# Huba Control

Pressure transmitters

Differential pressure transmitters

Pressure switches

Vortex flow sensors

Pressure level transmitters



Pressure and flow

www.hubacontrol.com

# **Product overview**

				PRESSURE				MEDIUM		
PRESSURE TRANS- MITTERS	PRESSURE RANGE	PAGE	Relative	Absolute	Differential	Air and neut- ral gases	Flammable gases	Liquids	Refrigerants	H2
400 OEM	0 10-100 mbar	8	~			~		~		
501 OEM	-1 0-60 bar	8	~	<b>~</b>		~		~		
503 OEM	0 2.5 - 52 bar	8	~			~		~		
505 OEM	0 4 - 16 bar	9	~			~		~		
506 OEM	-0.5 7 bar / 0 10 - 60 bar	9	~			~		~	~	
511 OEM	-1 0 - 600 bar	9	<b>V</b>	¥		~		<b>~</b>		
512	0 40 - 1000 bar	10	<b>V</b>			~		~		
515 OEM	-1 0 - 600 bar	10	~	<b>~</b>		~		~		
519	0 0.4 - 60 bar	10	<b>V</b>			~		<b>~</b>		
520	-1 9 bar / 0 2.5 - 1000 bar	11	<b>V</b>			~		~	~	
522	0 2.5 - 600 bar	11	~			~		~	~	
525	0 0.05 - 0.6 bar	11	<b>V</b>			~		<b>~</b>		
526	0 0.1 - 0.6 bar	12	<b>V</b>			~		~		
527	0 1 - 60 bar	12	<b>V</b>	<b>~</b>		~		~		
528	-1 0 - 60 bar	12	<b>V</b>	¥		~		<b>~</b>		
540	0 60 - 600 bar	13	<b>V</b>			<b>~</b>		<b>~</b>		
548	-1 0 - 40 bar	13	<b>V</b>			~		~		
550	0 40 - 600 bar	13	~			<b>~</b>		~		
555	0 40 - 900 bar	14	<b>V</b>							~
558	0 6 - 60 bar	14	~	<b>~</b>		<b>~</b>		~		
680	0 0.1 - 1000 bar	14	~	<b>~</b>		<b>~</b>		~		

DIFFERENTIAL PRESSURE TRANSMITTERS									
401 OEM	0 3 - 8 mbar	15	<b>~</b>		<b>~</b>	~			
402	0 3 - 50 mbar	15	<b>~</b>		<b>~</b>	<b>~</b>			
403 OEM	0 3 - 8 mbar	15	<b>~</b>		<b>~</b>	<b>~</b>	~		
450	-1.5 3 - 100 mbar	16	<b>~</b>		<b>✓</b>	<b>~</b>			
652	0 50 - 1000 mbar	16	<b>~</b>		<b>~</b>	<b>~</b>		<b>~</b>	
664	-5 5 mbar/ 0 5- 2000 mbar	16	<b>~</b>			<b>~</b>			
692	0 0.1 - 25 bar	17	<b>~</b>		<b>✓</b>	<b>~</b>		<b>✓</b>	
698	-5 5 mbar / 0 10000 mbar	17	<b>~</b>		<b>~</b>	<b>~</b>			
699	-1 1 mbar / 0 0.3 - 50 mbar	17	<b>~</b>		<b>~</b>	<b>~</b>			
699M	0 500 - 7000 Pa	18	<b>V</b>		<b>✓</b>	V			

PRESSURE LEVEL TRANS	MITTERS						
711	0 0.1 - 10 bar	18	V			<b>✓</b>	
712	0 0.3 - 3 bar	18	<b>~</b>	<b>~</b>		<b>✓</b>	
713	0 0.6 - 16 bar	19	<b>~</b>	<b>~</b>		<b>✓</b>	

ELECTRONIC PRES	SSURE SWITCHES						
521	0 2.5 - 600 bar	19	<b>~</b>		<b>~</b>	<b>V</b>	
529	-1 0 - 60 bar	19	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	

MECHANICAL PRESSURE SWITCHES									
604	0.2 50 mbar	20	<b>~</b>		<b>~</b>	<b>~</b>			
605 OEM	20 400 Pa	20	<b>✓</b>		<b>~</b>	<b>~</b>			
620/625	-900 6000 mbar	20	<b>✓</b>			<b>~</b>		<b>✓</b>	
630	6 5500 mbar	21	<b>~</b>		<b>V</b>	~		<b>V</b>	

FLOW SENSORS						
200 OEM	0.5 150 l/min	21			<b>~</b>	
210	0.5 150 l/min	21			<b>✓</b>	
212	0.5 150 l/min	22			<b>✓</b>	
230	1.8 150 l/min	22			<b>✓</b>	
235 OEM	0.9 240 l/min	22			<b>✓</b>	
236	0.9 240 l/min	23			<b>✓</b>	

DIGITAL INDICATING DEVI	CES					
801	-	23				

# **Huba Control - the fine difference**

Components for measuring pressure and flow are our specialty

Since 1945, the name Huba Control has stood for exceptional quality, top performance and innovation. A claim that spurs and drives our dedicated employees to give their best for our customers every day. Today, as over 75 years ago, the customer and his needs are at the center of our activities.

