

# COMPACT ELECTRONIC PRESSURE SWITCHES / VACUUM SWITCHES

## SERIES SWMN AND SWMS

Ports: G1/8, M5 thread or  $\varnothing$  4, 6 mm plug-in tube  
 Measuring range: 0 ÷ -1 bar, 0 ÷ 1 bar with analog output,  
 0 ÷ -1 bar, 0 ÷ 6 bar with digital PNP output



- Minimum dimensions
- Reduced weight
- Available with analog or digital output
- High measuring precision

The Series SWMN and SWMS vacuum/ pressure switches can be installed directly at the measuring point or pressure/ vacuum determination point in handling systems, thanks to its highly compact dimensions.

Its reduced weight (only 50 grams with a 2 meter cable) and robust construction allow its installation on applications with high accelerations. The four types of connection enable a high flexibility and an easy installation inside machines or pneumatic cabinets.

### General Data

<b>Working pressure</b>	-1 ÷ 0 bar; 0 ÷ 10 bar; -1 ÷ 10 bar
<b>Medium</b>	Filtered air and inert gases
<b>Supply voltage</b>	12 ÷ 24 VDC
<b>Maximum load</b>	80 mA (SWMN-AP/AV/PN/PP) 40 mA (SWMS-NO/NC)
<b>Voltage drop</b>	0,8 V (SWMN-AP/AV/PN/PP) 5 V (SWMS-NO/NC)
<b>Short circuit protection</b>	Mod. SWMN-AP/AV/PN/PP
<b>Response time</b>	About 1 msec
<b>Repeatability</b>	±1% FS
<b>Hysteresis</b>	3% FS (SWMN-AP/AV/PN/PP) 4% FS (SWMS-NO/NC)
<b>Protection class</b>	IP40
<b>Working temperature</b>	0 ÷ 50°C
<b>Connection cable</b>	Oil resistant, 2 or 3-wire cable (according to the model), outer sheath $\varnothing$ 2,6 mm

**COMPACT ELECTRONIC PRESSURE SWITCHES / VACUUM SWITCHES**  
**SERIES SWMN AND SWMS - CODING EXAMPLES**
**Coding Example**

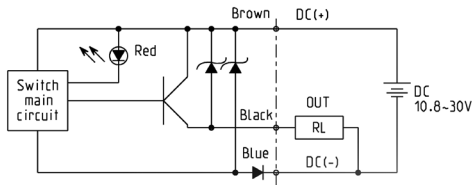
<b>SWMN</b>	<b>-</b>	<b>AP</b>	<b>-</b>	<b>T</b>	<b>-</b>	<b>2</b>
<b>SWMN</b>	SERIES SWMN SWMS					
<b>AP</b>	OUTPUT SIGNAL (SWMN) AV = Analog output signal - vacuum AP = Analog output signal - pressure PN = PNP output - vacuum PP = PNP output - pressure			OUTPUT SIGNAL (SWMS) NO = Normally Open NC = Normally Closed		
<b>T</b>	TYPE OF CONNECTION T = Ø6 tube U = Ø4 tube (only for SWMN) G = G1/8 thread M = M5 thread					
<b>2</b>	ELECTRIC CONNECTION 2 = Cable of 2 meters M = M8 3 pin connector					

