

Relative pressure transmitter type 519

Pressure range
0 ... 0.4 – 60 bar



The pressure transmitter type 519 has a compact and robust design and a very high measurement accuracy.

The flush diaphragm offers the use in the process technique of pasty media.

Beside various pressure- and electrical connectors there are pressure ranges from 400 mbar to 60 bar full scale available.

This sensor utilises a ceramic technology, developed by Huba Control and for the last 20 years, in millions of applications.

- Flush diaphragm
- Very high measurement accuracy
- Excellent thermal characteristic
- Available with integrated temperature measurement
- There are low pressure ranges from 400 mbar full scale available.
- Compact and rugged construction

Technical Overview

Pressure range

Relative 0 ... 0.4 – 60 bar

Operating conditions

Medium		Liquids, pasty media and gases
Temperature	Medium	-25 ... +125 °C
	Ambient	-25 ... +85 °C
	Storage	-40 ... +100 °C
Tolerable overload / rupture pressure	≤ 1.6 bar	max. 4.8 bar
	> 1.6 bar	3x FS

Materials

Cover		Stainless steel 1.4404 / AISI 316L
Materials in contact with medium	Pressure connection	Stainless steel 1.4404 / AISI 316L
	Sensor	Ceramic Al ₂ O ₃ (99.6%)
	Sealing material	FPM, EPDM

Electrical overview

	Output	Power supply	Load	Current consumption
2 wire	4 ... 20 mA	10 ... 30 VDC	< $\frac{\text{Supply voltage} \cdot 10 \text{ V}}{0.02 \text{ A}}$ [Ohm]	< 23 mA
	0 ... 5 V	7 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
3 wire	0 ... 10 V	12 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
	ration. 10 ... 90%	5 VDC ±10%	>10 kOhm / < 100 nF	< 5 mA
4 wire (with temperature)	Pressure	ration. 10 ... 90%	5 VDC ±10%	>10 kOhm / < 100 nF
	Temperature (-40...+150°C)	ration. 10 ... 90%	5 VDC ±10%	>10 kOhm / < 100 nF
Polarity reversal protection	Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.			
Insulation voltage	1000 VDC			

Dynamic response

Start-up time		< 100 ms
Response time	Pressure	< 5 ms
	Temperature T90	< 5 s
Load cycle		< 100 Hz

Electrical connection

	Protection class	Protection standard
Connector DIN EN 175301-803-A	IP 65	III
Connector DIN EN 175301-803-C (Industrial standard 9.4 mm)	IP 65	III
Connector M12x1	IP 67	III

Pressure connection

Outside thread	G ½	sealed at back DIN 3852-E with profile seal ring in FPM (-30 ... +135 °C)
	G ½	dual sealed with profile seal ring in FPM (-30 ... +135 °C)
	G ¾	dual sealed with profile seal ring in FPM (-30 ... +135 °C)

Installation arrangement

Unrestricted

Tests / Admissions

Electromagnetic compatibility	CE conformity acc. EN 61326-2-3
Shock acc. IEC 60068-2-27	100 g, 11ms, half sine wave, 1x, all 6 directions
	40 g, 6 ms, half sine wave, all 6 directions
Vibration nach IEC 60068-2-6	10 g, 10 ... 2000 Hz, 1 Octave/min., all 3 directions, 50 constant load

Weight

110 ... 140 g

Packaging (Please state on order)

Single packaging in cardboard	accessories integrated
Multiple packaging in cardboard (25 pcs)	

Accuracy

Parameter pressure (> 1 bar)	Einheit	
Characteristic line 1) (at 25 °C)	% FS	± 0.3
Resolution	% FS	< 0.1
Long term stability acc. IEC EN 60770-1 max.	% FS	± 0.25
Total error band (at -25 °C ... +125 °C)	% FS	± 0.5

Parameter pressure (< 1 bar)	Einheit	
Characteristic line 1) (at 25 °C)	% FS	± 0.5
Resolution	% FS	< 0.1
Long term stability acc. IEC EN 60770-1 max.	% FS	± 0.25
Total error band (at -25 °C ... +125 °C)	% FS	± 0.7

