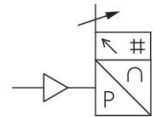


## AVENTICS Series PE7 Pressure sensors

The AVENTICS Series PE7 is a pressure sensor in stainless steel housing with shatterproof touch display. Impresses with its simple operation, great robustness and compact design.



## Technical information

Industry	Industrial
Output signal	PNP, NPN, push-pull, 1x IO-Link 0 - 10 V DC, 4 - 20 mA
Type	electronic
Type	with sensor element based on piezo resistance
Operating pressure min	0 bar
Operating pressure max	25 bar
Protection against overpressure	10 bar
Switching logic	NO/NC (adjustable)
Max. shock resistance	30 g
Vibration resistance	5 g (10 - 150 Hz)
Precision (% of full scale value)	$\pm 0,5$ %
Hysteresis	adjustable
Measurement	Relative pressure
Display	OLED
Units displayed	bar psi kPa MPa mmHg

# Pressure sensor, Series PE7

PE7

R412028728

2024-06-18

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	mmH <sub>2</sub> O
	%
Compressed air connection	G 1/4
Compressed air connection type	External thread
Min. medium temperature	-25 °C
Max. medium temperature	80 °C
Medium	Compressed air Neutral gases Hydraulic oil Neutral liquids
Certificates	CE declaration of conformity UKCA RoHS Conforms with REACH UL (Underwriters Laboratories)
Electrical connection type	Plug
Electrical connection size	M12x1
Electrical connection number of poles	4-pin
Electrical connection coding	A-coded
Min. ambient temperature	-25 °C
Max. ambient temperature	80 °C
Max. oil content of compressed air	40 mg/m <sup>3</sup>
Switching time	< 3 ms
Resetting point	adjustable
Switching point	adjustable
Quiescent current consumption	<25 mA
Switching/reset delay	adjustable
Analog output linearity	<± 0.5% of the final value
Protection class	IP65 IP67 IP68
Short circuit resistance	short circuit resistant
Weight	0.244 kg
<b>Material</b>	
Housing material	Stainless Steel
Seal material	Nitrile butadiene rubber
Part No.	R412028728

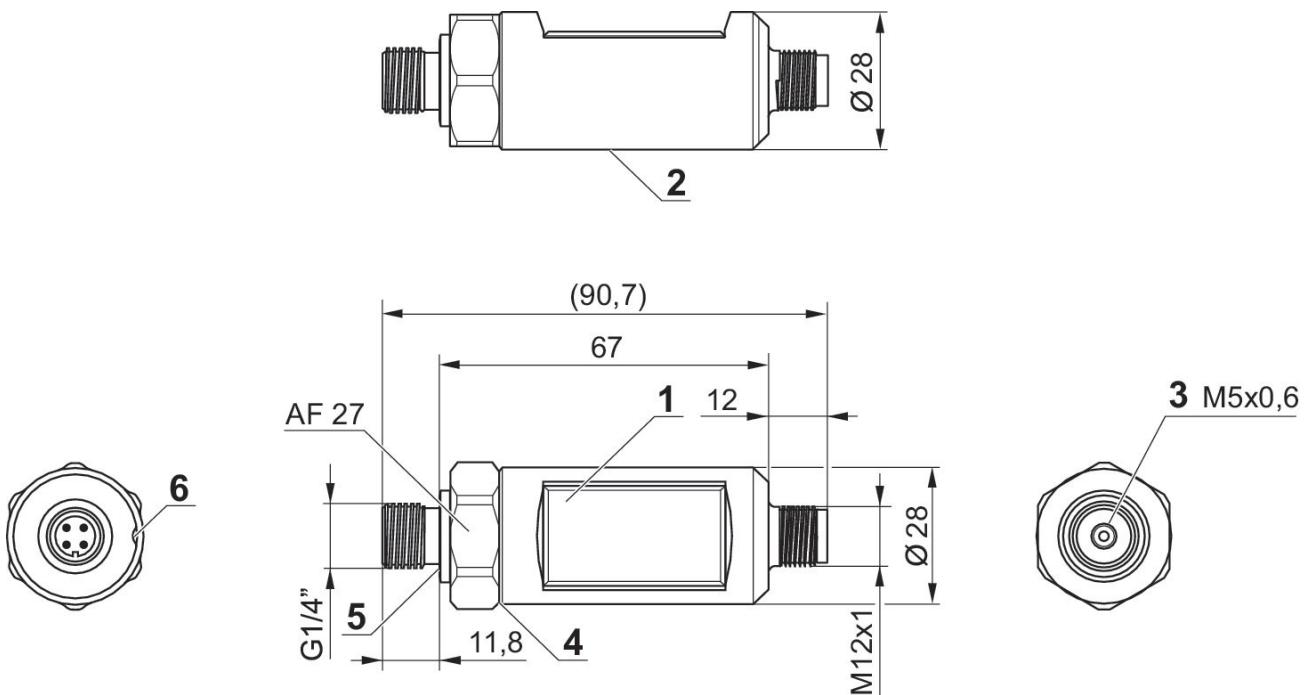
## Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in <https://www.emerson.com/en-us/support>).

