

Level sensing pressure transmitter type 711

Pressure range
0 ... 0.1 - 16 bar



The level sensing pressure transmitters of type 711 with a relative pressure measuring cell have an adjusted and amplified sensor signal. Cable length from 3 to 300 meters as well as ex-versions and versions with drinking water approval are available.

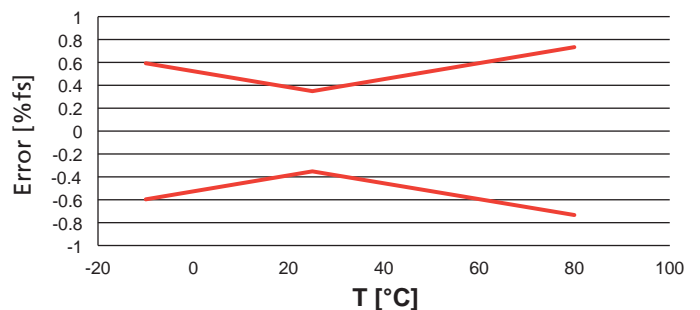
- Ex-version available
- Sea water resistant
- High accuracy
- Large variety of cable length (3 to 300 m)
- Low pressure ranges

Technical overview

Pressure range			
Relative		0 ... 0.1 - 16 bar	
Operating conditions			
Medium		Fuel oil, ultra-light ¹⁾ SN 181 160-2	
		Fuel oil, heavy ¹⁾ SN 181 160-2	
		Diesel oil ¹⁾	
		Benzine ¹⁾	
		Sea water	
		Drinking water (with EPDM O-ring)	
Temperature	Medium and ambient ²⁾	-10 ... +80 °C	
	Storage	-20 ... +80 °C	
Overload		see order code selection table	
Materials in contact with medium			
Case		Stainless steel 1.4404 / AISI 316L	
Sensor		Stainless steel 1.4539 / AISI 904L	
Cable		Ceramic Al ₂ O ₃ (99.6%)	
Cable grommet		PE / FEP	
Protection cover		PPE / ETFE	
Sealing material		PPE / ETFE	
		FPM / EPDM	
Electrical overview			
Output	Power supply	Load	
2 wire	4 ... 20 mA	10 ... 33 VDC (with Ex - 10 ... 30 VDC)	Current consumption
		< $\frac{\text{power supply} - 10 \text{ V}}{0.02 \text{ A}}$ [Ohm]	< 22 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal.		
Overvoltage protection			36 VDC
Electric strength towards case			500 VDC
Dynamic response			
Response time			< 0.1 s
Runtime			
Time starts at the moment of application of minimal supply voltage			< 1 s
Electrical connection	Protection standard	Protection class	
Cable length 3 ... 300 m	P 68, continuous immersion at max. overload (see order code selection table)	III	
Test / Admissions			
Electromagnetic compatibility			CE conform acc. EN 61326-2-3
Drinking water approval			ACS
Shipbuilding ³⁾			Germanischer Lloyd
			American Bureau of Shipping
			Bureau Veritas
			Det Norske Veritas
			Lloyd's Register
UL			UL 61010-1
EAC			
Ex-protection			
IECEX SEV 12.006			Ex ia IIC T4 Ga
SEV 12 ATEX 0138			II 1 G Ex ia IIC T4 Ga
Weight			
Niveau transmitter			~ 375 g
Cable			~ 80 g/m
Packaging			
Single packaging			

Accuracy

Parameter	Unit	
Characteristic line ⁴⁾ (at 25 °C)	% fs	± 0.35
Resolution	% fs	< 0.1
Long term stability acc. IEC EN 60770-1 max.	% fs	± 0.25
Thermal characteristic ⁵⁾	% fs/10K	± 0.07



¹⁾ Ex-protection to attention!

²⁾ non-congealing media

³⁾ Admissions provided

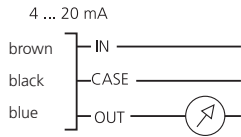
⁴⁾ incl. zero point, full scale, linearity, hysteresis and repeatability)

⁵⁾ at -10 ... +80 °C

			1	2	3	4	5	6	7	8	9	10	11	
Order code selection table			711. X X X X X X X X X X X X											
Pressure range ¹⁾		overload												
	0 ... 0.1 bar	1.5 bar	9	0	1									
	0 ... 0.2 bar	1.5 bar	9	0	2									
	0 ... 0.3 bar	1.5 bar	9	0	3									
	0 ... 0.4 bar	2 bar	9	0	4									
	0 ... 0.5 bar	2 bar	9	0	5									
	0 ... 0.6 bar	2 bar	9	1	0									
	0 ... 1.0 bar	5 bar	9	1	1									
	0 ... 2.0 bar	10 bar	9	1	3									
	0 ... 4.0 bar	20 bar	9	1	5									
	0 ... 6.0 bar	20 bar	9	1	7									
0 ... 10.0 bar	20 bar	9	3	0										
0 ... 16.0 bar	24 bar	9	3	1										
▲ Full scale signal at these pressures														
Sealing material	FPM	Fluoro-elastomer						0						
	EPDM	Ethylene propylene (for drinking water)						1						
Output / power supply	4 ... 20 mA	10 ... 33 VDC (with Ex: 10 ... 30 VDC)						0						
Electrical connection ²⁾	Cable	3 m							0	1				
		5 m							0	2				
		7 m								0	3			
		10 m								0	4			
		15 m								0	5			
		20 m								0	6			
		25 m								0	7			
		30 m								0	8			
		40 m								0	9			
		50 m								1	0			
		60 m								1	1			
		70 m								1	2			
		80 m								1	3			
		90 m								1	4			
		100 m								1	5			
		125 m								1	6			
		150 m								1	7			
		175 m								1	8			
200 m								1	9					
225 m								2	0					
250 m								2	1					
275 m								2	2					
300 m								2	3					
Cable material	PE	(for drinking water)									0			
	FEP										1			
Case material	Stainless steel 1.4404 / AISI 316L											0		
	Stainless steel 1.4539 / AISI 904L (recommend sea water)											1		
Admission	without												0	
	Ex protection	(max. cable length 300 m)											1	
	Drinking water approval												2	
ressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 3bar/OUT10...16mA)						1				0			
													W	