**Technical Data**

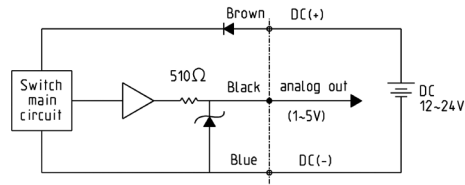
Mod.	SWMN-PN	SWMN-PP	SWMN-AV	SWMN-AP	SWMS-NO	SWMS-NC
<b>Medium</b>	Air, non-corrosive and non-flammable gases	Air, non-corrosive and non-flammable gases	Air, non-corrosive and non-flammable gases	Air, non-corrosive and non-flammable gases	Air, non-corrosive and non-flammable gases	Air, non-corrosive and non-flammable gases
<b>Working pressure range</b>	-1 ÷ 0 bar	0 ÷ 6 bar	-1 ÷ 0 bar	0 ÷ 10 bar	-1 ÷ 6 bar	-1 ÷ 6 bar
<b>Precision</b>	±1% operating range	±1% operating range	±1% operating range	±1% operating range	±1% operating range	±1% operating range
<b>Max overpressure</b>	6 bar	15 bar	2 bar	15 bar	15 bar	15 bar
<b>Output signal</b>	PNP	PNP	1 ÷ 5 V ≤±1% FS Linearity ≤±0,5% FS	1 ÷ 5 V ≤±1% FS Linearity ≤±0,5% FS	NO	NC
<b>Hysteresis</b>	3% FS	3% FS	-	-	≤ 4% FS	≤ 4% FS
<b>Maximum output current</b>	80 mA	80 mA	-	-	5 ÷ 40 mA	5 ÷ 40 mA
<b>Voltage</b>	10,8 ÷ 30 V DC	10,8 ÷ 30 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC
<b>Voltage drop</b>	≤0,8 V	≤ 0,8 V	≤ 0,8 V	≤0,8 V	≤5 V	≤5 V
<b>Protection class</b>	IP40	IP40	IP40	IP40	IP40	IP40
<b>Short circuit protection</b>	Yes	Yes	Yes	Yes	-	-
<b>Temperature effect (temperature range between 0 and 50°C)</b>	± 3% FS	±3% FS	±2% FS	±2% FS	±3% FS	±3% FS
<b>Response time</b>	1 ms	1 ms	-	-	1 ms	1 ms
<b>Environmental temperature</b>	0 ÷ 60°C	0 ÷ 60°C	0 ÷ 50°C	0 ÷ 50°C	0 ÷ 60°C	0 ÷ 60°C
<b>Repeatability</b>	≤ ± 1% FS	≤±1% FS	-	-	≤ ± 1% FS	≤±1% FS
<b>Indication</b>	LED	LED	-	-	LED	LED
<b>Electric connection</b>	Cable or M8 3 pin female connector	Cable or M8 3 pin female connector	Cable or M8 3 pin female connector	Cable or M8 3 pin female connector	Cable or M8 3 pin female connector	Cable or M8 3 pin female connector
<b>Cable (oil resistant)</b>	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm	2 wires 0,18 mm <sup>2</sup> , Ø2,6 mm
<b>Weight (with 3-meter cable)</b>	50 g	50 g	50 g	50 g	50 g	50 g

**Connection circuit**

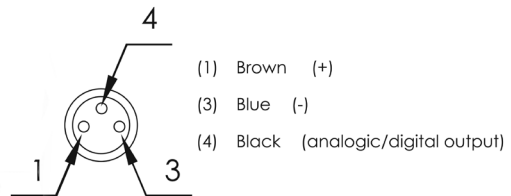
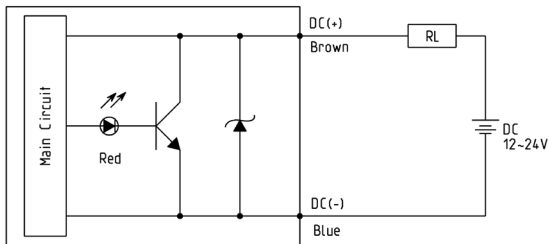
**SWMN-PN / SWMN-PP**



**SWMN-AV / SWMN-AP**



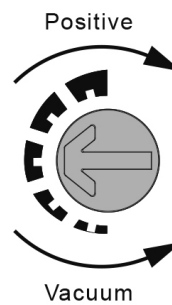
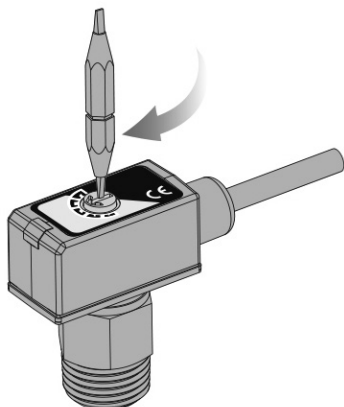
**SWMS-NO / SWMS-NC**



