Series SWCN
electronic vacuum/pressure switches

New models

With digital display
High precision, easy to use

- Compact and lightweight
- Digital indicator: precise electronic insertion with two separated switch outputs
- Switching point and hysteresis can be programmed with a membrane keypad
- Upper and lower limit values can be programmed through two PNP switch outputs
- Analog output 4-20 mA
- IP65 protection

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

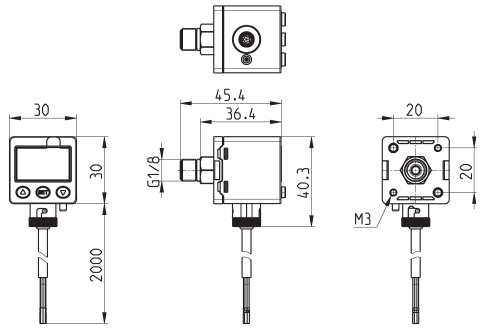
Type of pressure/vacuum switch	electronic with polycarbonate housing
Port	with external thread G1/8 and internal thread M5
Display	3 digit display with membrane keypad for the values set up
LED	integrated LED indicators for switching state
Electric connection	with M8 4-pole connector or pre-wired cable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

CODING EXAMPLE

SWCN	-	V01	-	P3	-	2

SWCN	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 P6 = 2 PNP outputs + 1 analog output 4-20 mA (this version is available with 5-pole cable only)
2	ELECTRIC CONNECTION: 2 = cable of 2 meters M = M8 4 pin connector

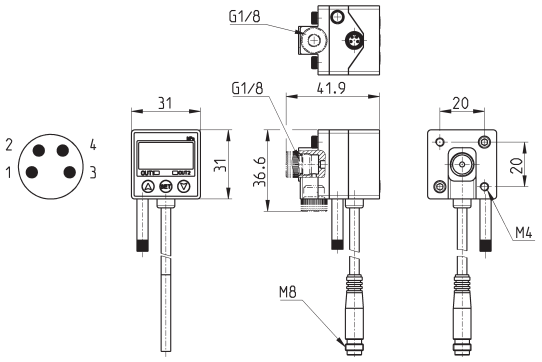
Series SWCN Vacuum/Pressure switch with 4-20 mA output



Mod.
SWCN-V01-P6-2
SWCN-P10-P6-2

Series SWCN Vacuum/Pressure switch

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



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

TECHNICAL DATA Version P3 and P4

CHARACTERISTICS

		SWCN-V01-...	SWCN-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 linearity 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**	IP65	
	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 105 g for the version with 2-meter lead wire About 71 g for the version with male connector	

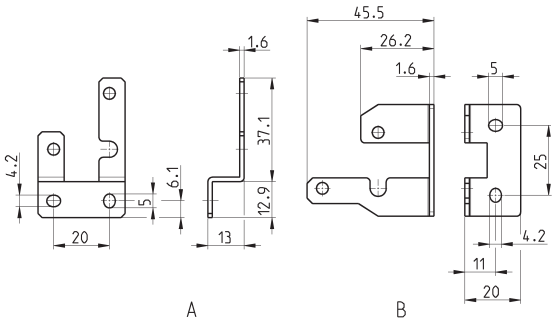
TECHNICAL DATA Version P6

CHARACTERISTICS

Fluid		Filtered air, Non-corrosive / Non-flammable gas	
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	-
Power supply voltage		12 ~ 24 V DC ± 10%, ripple (P-P) ≤ 10% (UL class 2)	
Current consumption		≤ 40 mA (with no load)	
Switch output		2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1.5 V	
Repeatibility		± 0.2 % F.S. ± 1 digit	
Hysteresis	**One Point Set Mode** **Hysteresis mode** **Window comparator mode**	Adjustable	
Response time		≤ 2.5 ms (Chattering-proof function : 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms and 1500 ms selectable)	
Output short circuit protection		YES	
Display		3 ½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 5 times / sec.)	
Indicator accuracy		± 2 % F.S. ± 1 digit (Ambient temperature : 25 ± 3 °C)	
Switch on Indicator		Orange Indicator 1 : OUT1 & Orange Indicator 2 : OUT2	
Analog Output (Voltage Output)		Output Voltage : 1 ~ 5 V ± 2.5 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Output Impedance : about 1 kΩ	
Analog Output (Current Output)		Output Current : 4 ~ 20 mA ± 2.5 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Max. Load Impedance : 250 Ω at power supply of 12 V 600 Ω at power supply of 24 V Min. Load Impedance : 50 Ω	
Environment	**Enclosure**	IP65	
	Ambient Temp. Range	Operation : 0 ~ 50 °C, Storage : -10 ~ 60 °C (No condensation or freezing)	
	Ambient Humidity Range	Operation / Storage : 35 ~ 85 % RH (No condensation)	
	Withstand Voltage	1000 V AC in 1-min (between case and lead wire)	
	Insulation resistance	≥ 50 MΩ (at 500 V DC, between case and lead wire)	
	Vibration	Total amplitude 1.5 mm or 10 G, 10 Hz ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z	
	Shock	100 m/s² (10 G), 3 times each in direction of X, Y and Z	
Temperature Characteristic		≤ ± 2% F.S. of detected pressure (25°C) within the operating temperature range	
Port size		F1 : R1/8", M5 ; F2 : NPT1/8", #10-32 UNF ; F3 : G1/8" (BSPP), M5 F1C : Rc1/8" ; F2C : NPT1/8" ; F3C : G1/8" (BSPP)	
Lead wire		Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm²) - 5 cores	
Weight (with 2 Meter Lead Wire)		Approx. 86 g (Port F1 ~ F3) ; Approx. 114 g (Port F1C ~ F3C)	

