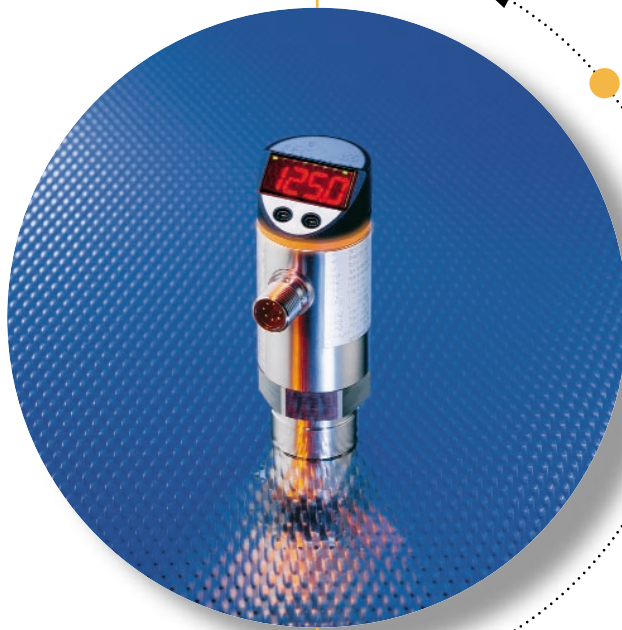


# Electronic pressure switch PNI with analogue input.

Ideal for automatic switch point adjustment.



- Evaluation of external voltage / current values.
- Continuous comparison of set/actual values within the sensor.
- Integrated task specific functions.
- 4-digit LED display, pressure indication in bar, psi, and MPa.
- Monitoring of differential pressure by processing a pressure transmitter signal.

Fluid sensors and diagnostic systems



## Application example

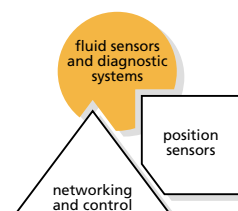
Variable pressures are used in the hydraulic clamping systems for machine tools: It is a significant advantage if the switch point can be adjusted electronically in response to changes in the valve position. Clamping pressure is to remain within a variable acceptable range (window). If the pressure is outside the preset window the switched output is de-energised. Special feature: The acceptable range is varied using an external analogue signal.

## Differential pressure switch

By evaluating the analogue signal of an external pressure transmitter the sensor switches if the set differential pressure is too high or too low. Applications include monitoring of filters or balancing liquids in tanks. Since the reference measurement is an electrical signal rather than a physical variable it is easy to monitor a differential pressure between remote locations.

## Functionality

The ifm pressure sensor offers a new means of signal evaluation. The two freely configurable switching outputs can be continuously and automatically adjusted using an analogue input signal (0/4...20 mA / 0...10 V). The display indicates either the input pressure, the output pressure or the differential pressure.



10-segment LED display, 4-digit  
M12 connector, gold-plated contacts  
LED switching status indication

2 programmable switching outputs  
Protection rating IP 67  
Stainless steel housing

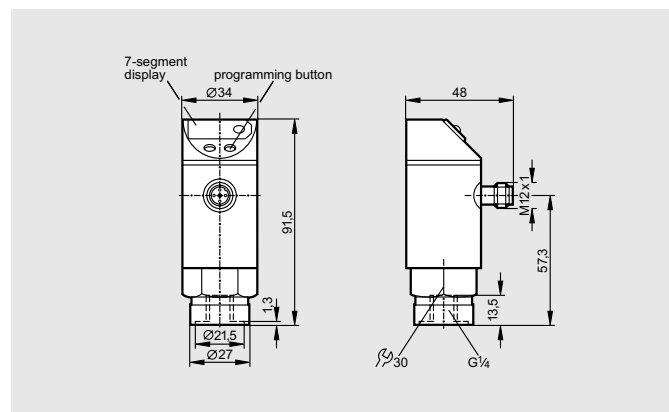
Fluid sensors and diagnostic systems

Application	Hydraulic applications			
Electrical design	DC PNP / NPN			
Output	2 x  /  programmable			
Measuring range [bar]	250	100	25	10
Order no.	PNI 021	PNI 022	PNI 023	PNI 024
Permissible overl. pressure [bar]	400	300	100	50
Min. bursting pressure [bar]	850	650	350	150
Pressure cycles min.	100 million			
Operating voltage [V]	20...30 DC			
Current rating [mA]	2 x 250			
Short circuit protection, pulsed	•			
Rev. pol. protection/overl. prot.	•			
Integrated watchdog	•			
Voltage drop [V]	<2			
Current consumption [mA]	<90 (when display is active)			
Analogue current input	0/4...20 mA (load max. 300 ohms)			
Analogue voltage input	0...10 V (input resistance min. 90 kohms)			
Max. rise time	3 ms			
Switch point setting	programming button			
Temp. influence [per 10 K in %]	+/- 0.3			
Function display				
Switching status LED	3 x green / 2 x yellow			
Function LED	alphanumeric display			
Operating temperature [°C]	-25...80			
Medium temperature [°C]	-25...80			
Storage temperature [°C]	-40...100			
Housing materials	stainless steel (304S15), stainl. steel (303S21), EPDM/X (Santoprene), PC (Makrolon), PBTP (Pocan), FPM (Viton)			
Connection	M12 connector, 8-pole, gold-plated contacts			

**Connectors**

Type	Design	Order no.
Socket	2m (PUR), M12 angled, without LED 8-pole	E 11231
Socket	5m (PUR), M12 angled, without LED 8-pole	E 11232
Socket	2m (PUR), M12 angled, without LED 4-pole	E 10900
Jumper	2m (PUR), M12 straight 4-pole	E 11473
T splitter	Socket M12, 8-pole, for 1xconnector and 1xsocket, M12, 4-pole	E 11566

**Dimensions**



**Accessories**

For further accessories and scale drawings please see our main catalogue "Fluid sensors"