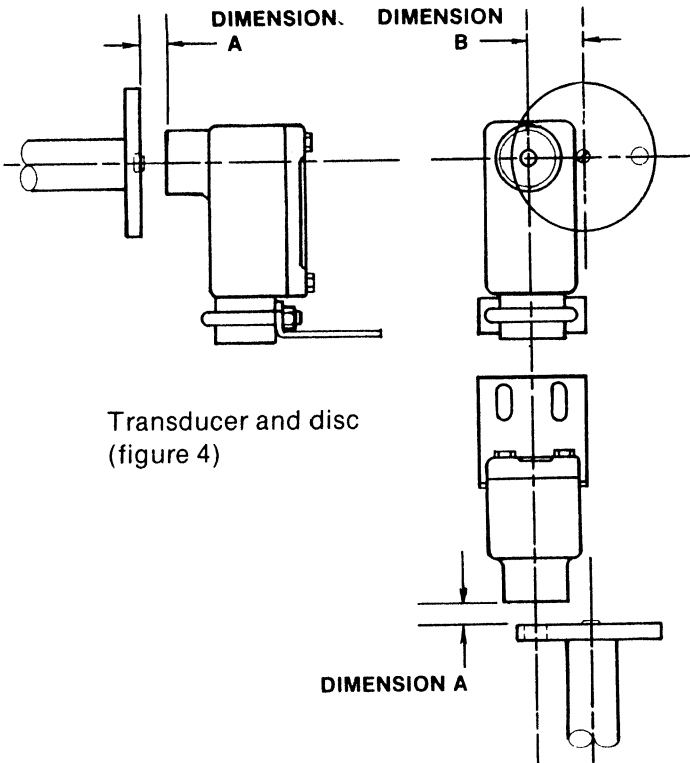
The standard transducer is supplied with a mounting bracket and two jam nuts on the transducer itself. The optional explosion proof transducer is supplied with a slotted mounting bracket. Transducer should be installed so the center line of the transducer passes through the center line of the magnets as they rotate.

When using a disc (figure 4) the pick-up gap (dimension A) should be adjusted between 1/16" and 1/4" for proper operation. This is achieved by adjusting the jam nuts on the standard transducer and adjusting position of the optional explosion proof transducer through use of the slotted mounting bracket. Dimension B is 15/16" from the center hole of a disc.

When using a wrap (figure 5), dimension A must be between 1/16" and 1/4".



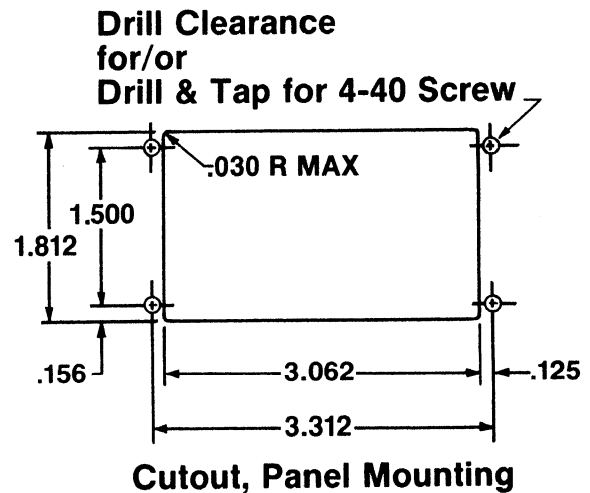
Transducer and wrap (figure 5)



Transducer and disc (figure 4)

Meter Installation

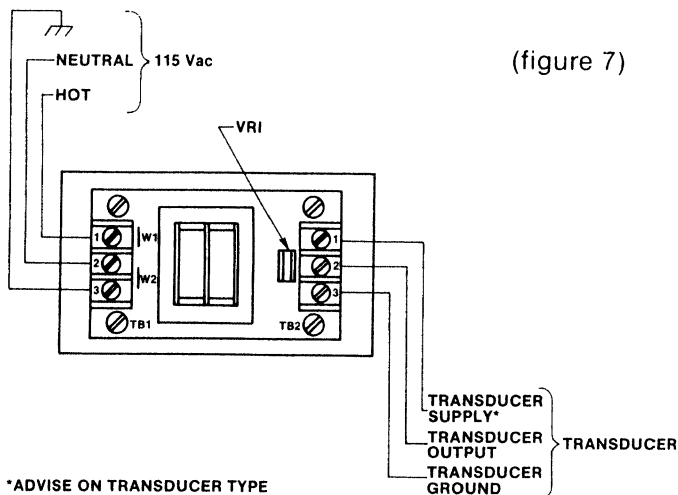
Figure 6 illustrates the cutout necessary for installation of the digital meter in the panel. Four #4-40 flathead screws are needed to secure the meter to the panel. The front bezel snaps off to allow access to the screw holes.



