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

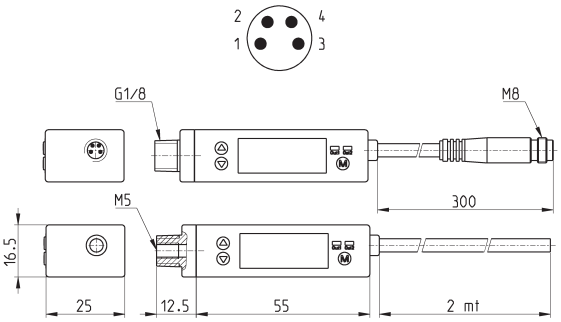
CODING EXAMPLE

SWDN	-	V01	-	P3	-	2

SWDN	SERIES
V01	SET PRESSURE RANGE: V01 = from -1 bar to 1 bar P10 = from 0 bar to 10 bar
P3	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
2	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)
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

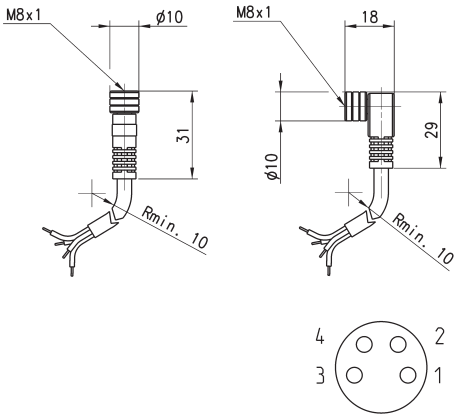
TECHNICAL DATA

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:	**kPa**	0,1	-
	MPa	-	0,001
	Kgf/cm²	0,001	0,01
	bar	0,001	0,01
	Psi	0,01	0,1
	InHg	0,1	-
	mmHg	1	-
	mmH2O	0,1	-
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 80mA max. power supply voltage of 24VDC residual voltage ≤ 1V (with load current of 80mA)	
Repeatibility (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/s² (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 mm²)	
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