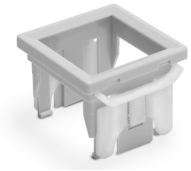
Mounting bracket Mod. SWCN-B

Supplied with:
- 4 fixing screws M4x5 ISO 724 (fine pitch)
- 1 fixing bracket for surface mounting (A)
- 1 fixing bracket for wall mounting (B)

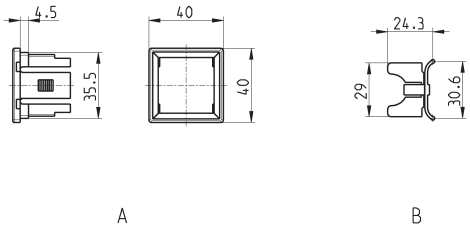


Mod.
SWCN-B

Panel mounting set Mod. SWCN-F



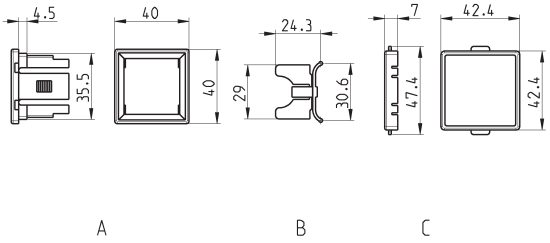
Supplied with:
- 1 pressure switch holder (A)
- 2 panel mounting brackets (B)



Mod.
SWCN-F

Panel mounting set + transparent cover Mod. SWCN-FP

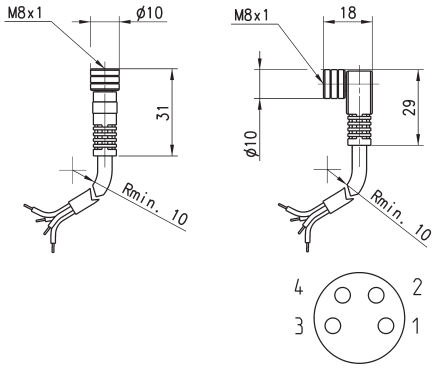
Supplied with:
- 1 pressure switch holder (A)
- 2 panel mounting brackets (B)
- 1 transparent cover (C)



Mod.
SWCN-FP

Circular M8 4-pole connectors, Female

With PU sheathing, non shielded cable.
Protection class: IP65

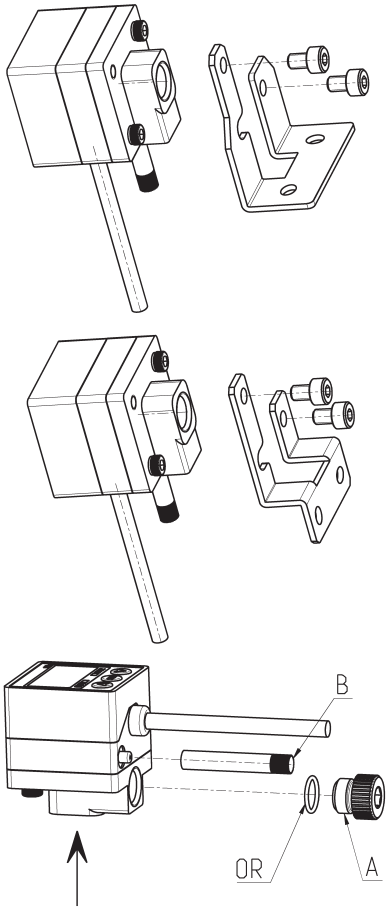


Mod.	Type of connector	Cable length (m)
CS-DF04EG-E200	straight	2
CS-DF04EG-E500	straight	5
CS-DR04EG-E200	right angle (90 degrees)	2
CS-DR04EG-E500	right angle (90 degrees)	5

Example of mounting with bracket Mod. SWCN-B and standard accessories

A: ADDITIONAL POWER SUPPLY
In case of use, please unscrew plug A from one side and mount it on the other one.

B: Use of the AIR FILTER TUBE to reach the IP 65 protection class.



Example of mounting with panel mounting set Mod. SWCN-F

A = PANEL MOUNTING SET MOD. SWCN-F
B = PRESSURE SWITCH MOD. SWCN-...
C = PANEL