(figure 6)

Wiring Connections (ESI Transducer)

Connect the transducer cable to terminal block TB2 attaching the red lead to terminal 1, the black lead to terminal 2 and both the clear lead and the shield to terminal 3. Connect 115Vac power to terminal block TB1 by attaching the hot lead to terminal 1, the neutral lead to terminal 2, and the ground lead to terminal 3. (See figure 7.)



(figure 7)

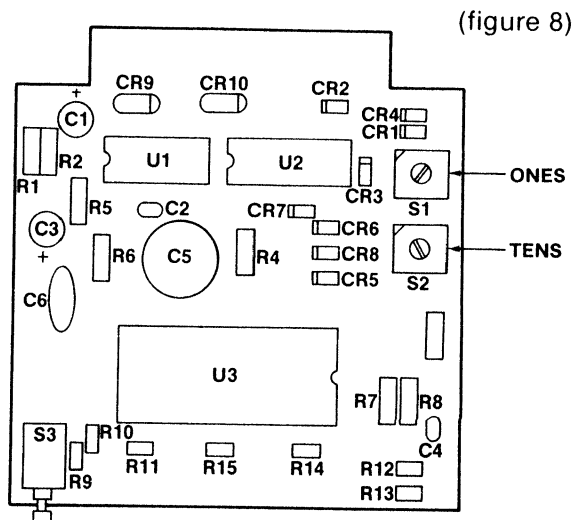
*ADVISE ON TRANSUDER TYPE

Calibration

All standard units are supplied with a one-pulse disc which generates a one-unit total per revolution. A division network from 1 to 99 may be programmed into the circuitry.

To achieve a meaningful unit total, the ratio between pulses and revolutions must be calculated. Systems are usually factory calibrated, but should the need arise, the following procedure is for field calibration.

Remove the transformer circuit card by unscrewing the four screws holding it to the back of the enclosure, (see figure 9). Assure that the two stand-offs are not lost as the board is disengaged from the internal circuit card. Remove the cotter pin from the exposed portion of the internal circuit card; next remove the front bezel and display panel. Exert pressure on the protruding portion of the card in the back of the enclosure; the card will slide out easily.

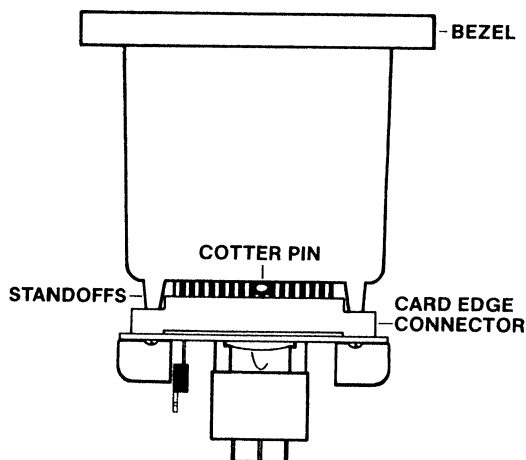


(figure 8)

Consult figure 8 for switch locations and set the divisor by dialing in ones on S1 and tens on S2. Any number between 1 and 99 inclusive may be selected as a divisor.

Reverse the removal procedure for putting the counter back together.

It is the responsibility of the user to calibrate the system in the field or provide the factory with enough information about the application to calibrate the system before shipment.



(figure 9)

PT-700 General Specifications

Input Power 115Vac \pm 10%, 50-60 Hz, 2.4VA

Input Signal:

Input impedance 2200 ohms
 Signal type required ... Open collector/logic
 Nominal amplitude 5V
 Maximum frequency ... 20KHz
 Minimum pulse width .. 4 μ s

Output:

Transducer Supply 12Vdc, 50mA max.

Electrical Connections:

Barrier strip Screw type with wire clamping plate

Display 7 Decade, LED, .43 inch character height

Prescale:

Operation type Division
 Range Integer 1-99
 Adjustment 10 position rotary BCD switch

Ambient Temperature Range:

Storage temperature ... -40° to 85° C
 Operating temperature ... 0° to 70° C

Enclosure:

Material Noryl 255
 Dimensions 2 1/8" H X 3 3/4" W X 4 3/4" D
 Mounting type Panel mount

Magnetic Pulser Disc:

Material PVC (standard)
 Dimensions 2.5" diameter X 1/4" thick
 Operating temperature ... -40° to 60° C*

Transducer:

Material Machined aluminum
 Operating temperature ... -40° to 60° C*
 Signal type Open collector, current sinking, 20mA max.
 Signal cable 3 conductor, shielded, 10' supplied

