



Pressure level transmitter

# Huba Control

## Level sensing pressure transmitter - Type 711

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.



**Pressure range**  
**0 ... 0.1 - 16 bar**

- + 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 <sup>1)</sup>	SN 181 160-2
	Fuel oil, heavy <sup>1)</sup>	SN 181 160-2
	Diesel oil <sup>1)</sup>	
	Benzine <sup>1)</sup>	
	Sea water	
Temperature	Medium and ambient <sup>2)</sup>	-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 <sub>2</sub> O <sub>3</sub> (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)	$< \frac{\text{power supply} - 10 \text{ V}}{0.02 \text{ A}}$ [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

Cable length 3 ... 300 m

### Protection standard

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

### Protection class

III

### Test / Admissions

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

### Ex-protection

IECEx SEV 12.006

SEV 12 ATEX 0138

Ex ia IIC T4 Ga

II 1 G Ex ia IIC T4 Ga

### Weight

Niveau transmitter ~ 375 g

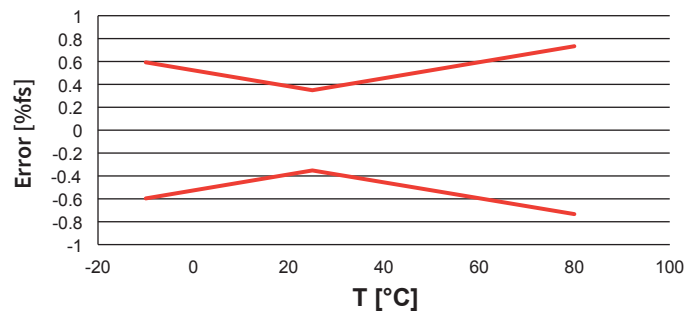
Cable ~ 80 g/m

### Packaging

Single packaging

## Accuracy

Parameter	Unit	
Characteristic line <sup>3)</sup> (at 25 °C)	% fs	± 0.35
Resolution	% fs	< 0.1
Long term stability acc. IEC EN 60770-1	% fs	± 0.25
Thermal characteristic <sup>4)</sup>	% fs/10K	± 0.07



<sup>1)</sup> Check Ex Zone for your application

<sup>2)</sup> non-congealing media

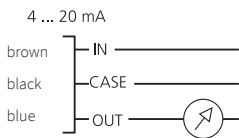
<sup>3)</sup> incl. zero point, full scale, linearity, hysteresis and repeatability

<sup>4)</sup> at -10 ... +80 °C

			1	2	3	4	5	6	7	8	9	10	11	
<b>Order code selection table</b>			711.	X	X	X	X	X	X	X	X	X	X	
<b>Pressure range <sup>1)</sup></b>		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														
<b>Sealing material</b>	FPM	Fluoro-elastomer					0							
	EPDM	Ethylene propylene (for drinking water)					1							
<b>Output / power supply</b>	4 ... 20 mA	10 ... 33 VDC (with Ex: 10 ... 30 VDC)					0							
<b>Electrical connection <sup>2)</sup></b>	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						
<b>Cable material</b>	PE	(for drinking water)									0			
	FEP										1			
<b>Case material</b>	Stainless steel 1.4404 / AISI 316L											0		
	Stainless steel 1.4539 / AISI 904L (recommend sea water)											1		
<b>Admission</b>	without												0	
	Ex protection (max. cable length 300 m)												1	
	Drinking water approval						1				0		2	
<b>Pressure range variation (optional)</b>	Indicate W and state range on order (e.g.: W0... +3bar/OUT10...16mA)												W	

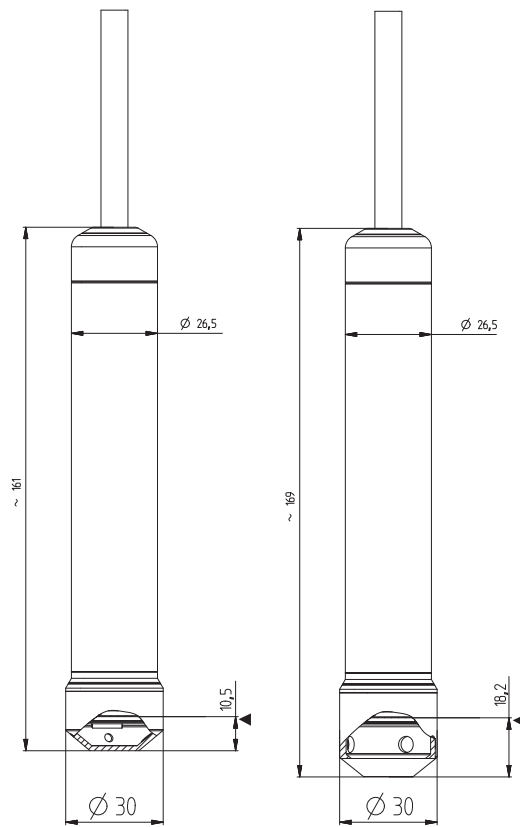
<b>Accessories</b> <small>(delivery incl. - Level transmitter with plastic protection cover, humidity protection elements and operating instruction)</small>		<b>Order number</b>
Cable hanger		118835
Connection box		118836
Protection cage (stainless steel 1.4404 / AISI 316L)		118837
Protection cage (stainless 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