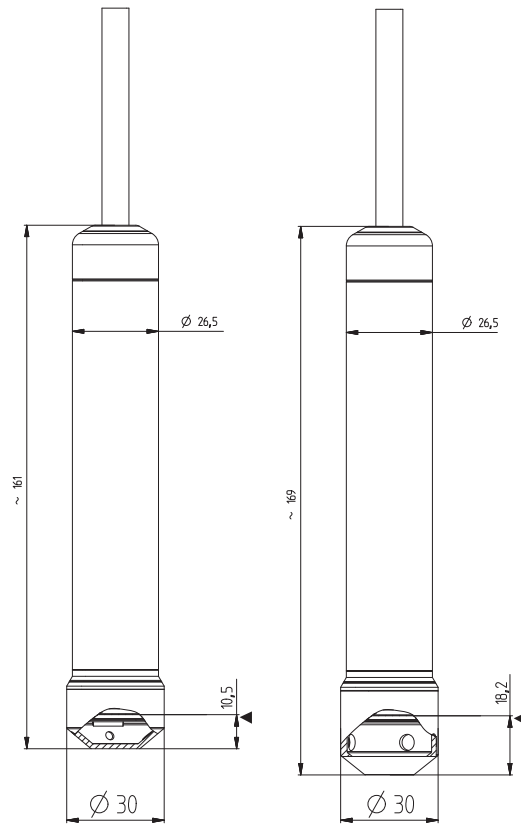
Accessories <small>(delivery incl. - Level transmitter with plastic protection cover, humidity protection elements and operating instruction)</small>	Order number
Cable hanger	118835
Connection box	118836
Protection cage (stainless steel 1.4404 / AISI 316L)	118837
Protection cage (stainless steel 1.4539 / AISI 904L)	119688
Protection cover PPE for PE cable (pack of 10)	118838
Protection cover ETFE for FEP cable (pack of 10)	118839
Humidity protection element (pack of 10)	119217
Calibration certificate	104551

¹⁾ Other pressure range on request ²⁾ Other cable length on request



Device design with explosion protection:
4 ... 20 mA

The grounding connection is conductively connected to the level transmitter housing. The ground conductor of level transmitter must be connected to the equipotential bonding system of the plant.

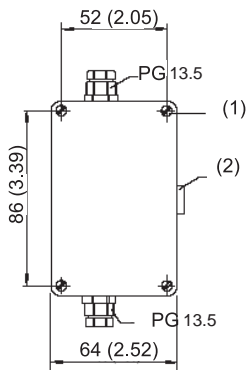


← - Measurement reference height

Sensor with protection cover

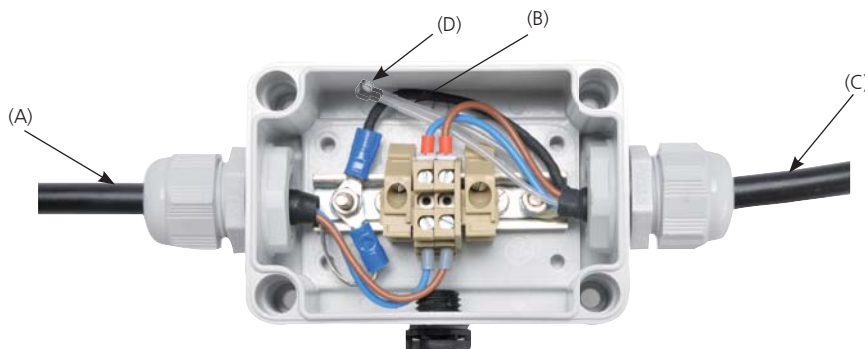
Sensor with metal protection cage

Connection box

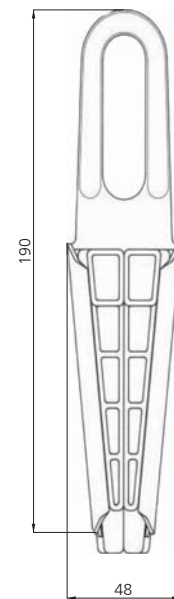


- (1) Mounting hole
- (2) Vent valve

- (A) Measuring value process
- (B) Vent pipes
- (C) to the transmitter
- (D) Humidity protection element



Cable hanger



hot-dip galvanized steel – PA6 glass fibre reinforced

Cable Ø 5.5 ... 9.5

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