

Flow Calculator DMY-2030-CV

- Three 4-20mA and 1-5Vdc standard inputs for flow, temperature and pressure signals.
- Calculation of flow rate with/without temperature and/or pressure correction, with/without squared root extraction.
- Totalization of the corrected flow and preset.
- Flow signal linearization up to 21 points.
- Includes water steam table.

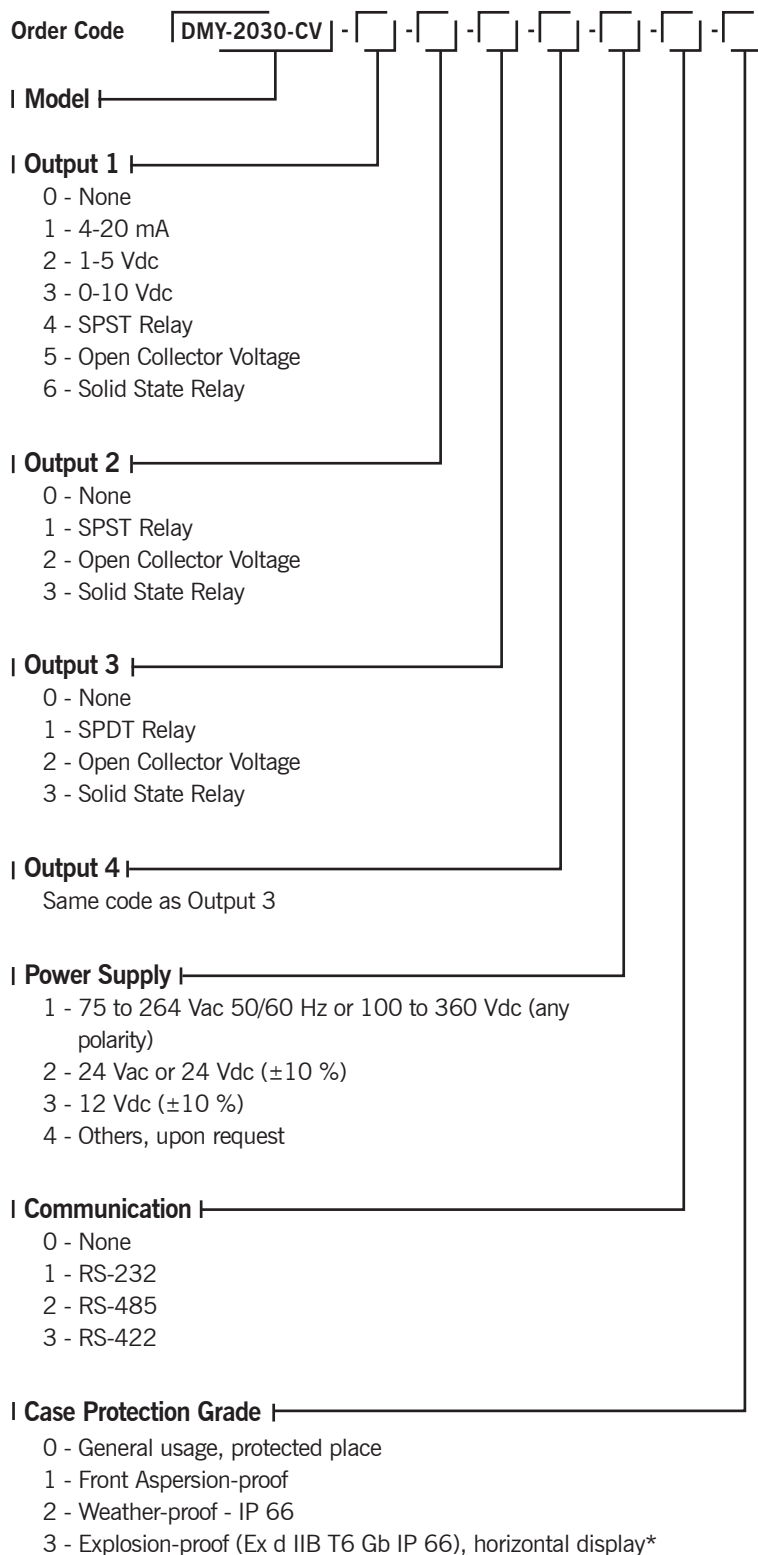
Flow Measurement Solution with Temperature and Pressure Compensation Integrated with Totalization

The flow measurement using the principle of differential pressure orifice plate is one of the methods most frequently used involving transport of fluids and gases. The method is very widespread, this is due to the following factors:

- Simplicity and low cost of installation;
- Easy maintenance for measuring elements;
- Low values of measurement uncertainties.

Flow measurement by differential pressure has many potential uses and application, mainly by the use of flow measurement compensated in pressure and temperature.

The Flow Calculator DMY-2030-CV has extruded aluminum metal case. Provides three inputs which can be used for connection with standard analog signals from the differential pressure sensors, gauge pressure and temperature, and is also the standard 24 Vdc power supply for two-wire transmitter. Presents the signs of the three inputs through 5 digits, performing the aggregation of flow corrected with 8-digit count, and have reset by the front panel or through external dry contact.



*Explosion-proof box:

Dimensions

310 x 310 x 200 mm (HxWxD)

Weight

11 kg nominal

Specifications

Inputs

Three configurable inputs for 4-20 mA, 1-5 Vdc. 250 Ω input impedance for mA and $>10\text{ M}\Omega$ for 5 Vdc.

Outputs

4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPST relay modules and up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication

RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Protocol

Indication

8-digit red leds display (9 mm) for totalization and 5 digits for indication. Can be configured together with the decimal point.

Totalization

0 to 99999999. Can be configured together with the decimal point.

Configuration

By front-panel push-buttons and internal jumpers.

Sampling Rate

120 ms standard. One second display update.

Accuracy

$\pm 0.1\%$ of full scale for mA and Vdc inputs.
 $\pm 0.5\%$ of full scale for analog retransmitter output.

Square Root Extraction

$\pm 0.5\%$ of reading, for input above 10% of span. Programmable Cut-off from 0 to 5%.

2-wire Transmitter Power Supply

24 Vdc/50 mA maximum, isolated from output with short circuit protection

Span Temperature Coefficient

$\pm 0.005\%$ of span / $^{\circ}\text{C}$ using 25 $^{\circ}\text{C}$ as the reference temperature.

Power Supply

75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc ($\pm 10\%$); 12 Vdc ($\pm 10\%$).

Operating Ambient

0 to 60 $^{\circ}\text{C}$ temperature and 90% maximum relative humidity.

Dimensions

1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight

0.5 kg nominal.

Warranty

One year.