## Dimensions in mm

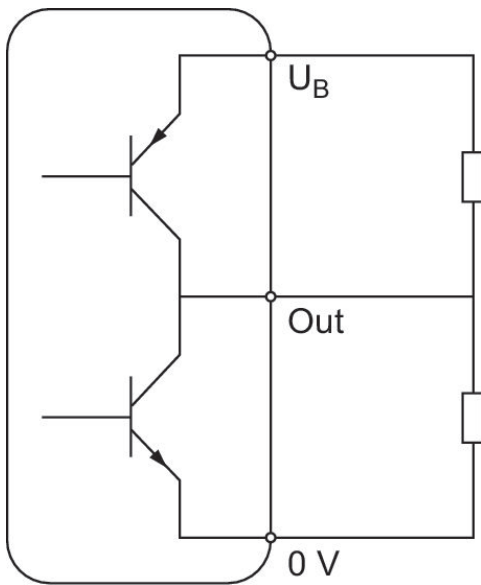


- 1) OLED
- 2) Laser inscription on underside according to printing instructions
- 3) Flow control screw
- 5) Seal
- 6) 1) Housing exhaust

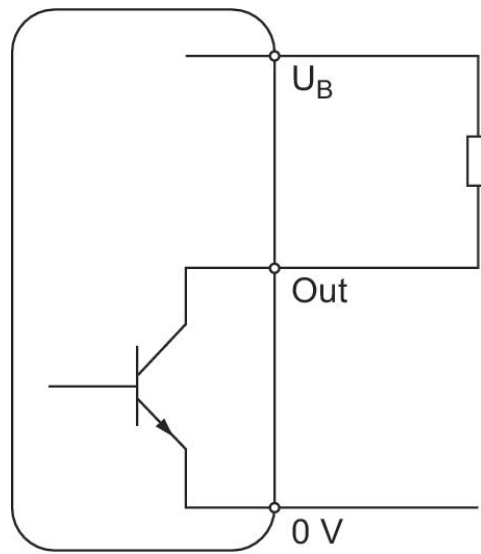
## Pin assignments

Pin	Allocation
1	operational voltage + UB
2	switch output Out2, analog: A or V, digital: PNP, NPN, push-pull
3	0 V
4	switch output Out1, digital: PNP, NPN, push-pull

