WIRING AND CALIBRATION

Transmitter Options W2 and W3

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1. Installation & Wiring

The transmitter board is fitted inside the enclosure of the Flo-Gage. Option W2 provides a 4-20 mA dc output in addition to a local mechanical analog readout. Option W3 operates identically, but omits the local mechanical analog output.

The transmitter measures differential pressure directly with a solid state strain gage. The differential pressure measured is independent of the mechanical measurement provide by the local mechanical indicator. The output of the transmitter is linear with *differential pressure*. The output must be linearized in the receiving device to provide a flow measurement. The transmitter is powered by an external 24 volt dc power supply provided by the user. A rated capacity of 25 mA is required.

Startup. Pressurize the pipeline and check the zero. Adjust the zero pot if necessary.

2. Field Calibration (4-20 mA dc)

2.1 Test equipment

Fluke 9600A digital multimeter or equivalent.

2.2 Procedure

All meters are factory calibrated. Do not adjust span unless you are certain that the meter is reading incorrectly.

WARNING: Do not attempt to adjust the span settings without the proper test equipment including the ability to establish a known steady flow rate close to full scale. Adjustment of the span WILL affect the meter calibration.

Connect multimeter in series with current loop. With pipline pressurized, adjust zero pot until current output reads 4.00 mA ±0.02 mA at no flow. Establish a known flow rate through the meter as close to 95% of full scale as practical. Set the span. Span is set using the following formula: $I = 16\ Q^2 + 4.00$; where I = current output in mA, Q = decimal % of full scale.

% FS	Current Output	% FS	Current Output
20	4.64	70	11.84
30	5.44	80	14.24
40	6.56	90	16.96
50	8.00	95	18.44
60	9.76	100	20.00

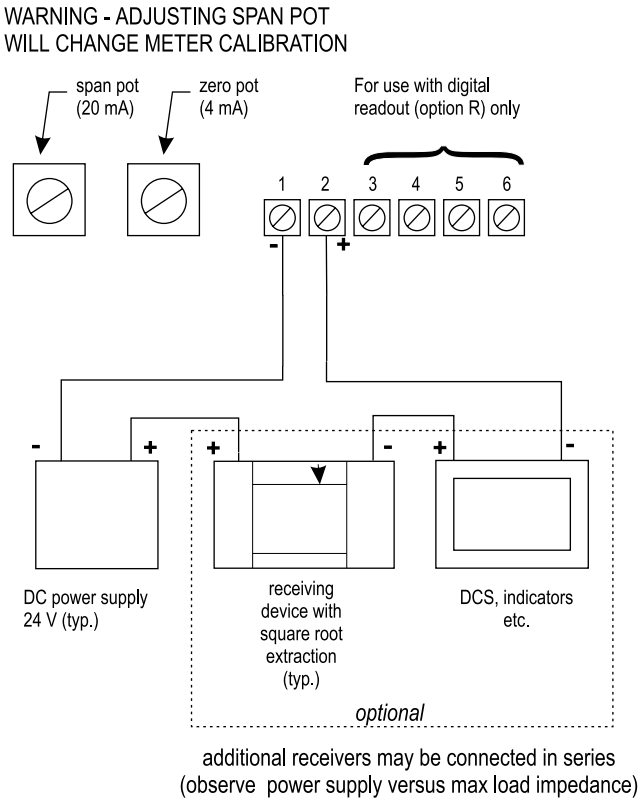

Figure 1
Connection Diagram

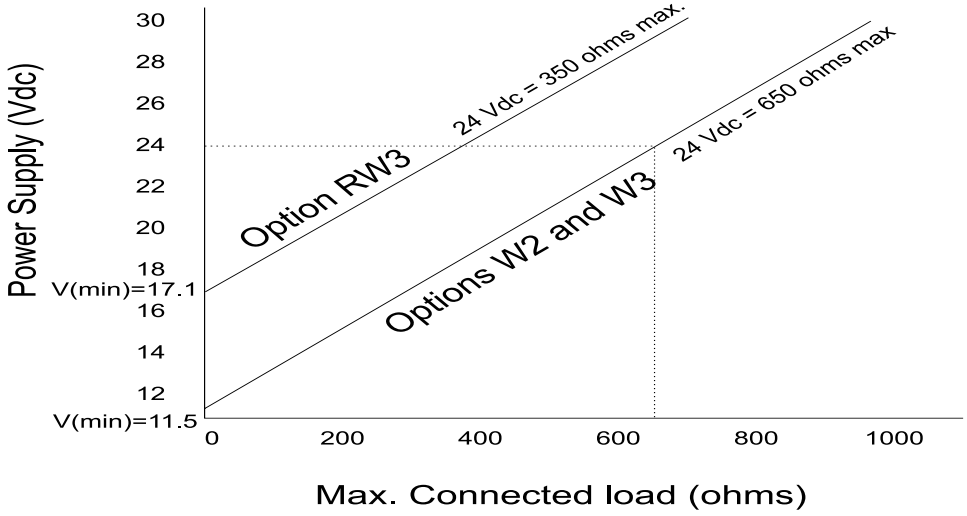

Figure 2
Loop Impedance versus Power Supply Voltage

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