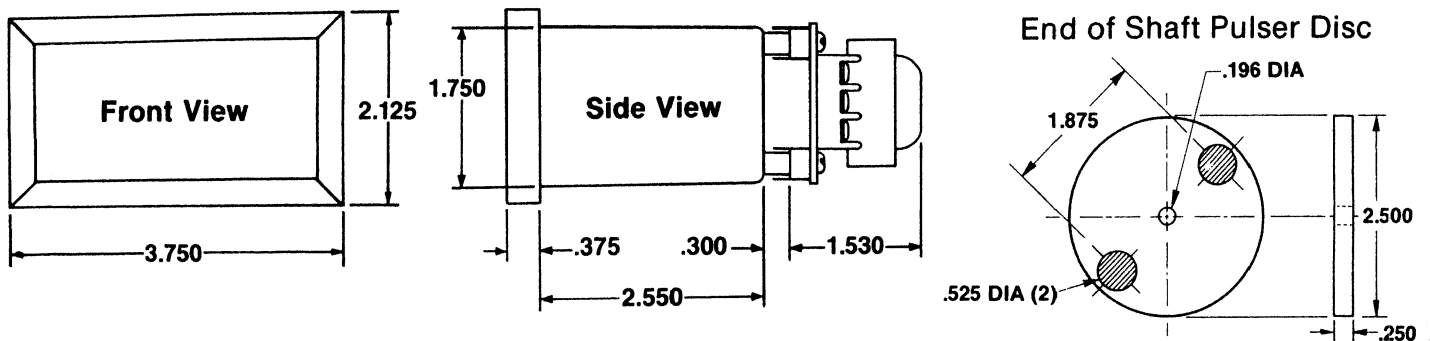
Sensing distance between transducer and magnetic pulser disc ... 1/16" to 1/4"

*Higher temperature ranges available.

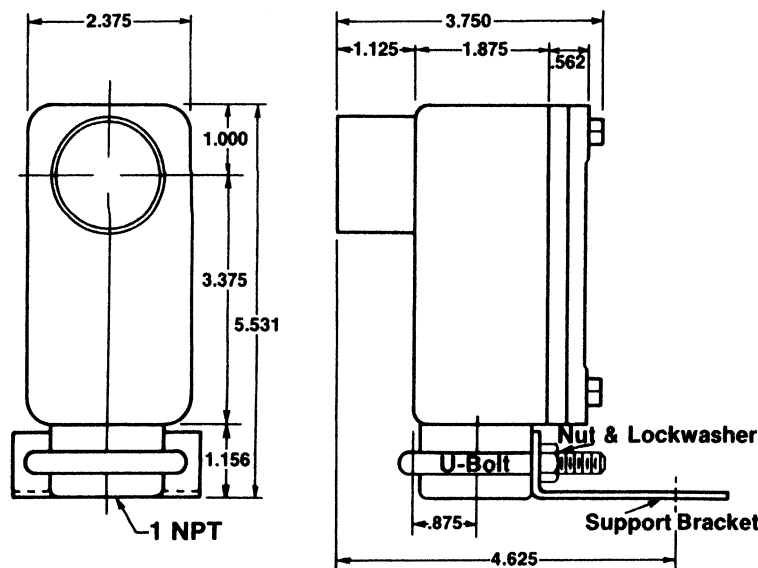
Specifications Subject to Change Without Notice

PT-700 Dimensional Drawings

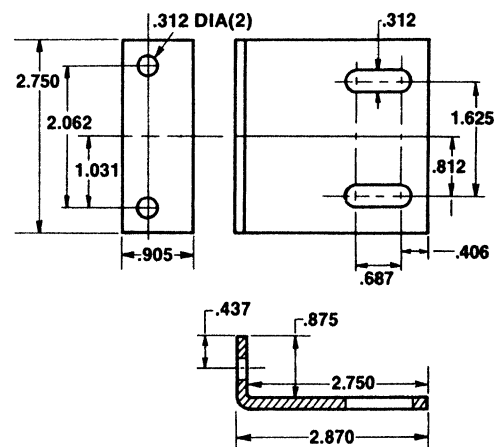
Dimensions in Inches



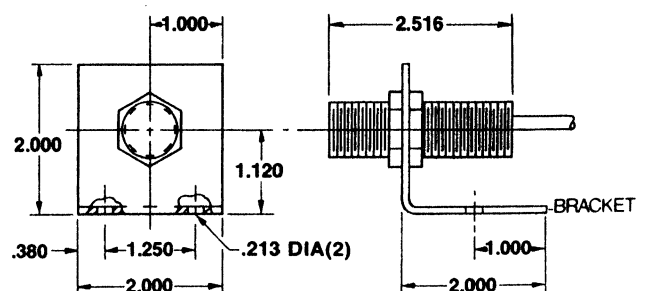
Explosion Proof Transducer



Mounting Bracket



Digital Transducer



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