

- 2 -

Rating of Apparatus: Differential Pressure ..... 0-53.97", 0-107.94", 0-215.88"  
water gauge

Working Pressure ..... 800 p.s.i.

Static Pressure Ranges

- (a) Bellows element - 0-5, 0-15 and 0-30 p.s.i.
- (b) Bourdon element - various ranges 0-60 to 0-800 p.s.i.

Temperature Range ..... -50°F to +150°F in various ranges

Application:

Measurement in distribution service of manufactured, natural and petroleum gases, or mixtures thereof, when used in conjunction with "Primary Elements of the Orifice Meters".

Description:

The differential pressure transmitter consists of the Differential Pressure Recorder Type "BU" (previously approved under Circular S-GA.224 of February 28, 1962) incorporating in its case a transformer-type retransmitter, the movable core of which is mechanically linked up with the recorder pen. The output signal of the retransmitter, proportional to the recorder pen position, is connected to a similar transformer in the Electronic Flow Receiver which functions as an A-C voltage balance circuit. An amplifier and a motor control unit in this receiver are made to reproduce, at balance conditions, transformer core and receiver pen position.

The static pressure transmitter may have either a bellows or a Bourdon tube pressure element linked up with an indicating pointer and the core of the retransmitting transformer, the output of which is connected to a slidewire circuit in the Telemeter Receiver which functions as an A-C voltage ratio balancing network. In operation an amplifier and motor control unit position the slidewire contact and also the receiver recorder pen so that pressure transmitter conditions are reproduced.

For the purpose of introducing automatic pressure compensation a retransmitting slidewire is added in this unit, its function being to multiply the differential pressure transmitter output by a suitable pressure compensating factor.

The temperature of the flowing gas is sensed by a resistance temperature element connected to the Pyrotron Receiver which functions as a self-balancing A-C Wheatstone Bridge with its amplifier and motor-driven slidewire unit. The temperature recording pen is positioned by a cam and lever arrangement included in the receiver, which also contains additional retransmitting slidewire for the purpose of automatic temperature compensation, effected in similar manner as pressure compensation.

...../3