

Diff-Calc (Differential mA transmitter)

Process variable management made easy.



General



Diff-Calc transmits a 4-20 mA signal proportional to the difference between two 4 - 20 mA signals from transmitters. Diff-Calc is especially designed for measurement of level differences where Diff-Calc is connected to two ultrasonic or pressure based level transmitters. Diff-Calc can be used with any 4 - 20 mA signals, such as temperature differential or the difference between pH values, etc.

Special features

- Price competitive unit for differential 4 - 20 mA measurement of differences such as temperatures, levels etc.
- Easy to install; DIN rail mounting.
- Operates from the transmitter loop power.
- Zero at 4 mA or 12 mA for application flexibility - span 4 - 20 mA.

Function

The two inputs and the output are 4 - 20 mA, and the output is the difference between the two input signals. Diff-Calc operates from the loop power supply from the input signals.

The inputs must be powered separately. To calculate the right difference, both inputs must have the same signal; e.g. 0 - 10 ft. WG at level measurement, or 32 - 120 °F at temperature measurement, for example.

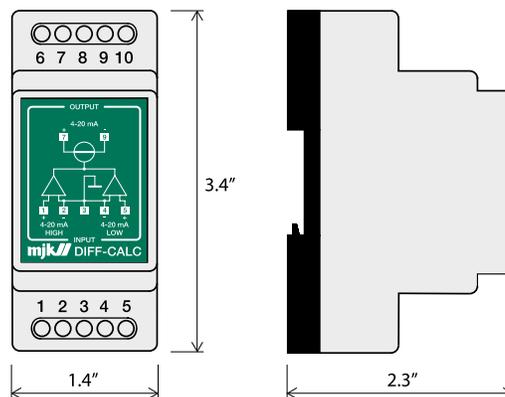
Specifications

Inputs:	2 x 4 - 20 mA
Voltage drop:	< 1 V
Output:	4 - 20 mA
Supply:	10 - 30 V DC
Calculation:	<p>v. 0-point = 4 mA:</p> $\text{OUTPUT} = \text{INPUT HIGH} - \text{INPUT LOW}$ <p>v. 0-point = 12 mA:</p> $\text{OUTPUT} = \frac{\text{INPUT HIGH} - \text{INPUT LOW}}{2} + 12$

Temperature:	- 5 ... + 140 °F
Accuracy:	< 1 %
Enclosure:	NEMA 1
Mounting:	DIN rail



Dimensions

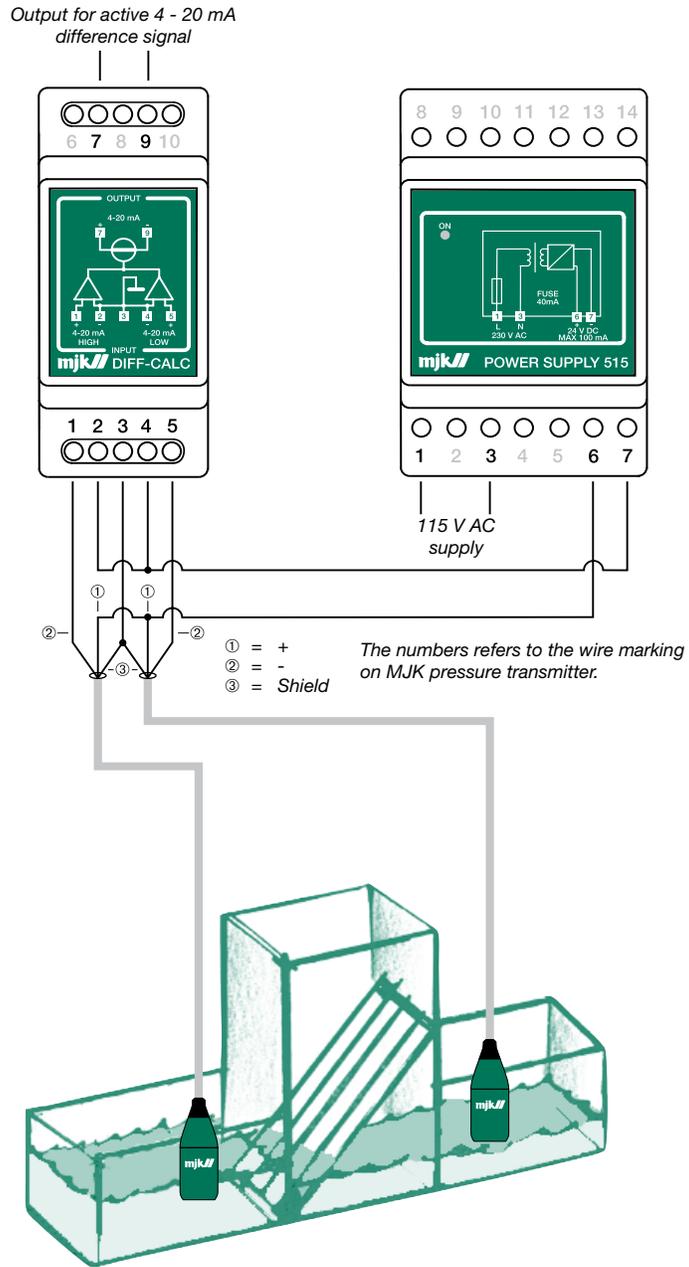


Electrical connection

The example shows an inlet screen where the cleaning is controlled by the level difference in front of and behind the screen.

The pressure transmitters are supplied with a MJK Power Supply 515.

Note: Isolated power supplies and transmitters such as MJK Iso-Power series should be used to prevent grounding between signals (see data sheet no. 6.4) especially if all items share a loop power supply.



Order numbers

Diff-Calc

202480	Diff-Calc without sensor
202482	Diff-Calc including 2 pcs. pressure transmitters model 2100, (209930), range 0 - 10 ft.
202484	Diff-Calc including 2 pcs. pressure transmitters model 2100, (209935), range 0 - 30 ft.
209930	Pressure transmitter model 2100, range 0 - 10 ft.
209935	Pressure transmitter model 2100, range 0 - 30 ft.

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