The focus on pressure and flow measurement is the cornerstone of our success and allows us to develop innovative products and produce them using state-of-the-art manufacturing equipment. Our products are used in applications for process optimization in systems, machines and plants and make an important contribution to process reliability and energy efficiency.

ISO 9001 Certification IATF 16949 Certification

ISO 14001 Certification ISO 45001 Certification





# The best under pressure

Individual and efficient solutions for every need



Individual and efficient solutions for highest demands. Sensor elements and fully calibrated, ready-to-use pressure transmitters, pressure switches and flow sensors are manufactured on state-of-the-art, highly automated production facilities. In-depth process knowledge and comprehensive control of our supply chain guarantee quality, flexibility and cost efficiency.

Our core competence is hybrid thick-film technology, which we have been refining and perfecting for over 30 years. This expertise allows us to manufacture sensor elements made of steel and ceramics, which have already proven themselves millions of times under the most difficult conditions. Long-term stable transmitters can thus be manufactured for even the finest pressures

in the Pascal range. For us, uncompromising customer proximity and individual consultation are the foundation of a partnership-based cooperation. We accompany our customers from the first product idea to the successful implementation.







# Vortex Flow sensors

Flow measurement based on the Kármán vortex street





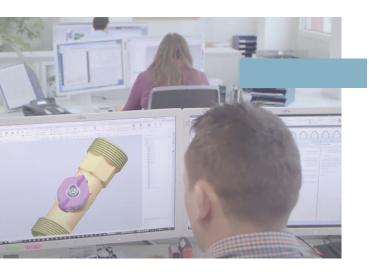
# Pressure transmitter

An electrical transmitter for measuring pressure in liquids and gases

# We make perfection measurable

Our innovation is your advantage

Quality, sustainability and the safety of our employees are the focus of our actions and thinking. An integrated, process-oriented management system creates the conditions for fulfilling this corporate policy.



«We can handle pressure.

1 mbar ... 1000 bar»

Motivated, entrepreneurial and professional employees are the most important basis for our success. This responsible and customer-oriented approach ensures the quality standards of our products and services.





Differential pressure transmitter

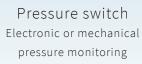
Used to measure pressure changes in

liquids and gases













Pressure level transmitter

Detection of liquid levels in tanks and containers



# Markets and presence

The clear focus on pressure measurement technology allows the development of innovative products. A wide range of products meets the most diverse requirements for process optimisation in systems, machines and plants. Sales engineers at the headquarters in Switzerland, in our own

sales offices in Germany, France, Great Britain and the Netherlands, as well as specialist agencies spread all over the world, ensure optimal advice.

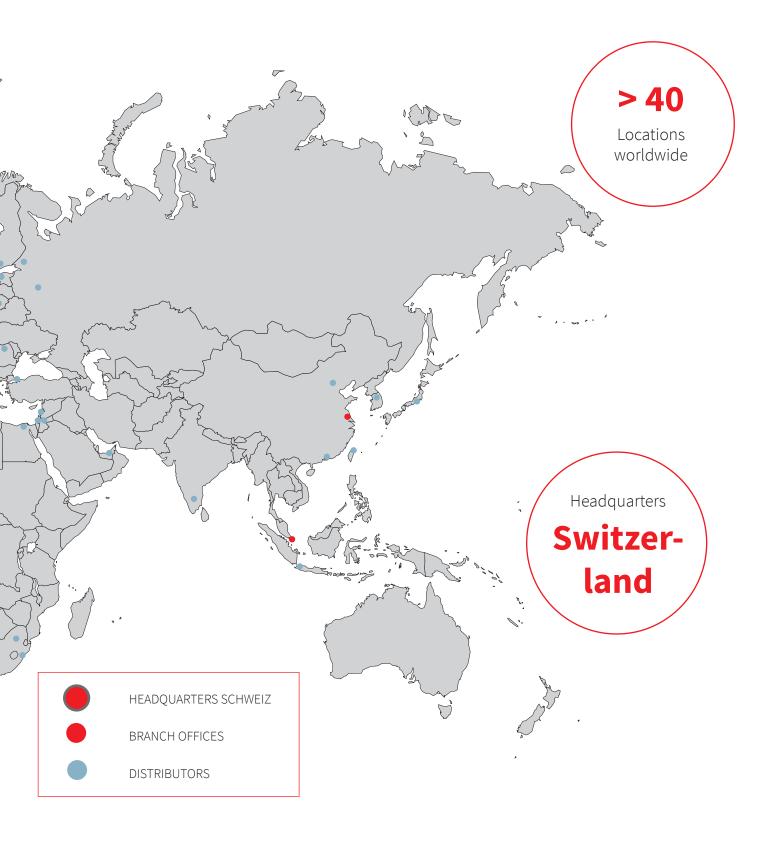
The target markets for Huba Control in the field of pressure and flow measurement technology are control and monito-



