

# 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**

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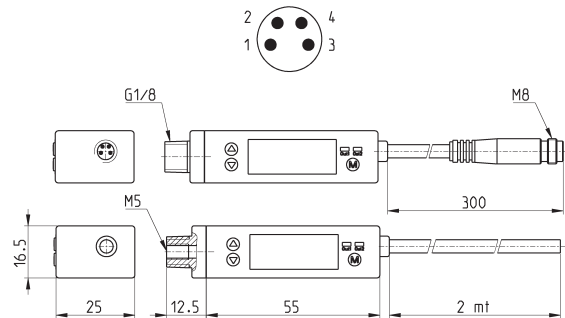
<b>SWDN</b>	SERIES
<b>V01</b>	SET PRESSURE RANGE: V01 = from -1 bar to 1 bar P10 = from 0 bar to 10 bar
<b>P3</b>	TYPE OF ELECTRIC CONNECTION: P3 = 2 PNP outputs + 1 analog output 1 - 5 V DC (this version is available with 5-pole cable only) P4 = 2 PNP outputs
<b>2</b>	ELECTRIC CONNECTION: 2 = cable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

SERIES SWDN ELECTRONIC VACUUM/PRESSURE SWITCHES

**Vacuum/Pressure switch Series SWDN**



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



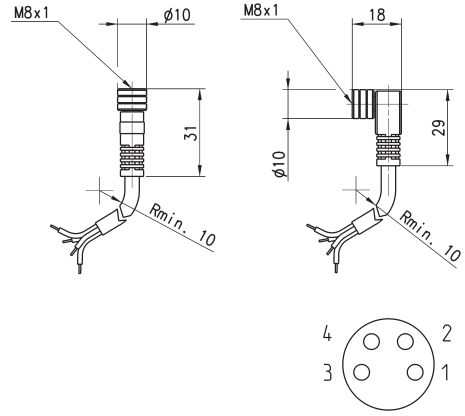
Mod.
SWDN-V01-P3-2
SWDN-V01-P4-2
SWDN-V01-P4-M
SWDN-P10-P3-2
SWDN-P10-P4-2
SWDN-P10-P4-M

## TECHNICAL DATA

CHARACTERISTICS		
	SWDN-V01-...	SWDN-P10-...
Rated pressure range (set-value)	-1 ÷ 1 bar	0 ÷ 10 bar
Setting pressure range (it can be displayed on the screen)	-1 ÷ 1 bar	-1 ÷ 10 bar
Withstand (Maximum) pressure	3 bar	15 bar
Fluid	Air, non-corrosive gases, incombustible gases	
Set pressure resolution:	0,1	-
kPa	-	0,001
MPa	0,001	0,01
Kgf/cm <sup>2</sup>	0,001	0,01
bar	0,01	0,1
Psi	0,1	-
InHg	1	-
mmHg	0,1	-
mmH <sub>2</sub> O	-	-
Power supply voltage	12-24 VDC ± 10%, ripple (P-P) 10% or less	
Current consumption	≤ 55mA	
PNP switch output	2 outputs with open collector max. load current of 100mA max. power supply voltage of 24VDC residual voltage ≤ 1V (with load current of 80mA)	
Repeatability (switch output)	≤ ± 0,2% F.S. ± 1 digit	
Analog output (where foreseen)	1 - 5V ± 5% F.S.	1 - 5V ± 2,5% F.S. (within the linear range: ≤ ± 1% F.S.)
Hysteresis: Hysteresis mode	Adjustable	
Window comparator mode	Fixed (3 digits)	
Response time	≤ 2,5ms (chattering-proof function: 24ms, 192ms and 768ms)	
Output short circuit protection	YES	
7 segment LED display	3 ½ digit (sampling rate of 5 times/sec)	
Indicator accuracy	≤ ± 2% F.S. ± 1 digit (ambient temperature: 25 ± 3°C)	
Indicator	green LED (OUT1), red LED (OUT2)	
Environment: 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	
Changes due to temperature	≤ ± 2% F.S. of detected pressure (25°C) within the operating temperature range	
Port size	G1/8 - M5	
Lead wire	Oil-resistance cable (0,15 mm <sup>2</sup> )	
Weight	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