

Description: The differential pressure unit together with the integrator and timing devices are identical to those described in Circular SD-GA.161 dated July 2, 1959. The static pressure element and a temperature measuring system, with recording pens attached, are added to form the compensated flowmeter. The introduction of the temperature and pressure compensation does not alter the model designation. The static pressure element may be of bellows or helical spring type. Resistance bulb element, forming one arm of a bridge circuit, is used for temperature measurement. A suitable electronic amplifier and a servo motor function to balance the bridge and position the recording pen at various temperatures. The system, described by the maker as 'PowrLog Model H-O Receiver', has the amplifier and the wiring terminal box mounted at the back of the meter case. The servo motor and the balancing circuit of the system is located inside the case.

The automatic compensation for static pressure and flowing temperature is provided by a suitable mechanical linkage system which causes the corrected pen to indicate the flow referred to the actual pressure and temperature conditions existing at the time. The flow is indicated as a percentage of full range, expressed in standard cubic feet per hour. The uncorrected flow pen is also provided for the purpose of calibration of the differential pressure unit, but it is not usually supplied with ink.

The integrator is linked with the corrected flow pen so that the accumulated quantity, in standard cubic feet, is indicated on the integrator counter, provided the specified multiplying factor is applied to the counter reading. This factor is obtained from the Instrument Specification Sheet provided by the maker for each meter installation.

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