AIR TREATMENT

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**Pressure adjustment**

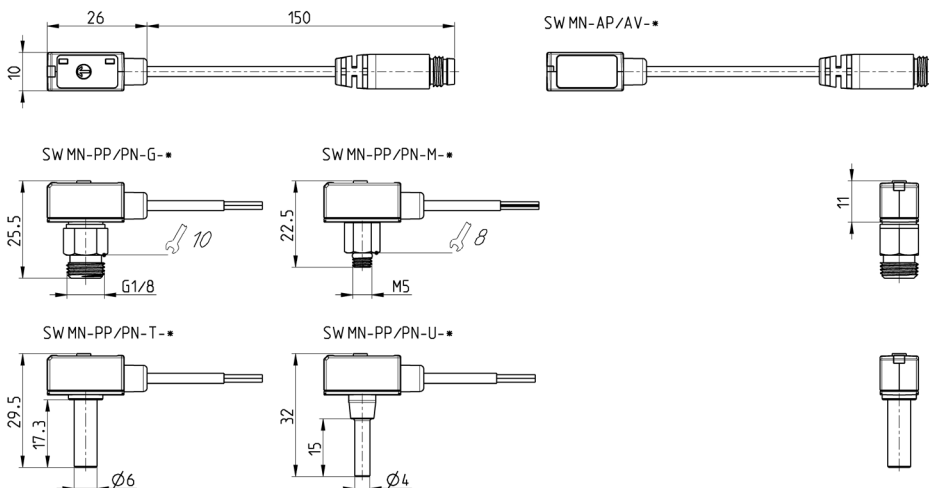


**For models SWMS-NO and SWMS-NC**

Rotate clockwise to increase the opening pressure of the contact for NC versions and the closing for NO versions.

**For models SWMN-PN and SWMN-PP**

Rotate clockwise to increase the opening pressure of the contact for NC versions and the closing for NO versions.

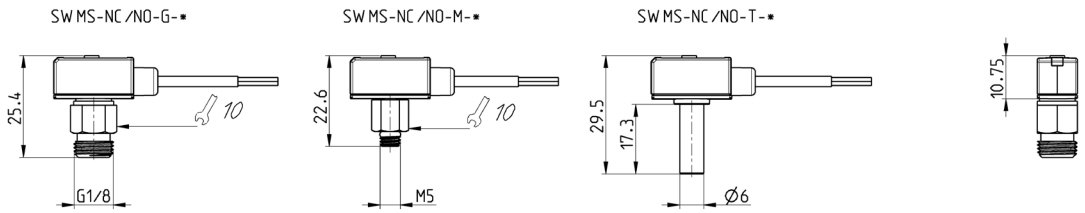
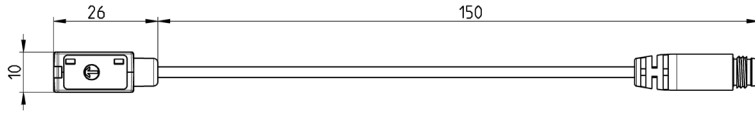
**COMPACT ELECTRONIC PRESSURE SWITCHES / VACUUM SWITCHES**  
**SERIES SWMN AND SWMS - DIMENSIONS**
**Vacuum/pressure switches Mod. SWMN-AV/AP/PN/PP**


