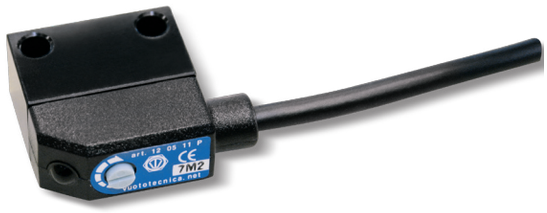
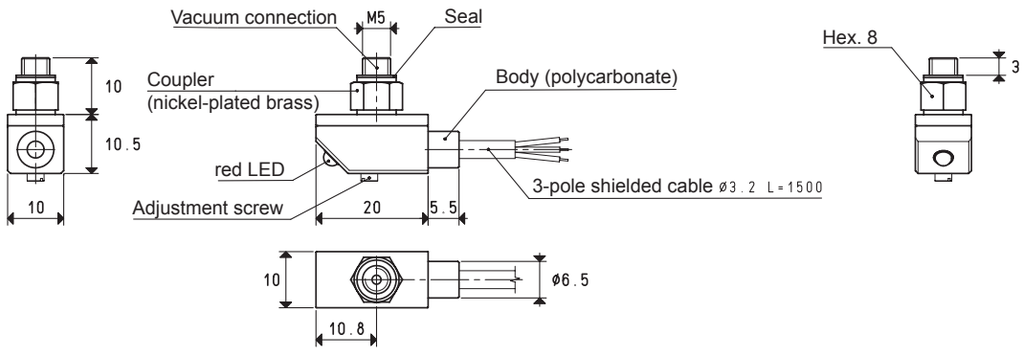
MICRO DIGITAL VACUUM SWITCHES



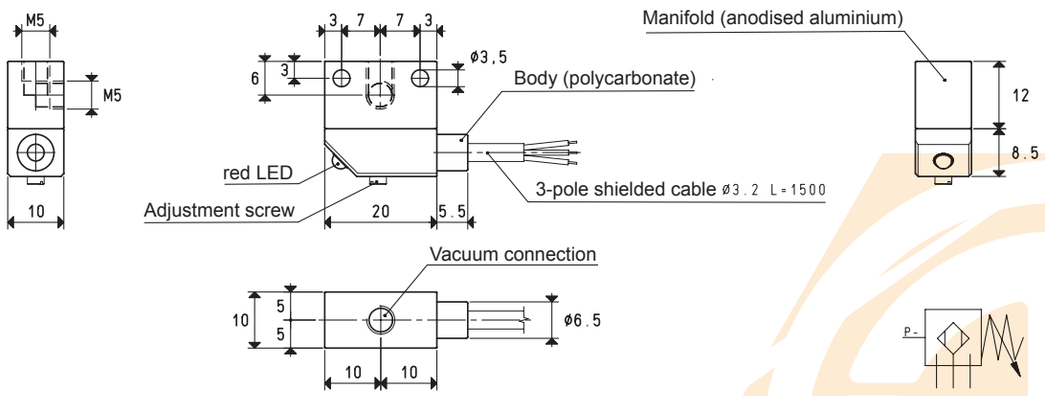
These small devices, if accurately calibrated and compensated for temperatures, are able to give very precise digital signals to the set maximum measuring value.
The commutation point, which is within the scale value, can be easily programmed by means of an adjustment screw located on the upper part of the device. A red LED near the screw indicates the digital output signal commutation status.
The pressure differential (hysteresis) between the set maximum value and the value of reset of the rest signal is 2% of the set value and cannot be adjusted.
They are composed of a polycarbonate enclosure, which includes the sensor and the electric circuit, and of a coupler or a small aluminium manifold with the vacuum connections.
Art. 12 05 10 can also be rotated freely to place the display in the desired position, without having to unscrew it from the vacuum connection. The vacuum connection can be carried out via male or female M5 connectors, while the electrical connection is made via a three-connector cable which they are equipped with. Mini digital vacuum switches are suited for controlling dry air and non-corrosive gasses and they are recommended in all those cases that require a signal when a certain vacuum level is reached, for safety, for starting a cycle, for checking the cup grip, etc.

Art. 12 05 10



Cable colour	Connection
brown	positive pole ⊕
black	output signal
blue	negative pole ⊖

Art. 12 05 11

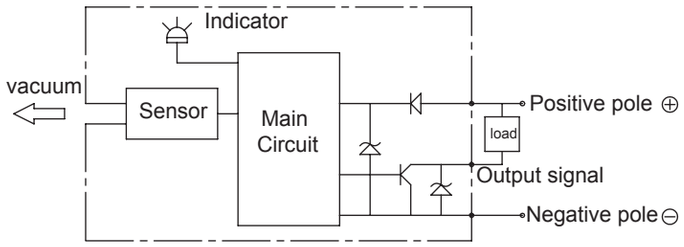


3D drawings available at **www.vuototecnica.net**

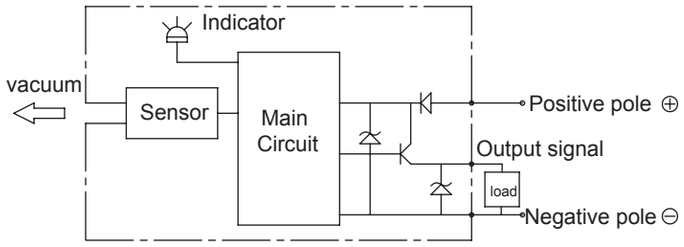
Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

INTERNAL ELECTRIC DIAGRAMS

• NPN on

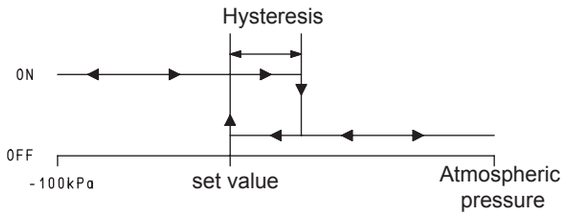


• PNP on



OUTPUT CONTACT DIAGRAM

The LED lights up at the preset pressure and turns off at the preset pressure minus the hysteresis



Electrical features and specifications	**Art. 12 05 10 P Art. 12 05 11 P**		**Art. 12 05 10 N Art. 12 05 11 N**
Adjustment range		da 0 a -100 kPa	
maximum overpressure		200 kPa	
Operating voltage		10.8 ÷ 30 VDC (Protection against polarity reversal)	
Electrical absorption		≤20 mA	
Commutation outputs	1 digital PNP, NO	80 mA maximum	1 digital NPN, NO
Reaction time		≤1 ms	
Commutation frequency		1000Hz	
Hysteresis		Not adjustable, 2% of the set maximum value	
Repeatability		±2% of the measuring range	
Commutation indicator		Red LED	
Insulation resistance		100 MΩ	
Proof voltage		500 VAC, 1 min	
Protection class		IP 40	
Working environment conditions			
Installation position		Any	
Controlable fluids		Dry air and non-corrosive gasses	
Operating temperature		-10 ÷ +60 °C	
Storage temperature		-20 ÷ +70 °C	
Emitted interference		In compliance with EN 55011, Group 1, Class B	
Interference immunity		In compliance with EN 61326 - 1	
Mechanical features and specifications			
Container material		Polycarbonate PC	
Connection material		Nickel-plated brass and aluminium	
Weight (without cable)		Approx. 5g	
Electrical connection		1.5 m long three-conductor cable	
Connection to fluid		M5 male or female thread	