

# Series SWDN electronic vacuum/pressure switches

With digital display  
High precision, easy to use



- » Compact and lightweight
- » Digital indicator: precision electronic insertion with two separated switch outputs
- » Switching point and hysteresis can be programmed with a membrane keypad.

## APPLICATIONS:

- electronic vacuum/pressure switch for safety monitoring, optimization of cycle times or energy saving devices;
- it can be installed directly on the gripping point of a handling system;
- setting of the limit vacuum value and continuous vacuum control;
- perfectly suitable for customer needs.

## ELECTRIC CONNECTION:

the device is available with hardwired cable of 2 meters or can be supplied with M8 connector. Accessories and extensions have to be ordered separately. Codes can be found at the end of this section.

## GENERAL DATA

Type of pressure/vacuum switch	electronic with polycarbonate housing
Port	with external thread G1/8 and internal thread M5
Display	3 digit display with membrane keypad for the values set up
LED	integrated LED indicators for switching state
Electric connection	with M8 4-pole connector or pre-wired cable of 2 meters

## CODING EXAMPLE

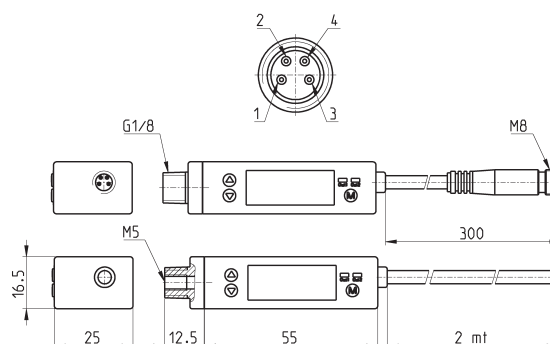
SWDN	-	V01	-	P3	-	2
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<b>SWDN</b>	SERIES
<b>V01</b>	SET PRESSURE RANGE: V01 = from -1 bar to 1 bar P10 = from 0 bar to 10 bar
<b>P3</b>	TYPE OF ELECTRIC CONNECTION: P3 = 2 PNP outputs + 1 analog output 1 - 5 V DC (this version is available with 5-pole cable only) P4 = 2 PNP outputs
<b>2</b>	ELECTRIC CONNECTION: 2 = cable of 2 meters M = M8 4 pin connector

## Vacuum/Pressure switch Series SWDN



- 1 = brown (+)  
2 = white (OUT 2)  
3 = blue (-)  
4 = black (OUT 1)



Mod.

SWDN-V01-P3-2

SWDN-V01-P4-2

SWDN-V01-P4-M

SWDN-P10-P3-2

SWDN-P10-P4-2

SWDN-P10-P4-M

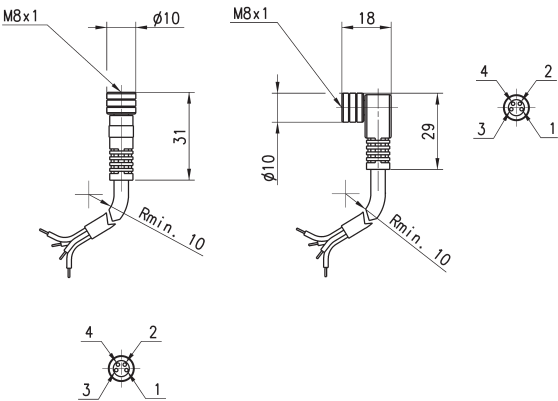
## TECHNICAL DATA

## CHARACTERISTICS

	SWDN-V01-...	SWDN-P10-...
<b>Rated pressure range (set-value)</b>	-1 ÷ 1 bar	0 ÷ 10 bar
<b>Setting pressure range (it can be displayed on the screen)</b>	-1 ÷ 1 bar	-1 ÷ 10 bar
<b>Withstand (Maximum) pressure</b>	3 bar	15 bar
<b>Fluid</b>	Air, non-corrosive gases, incombustible gases	
<b>Set pressure resolution:</b>	kPa MPa Kg/cm <sup>2</sup> bar Psi InHg mmHg mmH <sub>2</sub> O	0,1 - 0,001 0,001 0,01 0,1 1 0,1 - 0,001 0,01 0,1 - - -
<b>Power supply voltage</b>	12-24 VDC ± 10%, ripple (P-P) 10% or less	
<b>Current consumption</b>	≤ 55mA	
<b>PNP switch output</b>	2 outputs with open collector max. load current of 80mA max. power supply voltage of 24VDC residual voltage ≤ 1V (with load current of 80mA)	
<b>Repeatability (switch output)</b>	≤ ± 0,2% F.S. ± 1 digit	
<b>Analog output (where foreseen)</b>	1 - 5V ± 5% F.S. (within the linear range: ≤ ± 1% F.S.)	1 - 5V ± 2,5% F.S.
<b>Hysteresis:</b>	Hysteresis mode Window comparator mode	Adjustable Fixed (3 digits)
<b>Response time</b>	≤ 2,5ms (chattering-proof function: 24ms, 192ms and 768ms)	
<b>Output short circuit protection</b>	YES	
<b>7 segment LED display</b>	3 ½ digit (sampling rate of 5 times/sec)	
<b>Indicator accuracy</b>	≤ ± 2% F.S. ± 1 digit (ambient temperature: 25 ± 3°C)	
<b>Indicator</b>	green LED (OUT1), red LED (OUT2)	
<b>Environment:</b>	Protection class	IP40
	Temperature	Operation: 0 ÷ 50°C Storage: -20 ÷ 60°C (without condensation or freezing)
	Relative humidity	Operation/Storage: 35 ÷ 85% (without condensation)
	Withstand (Max.) voltage	1000 VAC in 1 min (between case and lead wire)
	Insulation resistance	50MΩ min. (at 500VDC between case and lead wire)
	Vibration	Total amplitude 1.5 mm 10Hz-55Hz-10Hz scan for 1 minute 2 hours each direction of X, Y and Z
	Shock	980 m/s <sup>2</sup> (100G) 3 times each direction of X, Y and Z
<b>Changes due to temperature</b>	≤ ± 2% F.S. of detected pressure (25°C) within the operating temperature range	
<b>Port size</b>	G1/8 - M5	
<b>Lead wire</b>	Oil-resistance cable (0,15 mm <sup>2</sup> )	
<b>Weight</b>	About 67 g for the version with 2-meter lead wire About 35 g for the version with male connector	

Circular M8 4-pole connectors, Female

Protection class: IP65  
Materials: PU non shielded cable



Mod.	Type of connector	Cable length (m)
CS-DF04EG-E200	straight	2
CS-DF04EG-E500	straight	5
CS-DR04EG-E200	90°	2
CS-DR04EG-E500	90°	5