AIR TREATMENT

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Mod.	Output signal	Type of connection	Electric connection
SWMN-AV-T-2	Analog output signal - vacuum	Ø6 tube	Cable of 2 meters
SWMN-AV-M-2	Analog output signal - vacuum	M5 thread	Cable of 2 meters
SWMN-AV-U-2	Analog output signal - vacuum	Ø4 tube	Cable of 2 meters
SWMN-AV-G-2	Analog output signal - vacuum	G1/8 thread	Cable of 2 meters
SWMN-AV-T-M	Analog output signal - vacuum	Ø6 tube	M8 3 pin connector
SWMN-AV-M-M	Analog output signal - vacuum	M5 thread	M8 3 pin connector
SWMN-AV-U-M	Analog output signal - vacuum	Ø4 tube	M8 3 pin connector
SWMN-AV-G-M	Analog output signal - vacuum	G1/8 thread	M8 3 pin connector
SWMN-AP-T-2	Analog output signal - pressure	Ø6 tube	Cable of 2 meters
SWMN-AP-M-2	Analog output signal - pressure	M5 thread	Cable of 2 meters
SWMN-AP-U-2	Analog output signal - pressure	Ø4 tube	Cable of 2 meters
SWMN-AP-G-2	Analog output signal - pressure	G1/8 thread	Cable of 2 meters
SWMN-AP-T-M	Analog output signal - pressure	Ø6 tube	M8 3 pin connector
SWMN-AP-M-M	Analog output signal - pressure	M5 thread	M8 3 pin connector
SWMN-AP-U-M	Analog output signal - pressure	Ø4 tube	M8 3 pin connector
SWMN-AP-G-M	Analog output signal - pressure	G1/8 thread	M8 3 pin connector
SWMN-PN-T-2	PNP output - vacuum	Ø6 tube	Cable of 2 meters
SWMN-PN-M-2	PNP output - vacuum	M5 thread	Cable of 2 meters
SWMN-PN-U-2	PNP output - vacuum	Ø4 tube	Cable of 2 meters
SWMN-PN-G-2	PNP output - vacuum	G1/8 thread	Cable of 2 meters
SWMN-PN-T-M	PNP output - vacuum	Ø6 tube	M8 3 pin connector
SWMN-PN-M-M	PNP output - vacuum	M5 thread	M8 3 pin connector
SWMN-PN-U-M	PNP output - vacuum	Ø4 tube	M8 3 pin connector
SWMN-PN-G-M	PNP output - vacuum	G1/8 thread	M8 3 pin connector
SWMN-PP-T-2	PNP output - pressure	Ø6 tube	Cable of 2 meters
SWMN-PP-M-2	PNP output - pressure	M5 thread	Cable of 2 meters
SWMN-PP-U-2	PNP output - pressure	Ø4 tube	Cable of 2 meters
SWMN-PP-G-2	PNP output - pressure	G1/8 thread	Cable of 2 meters
SWMN-PP-T-M	PNP output - pressure	Ø6 tube	M8 3 pin connector
SWMN-PP-M-M	PNP output - pressure	M5 thread	M8 3 pin connector
SWMN-PP-U-M	PNP output - pressure	Ø4 tube	M8 3 pin connector
SWMN-PP-G-M	PNP output - pressure	G1/8 thread	M8 3 pin connector

Vacuum/pressure switches Mod. SWMS-NO/NC



Mod.	Output signal	Type of connection	Electrical connection	Operating pressure range	Range of adjustment
SWMS-NO-T-2	NO	Ø6 tube	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NO-M-2	NO	M5 thread	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NO-G-2	NO	G1/8 thread	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NO-T-M	NO	Ø6 tube	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NO-M-M	NO	M5 thread	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NO-G-M	NO	G1/8 thread	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-T-2	NC	Ø6 tube	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-M-2	NC	M5 thread	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-G-2	NC	G1/8 thread	Cable of 2 meters	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-T-M	NC	Ø6 tube	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-M-M	NC	M5 thread	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar
SWMS-NC-G-M	NC	G1/8 thread	M8 3 pin connector	-1 ÷ 15 bar	-1 ÷ 6 bar