Parameter temperature	Einheit	
Characteristic line	°C	± 3.0
Resolution	°C	0.2

Test conditions: 45% rF
Balance position: vertical, pressure connection down

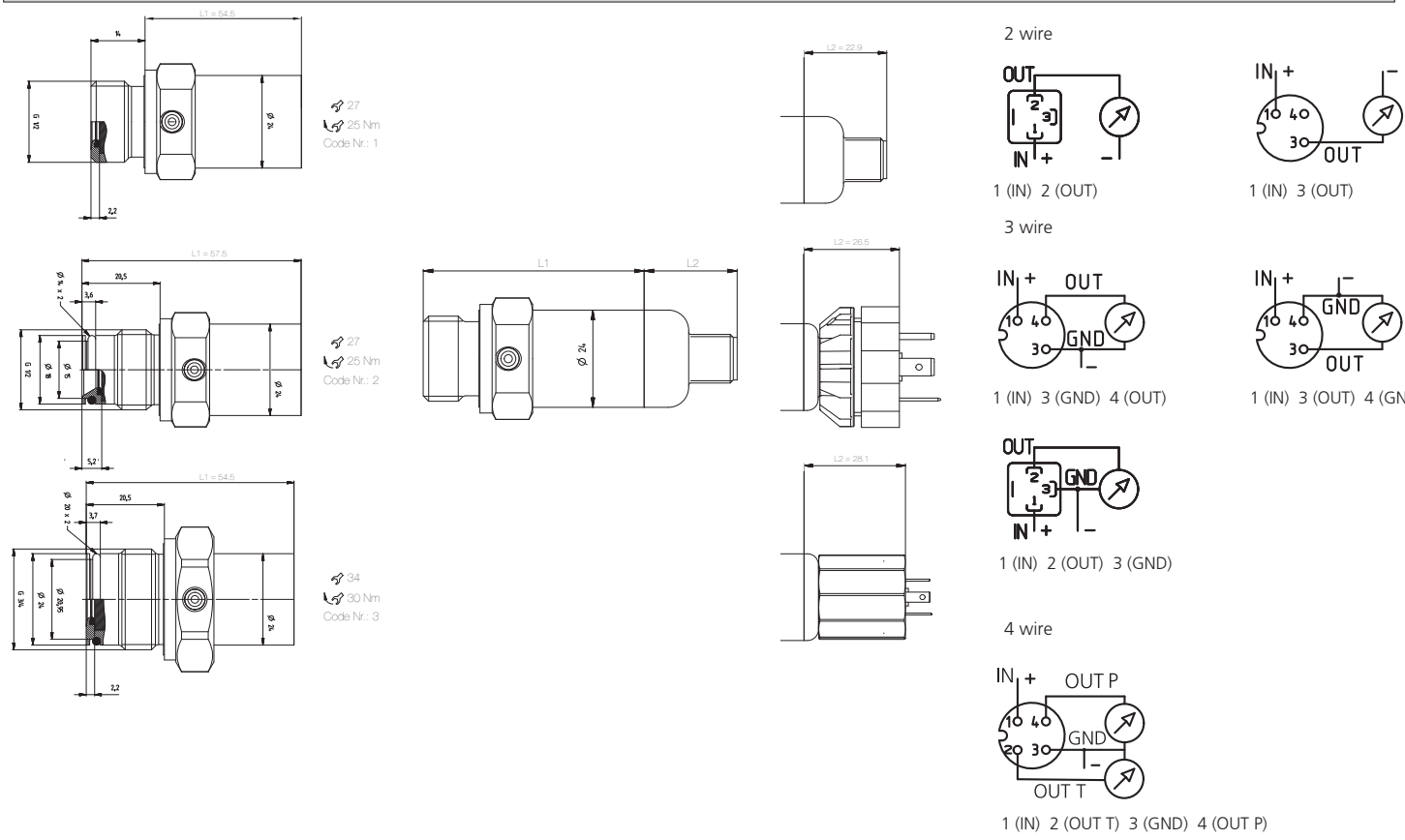
¹⁾ incl. zero point, full scale, linearity, hysteresis and repeatability

²⁾ fs <100 mbar ±0.7% fs

Order code selection table in bar			1	2	3	4	5	6	7	8	9	10	11
			519.	X	X	X	X	X	X	X	X	X	X
Pressure range ¹⁾	0 ... 0.4 bar		9	2	7								
	0 ... 0.6 bar		9	2	8								
	0 ... 1.0 bar		9	1	1								
	0 ... 1.6 bar		9	1	2								
	0 ... 2.5 bar		9	1	4								
	0 ... 4.0 bar		9	1	5								
	0 ... 6.0 bar		9	1	7								
	0 ... 10.0 bar		9	3	0								
	0 ... 16.0 bar		9	3	1								
	0 ... 25.0 bar		9	3	2								
0 ... 40.0 bar		9	3	3									
0 ... 60.0 bar		9	4	0									
Sealing material	FPM	Fluoro elastomer					0						
	EPDM	Ethylene propylene					1						
Version	standard						0						
	0 ... 5 V	7 ... 33 VDC						1					
Output / power supply	0 ... 10 V	12 ... 33 VDC						2					
	4 ... 20 mA	10 ... 30 VDC						3					
	ratiom. 10 ... 90%	5VDC ±10%						7					
	ratiom. 10 ... 90%	5VDC ±10% with temperature						5	3				
		M12x1 2L: IN=1 / OUT=3 3L: IN=1 / OUT=4 / GND=3 / Opt. T=2 M12x1 3L: IN=1 / OUT=3 / GND=4							1,2	M			
Electrical connection ²⁾	Connector	DIN EN 175301-803-A							1				
		DIN EN 175301-803-C							2				
		G ½ sealed at back DIN 3852-E									0	1	1
Pressure connection ¹⁾	Outside thread	G ½ doppelt dichtend								0	2	1	
		G ¾ doppelt dichtend								0	3	1	
Pressure range variation (optional)	Indicate W and state range on order (e.g. W0... + 0.5bar/OUT0.5...4.5V)												W

Accessories (supplied loose)	Order number
Female connector DIN EN 175301-803-A with seal	103510
Connector DIN EN 175301-803-C with seal	104244
Corner-wire box for connector M12x1	106975
Corner-wire box for connector M12x1 with cable 2.0 m	114604
Straight-wire box for connector M12x1	114570
Straight-wire box for connector M12x1 with cable 2.0 m	114605
Calibration certificate	104551

Dimensions in mm / Electrical connections



¹⁾ Other pressure ranges on request ²⁾ Delivery without female connector

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