



TS2001

Smart switch

The TS2001 smart pressure switch is designed for discontinuous control and indication of pressure using two-state outputs. The switch includes a piezoresistive or on request a ceramic pressure sensor depending on compatibility with the medium to be measured. Measured data are digitally processed with digital compensation of temperature dependencies and measurement nonlinearity.

The entire device is configurable from a PC, it is possible to choose the function of each switch, the level and hysteresis of the pressure for switching. The advantage of the switch is full digital setting from a PC without the need for manual tuning according to the manometer, high accuracy of pressure measurement and correction of the temperature dependence of the sensor. The pressure switch is particularly suitable, for example, for measuring the level using hydrostatic pressure, where the resolution is 1 mm at a water level of 10 m.

Basic Information

- piezoresistive or ceramic pressure sensor
- digital data processing with compensation of temperature dependencies and non-linearity of measurements
- outputs programmable in pressure or level units with hysteresis option at each output
- contactless galvanically isolated outputs with the possibility of switching DC / AC voltage
- configuration SW for Windows



Technical parameters

Power supply		Features of contactless outputs	
Power supply voltage	12 to 30 V DC	Number of outputs	3
Consumption	30 mA max.	Switched voltage	max 30 V DC, 24 V eff. AC
Electrical connections		Switched current	max 1 A AC/DC
Terminal blocks for power supply and contactless outputs	Cross section 0 - 1.5 mm ²	Isolation voltage	500 VDC max against all other terminals
USB port	type B - inside the box	Environmental specifications	
Pressure measurement		Ambient temperature	-5 to +60 °C
Pressure sensor	piezoresistive or *ceramic	Ambient humidity	5 % to 90 % without condensation
Nominal range	10 kPa to 40 MPa in series 1,2,5	Storage temperature	-40 °C to +80 °C**
Allowed overpressure	+100 % of the nominal range	Designed for	indoor and outdoor use
Measured media	non-corrosive media, corrosive media compatible with 316 stainless steel and FKM materials	Mechanical properties	
Pressure connection	inner thread G1/4 x 10, G1/4 DIN 3852*	Box material	aluminium
Pressure error (linearity, hysteresis error, repeatability)	< ±0.25 % of nominal range	Ingression protection	IP65, connection with round cables
Temperature error within the operating temperature range	max. ±0.5 % of the nominal range	Dimensions (W × H × L)	100 × 100 × 58 mm
Rozsah teplot média	-20 to +100 °C**	Weight	415 g
		Approval according to directives and standards	
		ROHS	EN IEC 63000
		EMC	EN IEC 61326-1:2020 EN 50121-3-2 ed. 4:2016 + Amendment A1:2019

Note:
 * to order
 ** the pressure space of the instrument must not be filled with liquid medium with a freezing point above the temperatures of use or storage.