<sup>1)</sup> Other pressure range on request      <sup>2)</sup> 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.

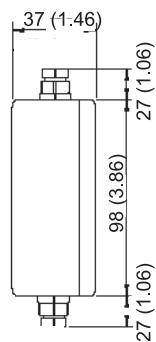
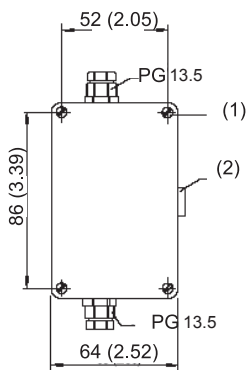


Sensor with protection cover

Sensor with metal protection cage

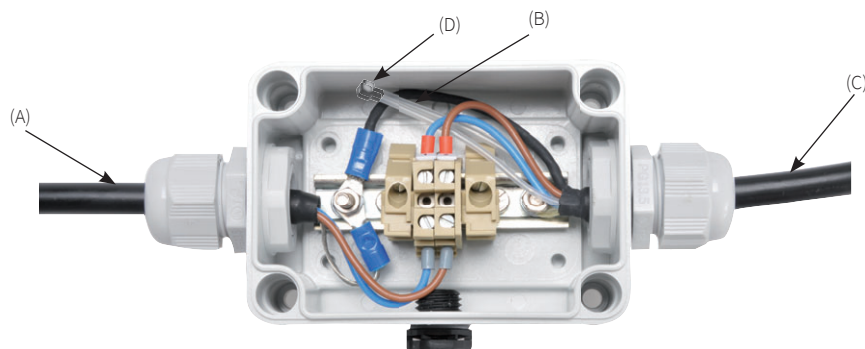
← - Measurement reference height

Connection box

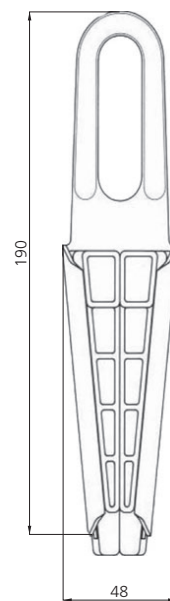


- (1) Mounting hole
- (2) Vent valve

- (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

**Huba Control AG**

Headquarters Schweiz  
Industriestrasse 17  
CH-5436 Würenlos  
Telefon +41 56 436 82 00  
Fax +41 56 436 82 82  
info.ch@hubacontrol.com

**Huba Control AG**

Vestiging Nederland  
Hamseweg 20A  
NL-3828 AD-Hoogland  
Telefoon +31 33 433 03 66  
Telefax +31 33 433 03 77  
info.nl@hubacontrol.com

**Huba Control AG**

Niederlassung Deutschland  
Schlattgrabenstrasse 24  
D-72141 Walddorfhäslach  
Telefon +49 7127 2393 00  
Fax +49 7127 2393 20  
info.de@hubacontrol.com

**Huba Control USA, Inc.**

Office United States of America  
303 Wyman Street  
Suite #300  
Waltham MA 02451  
Tel: +1 866-6HUBACO (+1 866-648-2226)  
info.usa@hubacontrol.com

**Huba Control SA**

Succursale France  
Rue Lavoisier  
Technopôle Forbach-Sud  
F-57602 Forbach Cedex  
Téléphone +33 3 87 84 73 00  
Télécopieur +33 3 87 84 73 01  
info.fr@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 1993 77 66 67  
Fax +44 1993 77 66 71  
info.uk@hubacontrol.com

**[www.hubacontrol.com](http://www.hubacontrol.com)**

