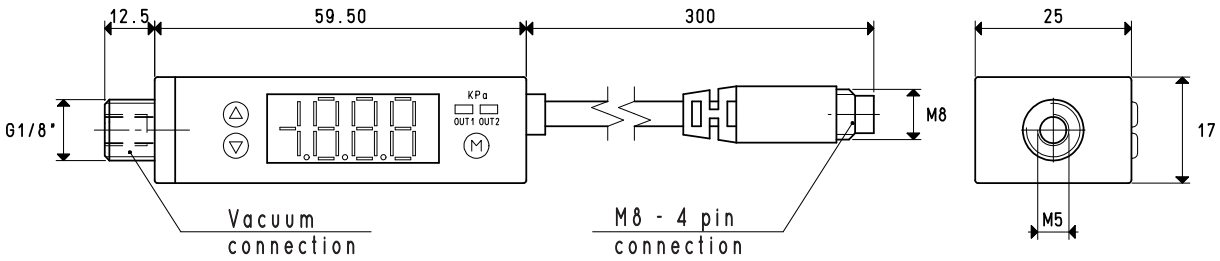
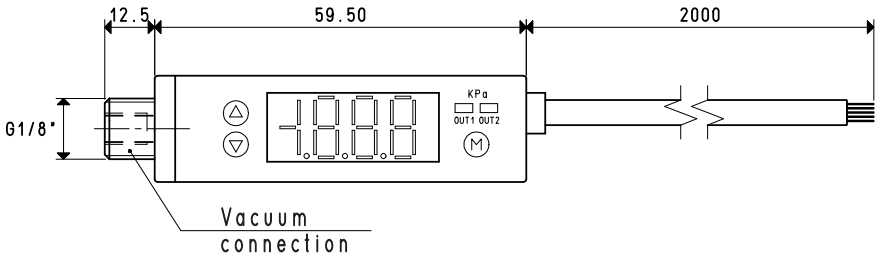
DIGITAL VACUUM SWITCHES

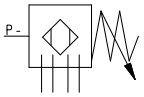
Changes the shape of these digital vacuum switches with respect to those previously described, from cylindrical to parallelepiped. However, the container in which they are enclosed remains in ABS and is also especially compact and extremely light to allow for its installation on board automatisms and 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 values can be programmed, such as
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 art. 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, art. 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 art. 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 suction 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.

12 30 10



12 30 10 A

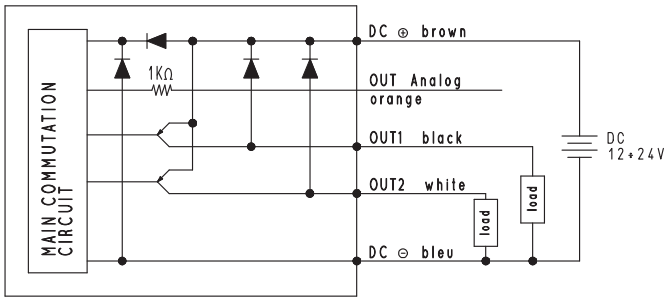




Conversion ratio: N (newton) = Kg x 9.81 (G-force) ; inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$ GAS-NPT thread adapters available at page 1.128

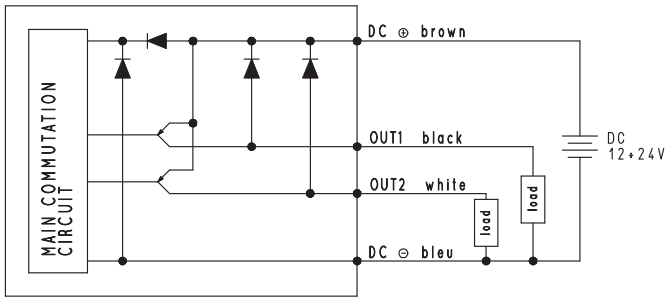
ELECTRIC DIAGRAMS

PNP



12 30 10 A

PNP



12 30 10

Electrical features and specifications	Art. 12 30 10 A Vacuum Switch	Art. 12 30 10 Vacuum Switch
Adjustment range	from 0 to -101.3 KPa	
Maximum overpressure	300 KPa	
Minimum detected 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 reversal)	
Electrical absorption	≤60 mA	
Digitale output	2 PNP, max commutation power 80 mA	
Analog output	1 analog, 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 a 3 1/2 digit, 7 segment, OUT 1 green OUT 2 red	
Insulation resistance	50 MΩ a 500 VDC	
Proof voltage	1000 VAC, 1 min	
Protection class	IP 40	
Working environment conditions		
Installation position	Any	
Measurable fluids	Non-corrosive gasses and dry air	
Operating temperature	0 ÷ +50 °C	
Storage temperature	-20 ÷ +60 °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	ABS - PC plastic	
Connection material	Nickel-plated brass	
Weight	65 g, electric cable included	35 g, electric cable included
Electrical connection	--	M8-4 pin plug
Electrical connection cable	With 5-conductor cable length mt. 2	With 4-conductor cable length mt. 0,3
Connection to fluid	Male G1/8" and female M5 thread	