



## Type SDT 05

**modular @ pressure**

Modular pressure switch and transducer with LED Display

### Basic Features

- ▶ High accuracy
- ▶ High temperature resistance
- ▶ Pressure resistant up to 100 bar
- ▶ Relative pressure
- ▶ Programmable switching- and analogue output
- ▶ Front flushed installation (ceramics)
- ▶ Wetted parts made of ceramics (99,9 % Al<sub>2</sub>O<sub>3</sub>); PTFE; V4A / 316L / 1.4435;
- ▶ Housing made of high-grade-steel (1.4404); FPM (Viton); PTFE; PBT (Pocan); PEI; PFA
- ▶ FDA, EHEDG-conformal

### Technical features

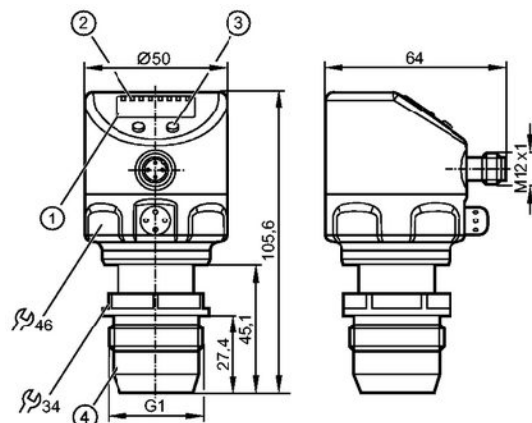
- ▶ Accuracy according to IEC 60770: 0,2 %
- ▶ Long time stability < ± 0,1% p.A.
- ▶ Protected against bypass and polarity reversal
- ▶ Ambient temperature -25...80°C
- ▶ Storage temperature -40...100°C
- ▶ Medium temperature -25...125°C (145 C°max. 1h)
- ▶ Response time < 3 ms
- ▶ Protection class IP 69K
- ▶ M12 connector, contacts gilded
- ▶ Damping switching output (daP)[s] 0,00...30,00
- ▶ Damping analogue output (daP)[s] 0,01...99,99

### Favoured fields of applications are:

- ▶ Fill Level Measurement
- ▶ Food Technology
- ▶ Chemical und Pharmaceutical Industry
- ▶ Process Measurement

### Design and mode of operation

The pressure sensor SDT05 is equipped with high-visibility LED display. It can be used as 2, 3 or 4-wire connection. This reduces wiring costs in new plants and facilitate the exchange with existing 2-wire wiring.



### Examples of modular process connections



See our data sheet process connections  
**modular @ process**



## Technical Data

### Input value (Measuring Range)

Basic ranges	0,005...0,1	-1...1	-0,0124...0,25	-0,05...1	-0,124...2,5	-1...4	-1...10	-1...25
Overload bar	4	10	10	10	20	30	50	100

### Housing material

High gr.steel (1.4404);  
FPM (Viton); PTFE; PBT  
(Pocan); PEI; PFA

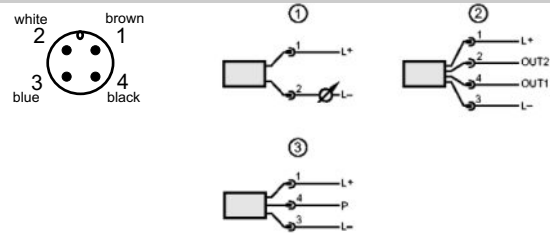
### Sensor material (wetted parts)

ceramics (99,9 % Al<sub>2</sub>O<sub>3</sub>); PTFE; V4A / 316L / 1.4435; Surface finish:  
Ra<0,4 / Rz 4

### Output function / Auxiliary power

Standard 2-wire: 4 ... 20 mA / U<sub>b</sub> = 12 ... 30 VDC  
1 NO/NC programmable + 1x NO/NC programmable

### Pin configuration M12-plug / Installation



### Electrical connection

- M 12-plug, contacts gilded

### Response time

Standby response time	[s]	1(2L) / 0,5(3L)
Min. response time switching output	[ms]	---(2L) / 3(3L)
Damping switching output	(dAP)[s]	0,00...30,00
Damping analogue output	(dAA)[s]	0,01...99,99
Step response time analogue output	[ms]	45(2L) / 7 (3L)

1 Connection for 2-wire-operation  
2 Connection for 3-wire-operation  
3 Connection for IO-Link-parameterization (P = communication via IO-Link)

### Connection 3-wire

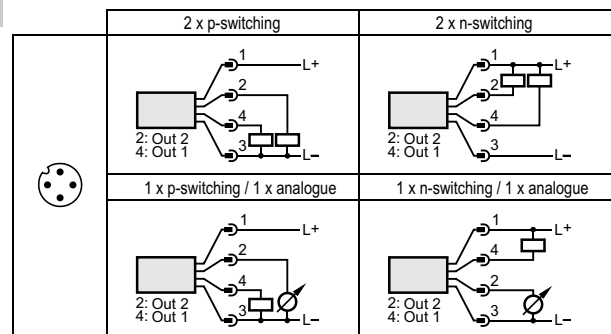
### Accuracy

(in % of span) Turn down 1:1

Accuracy switching point	< ± 0,2
Drift characteristic curve *)	< ± 0,2
Linearity	< ± 0,15
Hysteresis	< ± 0,15
Repeatability **)	< ± 0,1
Long time stability ***)	< ± 0,1

### Temperature coefficient (TC) in temperature-range 0...70° C (in % of span per 10 K)

Largest TC of zero point	< ± 0,05
Largest TC of span	< ± 0,15



### Ambient conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection class	IP 67 / IP 68 / IP 69K

Pin 1	Ub+ brown
Pin 3	Ub- blue
Pin 4 (OUT1)	• Binary switching output pressure monitoring black • Communication via IO-Link
Pin 2 (OUT2)	Binary switching output pressure monitoring or analogue output for system pressure white

### Order Code

SDT05 - 

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 0 - B - B - 6 G

Measuring range	bar						
- 0,005...0,1		3	1				
- 0,0124...0,25		3	2				
- 0,05...1		3	3				
- 1...1		3	4				
- 0,124...2,5		3	5				
- 1...4		3	6				
- 1...10		3	7				
- 1...25		3	8				
Measured variable							
Relative pressure				0			
Output signal							
4...20 mA, 2-wire / switching output no/nc					B		
Parameterization module							
with integrated control display						B	
Electrical connection							
High-grade steel connection head with M12 plug							6
Pressure compensation via Goretex-filter							G
Process connection							
see data sheet process connections							

\*\*) temperature fluctuation < 10 K

\*\*\*) in % of span per year