

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	Current consumption
2 wire 4 ... 20 mA	10 ... 33 VDC (with Ex - 10 ... 30 VDC)	$< \frac{0.2 \text{ W}}{0.02 \text{ A}}$ [Ohm]	< 22 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal.		
Overvoltage protection			36 VDC
Electric strength towards case			500 VDC

Protection class

Protection class III

Dynamic response

Response time < 0.1 s

Protection standard

IP 68, continuous immersion at max. overload (see order code selection table)

Runtime

Time starts at the moment of application of minimal supply voltage < 1 s

Electrical connection

Cable length 3 ... 300 m

Test / Admissions

Electromagnetic compatibility	CE conform acc. EN 61326-2-3
Drinking water approval ³⁾	DVGW, KTW, ACS Germanischer Lloyd American Bureau of Shipping Bureau Veritas Det Norske Veritas Lloyd's Register UL 61010-1
Shipbuilding ³⁾	
UL ³⁾	
EAC ³⁾	

Ex-protection

IECEx SEV 12.006 Ex ia IIC T4 Ga
SEV 12 ATEX 0138 II 1 G Ex ia IIC T4 Ga

Weight

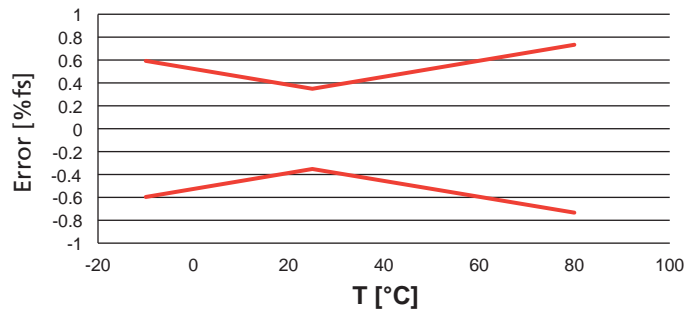
Niveau transmitter ~ 375 g
Cable ~ 80 g/m

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⁾	0 ... 0.1 bar	overload	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			
	without									0		
Admission	Ex protection (max. cable length 300 m)										1	
	Drinking water approval					1			0		2	
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 3bar/OUT10...16mA)											
												W

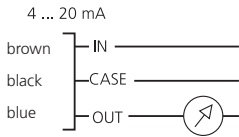
Accessories

(In the delivery incl. - Level transmitter with plastik protection cover, humidity protection element and operating instruction)

	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

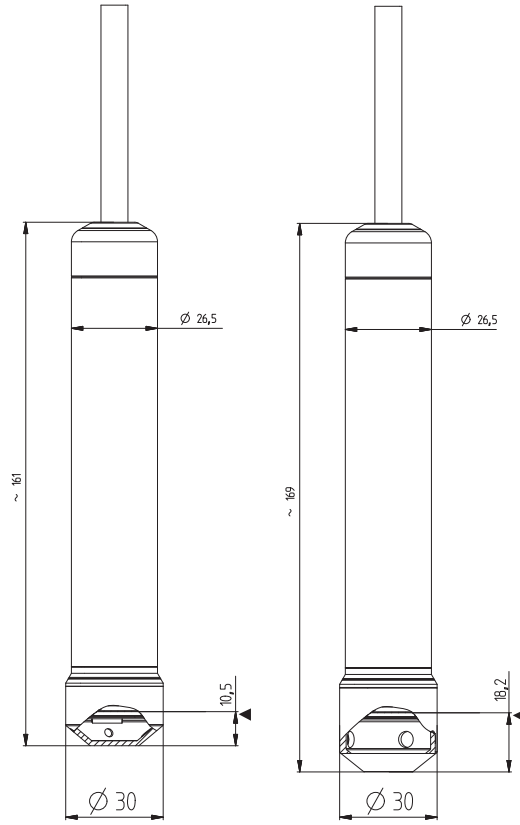
¹⁾ Other pressure range on request

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.

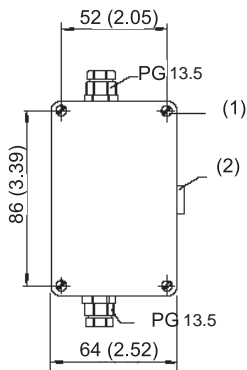


← - Measurement reference height

Sensor with protection cover

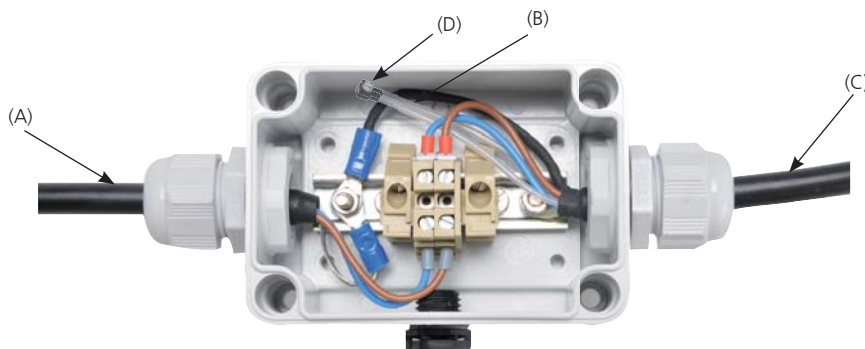
Sensor with metal protection cage

Connection box

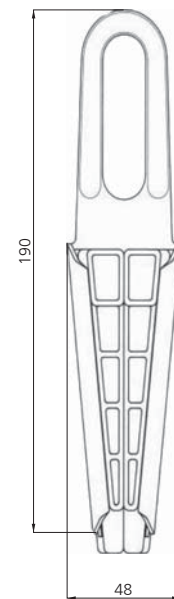


- (1) Mounting hole
- (2) Vent valve

- (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 \varnothing 5.5 ... 9.5

Huba Control AG
Headquarters

Industriestrasse 17
5436 Würenlos
Telefon +41 (0) 56 436 82 00
Telefax +41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG
Niederlassung Deutschland

Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon +49 (0) 7127 23 93 00
Telefax +49 (0) 7127 23 93 20
info.de@hubacontrol.com

Huba Control SA
Succursale France

Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone +33 (0) 387 847 300
Télécopieur +33 (0) 387 847 301
info.fr@hubacontrol.com

Huba Control AG
Vestiging Nederland

Hamseweg 20A
3828 AD Hoogland
Telefoon +31 (0) 33 433 03 66
Telefax +31 (0) 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG
Branch Office United Kingdom

Unit 13 Berkshire House
County Park Business Centre
Shrivenham Road
Swindon Wiltshire SN1 2NR
Phone +44 (0) 1993 776667
Fax +44 (0) 1993 776671
info.uk@hubacontrol.com