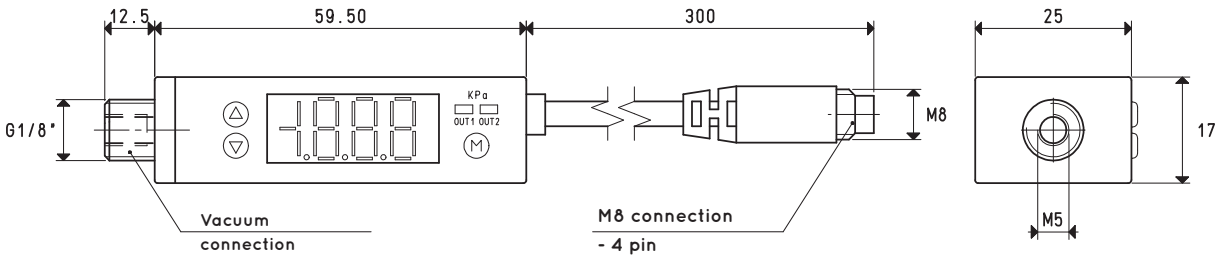
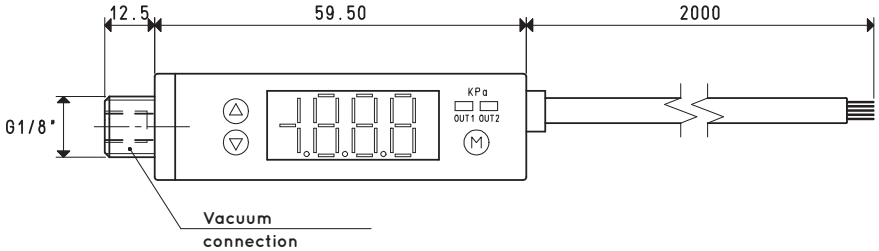
DIGITAL VACUUM SWITCHES

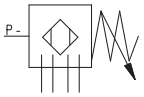
Changes the shape of these digital vacuum switches with respect to those previously described, from cylindrical to parallelepiped. However, the container in which they are enclosed remains in ABS and is also especially compact and extremely light to allow for its installation on board automatisms and near use. These carefully calibrated devices are able to provide very accurate measurement values. The detected values are shown on the display, making it unnecessary to use a vacuum gauge. The panel includes two LED indicators, one green and one red, which indicate the switching status of the two digital output signals. The switching outputs are completely independent. The switching points within the scale values, including hysteresis from 0 to 100% of the set value, are easily programmable via the buttons located on the control panel. Other additional functions can be configured, such as the comparisons between values, NO and NC contacts, the choice of the units of measure, the blocking of functions and programmed values, etc. The vacuum connection can be made by means of a G 1/8" male or M5 female double threading connection.
Electrical connection for item 12 30 10 is push-in with a M8-4 pin threaded jack. A connection cable can be provided in PUR upon request with corresponding axial or radial connector.
Instead, item 12 30 10 A already has an integrated PUR, 2-metre long connection cable. The adjustment range of vacuum switch 12 30 10 is from 0 to -1 bar, with two digital PNP outputs that can be set by means of Teach-in. The adjustment range of item 12 30 10 A, while it is also between 0 and -1 bar, can instead be interfaced with external logics via a 1 to 5 volt analogue output and two digital PNP outputs.
This series of digital vacuum switches is suitable for measuring and control of dry air and non-corrosive gases. These are recommended in all cases where maximum and minimum value signalling is required, set for safety reasons, in order to start a work cycle, to control vacuum cup gripping, and so on. In addition, with the hysteresis function, it is possible to manage the compressed air supply to the vacuum generators, allowing for considerable energy savings.

Item 12 30 10



Item 12 30 10 A



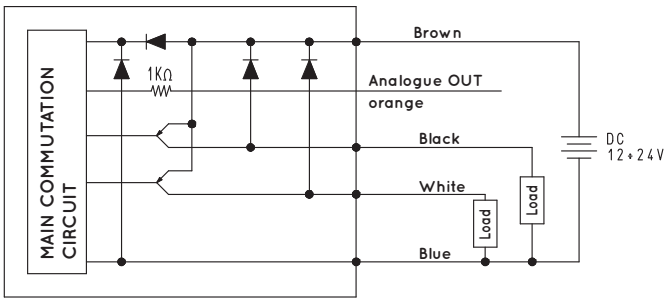


Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Adapters for GAS - NPT threading available on page 1.130

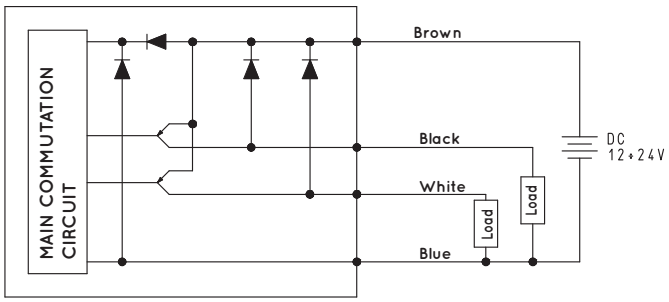
WIRING DIAGRAMS

PNP



Item 12 30 10 A

PNP



Item 12 30 10

Characteristics and electrical specifications	Item 12 30 10 A Vacuum switch	Item 12 30 10 Vacuum switch
Adjustment range	from 0 to -1 bar	
Maximum overpressure	3 bar	
Minimum detectable values	0.1 KPa 0.001 Kgf/cm^2 0.001 bar 0.01 psi 0.1 InHg 1 mmHg 0.1 mmH_2O	
Operating voltage	12 - 24 VDC ±10% (Protection against polarity inversion)	
Electrical absorption	≤60 mA	
Digital output	2 PNP, maximum commutation current 100 mA	
Analogue output	1 analogue, 1 + 5 V ±2% F.S.	--
Display tolerance	≤ ±2% F.S. ±1 digit	
Reaction time	≤2.5 ms	
Hysteresis	Adjustable	
Repeatability	±0.2% ±1 digit of the measuring range	
Display	LED at 3 1/2 digit, 7 segments, OUT 1 green OUT 2 red	
Insulation resistance	50 MΩ to 500 VDC	
Test voltage	1000 VAC, 1 min	
Degree of protection	IP 40	
Environmental operating conditions		
Installation position	Any	
Measurable fluids	Non-corrosive gas and dry air	
Operating temperature	0 - +50 °C	
Storage temperature	-20 - +60 °C	
Interference emission	In compliance with EN 55011, Group 1, class B	
Resistance to interference	In compliance with EN 61326 – 1	
Characteristics and mechanical specifications		
Container material	ABS plastic - PC	
Connection material	Nickel-plated brass	
Weight	65 g, including electrical cable	35 g, including electrical cable
Electrical connection	--	With M8-4 pin coupler
Electrical connection cable	5-wire 2m cable	4-wire 0.3 m cable
Connection to the fluid	Male G 1/8" or female M5 threading	