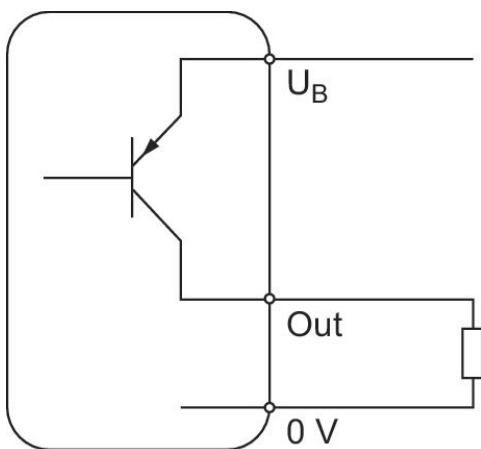
Operating mode  
Push-pull



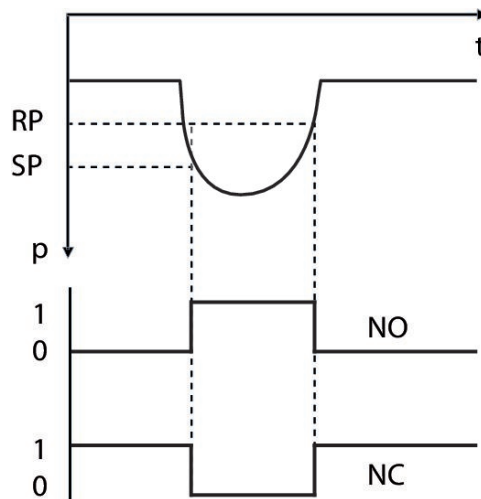
Operating mode  
NPN



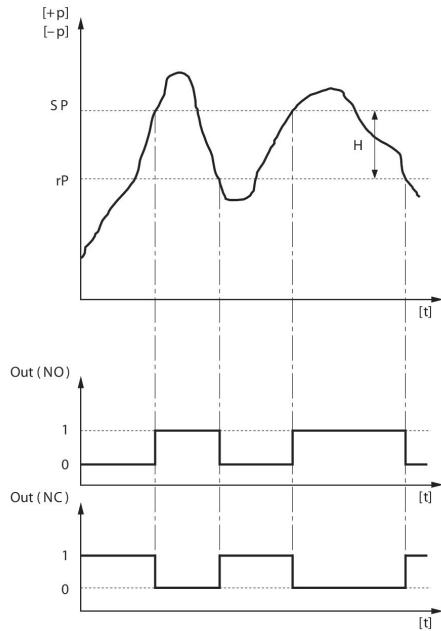
Operating mode  
PNP



Hysteresis function: switching and resetting behavior dependent on pressure  $p$  and time  $t$   
In case of underpressure

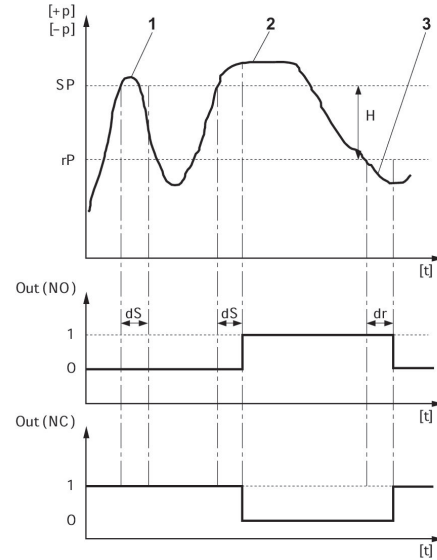


Hysteresis function: switching and resetting behavior dependent on pressure  $p$  and time  $t$   
In case of overpressure



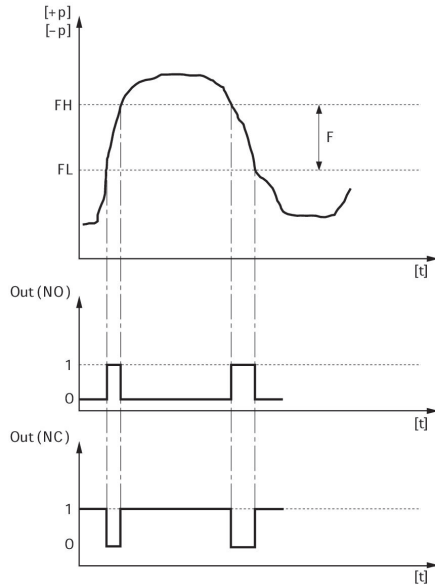
H: Hysteresis  
SP = switching point RP = resetting point  
Out (NC): switch output, break contact Out (NO): switch output, make contact

Delayed hysteresis function: switching and resetting behavior depending on pressure  $p$  and time  $t$

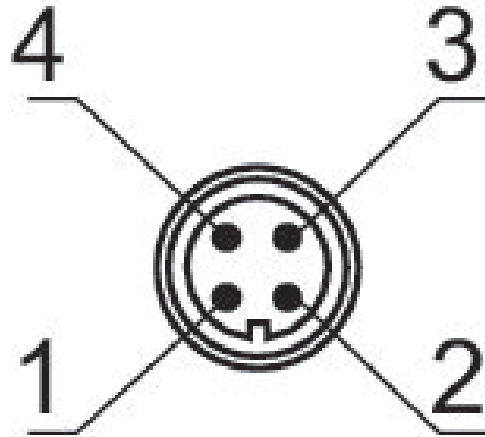


H: Hysteresis  
SP = switching point RP = resetting point  
Out (NC): switch output, break contact Out (NO): switch output, make contact  
dS: switching delay dR = reset delay  
1) period of pressure over the switching point  $< dS$ : pressure sensor does not switch  
2) Period of pressure over the switching point  $> dS$ : pressure sensor switches  
3) Period of pressure under the resetting point  $> dR$ : pressure sensor switches

Window function: switching and resetting behavior depending on pressure  $p$  and time  $t$



Pin assignments



- 1) +UB
- 2) OUT 2
- 3) 0 V DC
- 4) OUT 1 / IO-L

FH: pressure band, upper value  
FL: pressure band, lower value  
Out (NC): switch output, break contact  
Out (NO): switch output, make contact