ring tasks for a wide range of industrial automation applications as well as special pressure transducers, components for gas wall heaters (GAS), heating, ventilation, air conditioning (HVAC) and the automotive industry.

Huba Control is the market leader in the sub-markets of gas

boilers and HVAC. 97% of the products are exported. More than 50 specialist agencies and our own sales engineers in Germany, France, England, Netherlands and the USA enable us to continuously expand our international presence.



TYPE 400

Type 400 pressure transmitter, with its proven ceramic lever technology, has adjusted temperature compensated sensor signals and is available with a voltage output. The voltage output (VDC) is an amplified, linear signal suitable for direct processing in electronic control systems. The sensors are ideal for continuous level measurement in washing machines, dishwashers etc.

# **MEDIUM**

Liquids and neutral gases

#### PRESSURE RANGE

0 ... 10 - 100 mbar

#### OUTPUT

ratiom. 10 ... 70%

#### ACCURACY

< 0.3% fs

# **ELECTRICAL CONNECTION**

Connector RAST 2.5

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- + Robust construction, sensor element has no contact with media
- + Special design developed for large scale manufacture at an attractive
- + Special snap-on mounting for easy one-handed installation in different sheet thicknesses

# **OEM PRESSURE TRANSMITTER**

**TYPE 501** 

Type 501 pressure transmitters, with automated production processes, are suitable for larger quantity industrial OEM applications. Various pressure and electrical connections, together with several standardised output signals, provide suitability for a wide variety of applications.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

-1 ... 0 - 60 bar

#### OUTPUT

ratiom. 10% ... 90%, 0 ... 5 V, 1 ... 6 V, 0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 0.5% fs

### **ELECTRICAL CONNECTION**

Cable 1.5 m, connector DIN EN 175301-803-A or C, M12x1

#### PRESSURE CONNECTION

Inside thread or outside thread

- Compact construction
- + Automated manufacture in large quantities for ideal price / performance ratio
- Robust ceramic sensor technology
- High resistance to extreme temperatures

# **OEM PRESSURE TRANSMITTER**

TYPE 503

Type 503 pressure transmitters, with their excellent price / performance ratio, are specially designed for industrial OEM applications. Partially automated production techniques allow us to produce high quantities, yet retaining the flexibility to offer different versions.

#### MEDIUM

Liquids and gases

#### PRESSURE RANGE

0 ... 2.5 - 25 bar

#### OUTPUT

ratiom. 10 ... 90%, 0 ... 5 V, 0 ... 10 V, 4 ... 20 mΑ

#### **ACCURACY**

< 1.0% fs

# **ELECTRICAL CONNECTION**

Cable 1.5 m, connector DIN EN 175301-803-A, connector RAST 2.5

#### PRESSURE CONNECTION

Outside thread or plug connector

- + Partial automatic production, giving ideal price / performance ratio
- + Ideal for use as a control element, as a result of a small hysteresis
- Incorporates all the benefits of cera mics technology for industrial applications





TYPE 505

Type 505 pressure transmitters are particularly suitable for measuring water pressure rates in heating and industrial circular flow. Due to partially automated manfacturing we are able to handle customer orders in high quantities.

# MEDIUM

Liquids and gases

#### PRESSURE RANGE

0 ... 4 - 16 bar

#### OUTPUT

ratiom. 10 ... 70%, ratiom. 10 ... 50%, 0.5 ... 3.5 V

#### **ACCURACY**

< 1.0% fs

# **ELECTRICAL CONNECTION**

Connector RAST 2.5

# PRESSURE CONNECTION

Outside thread or plug connector

- Best price / performance ratio through: electronic integrated in measuring element, optimised mounting concept and automatic production
- + Ideal for use as a control element, as a result of a small hysteresis Ideal for use as a control element, as a result of a small hysteresis



# **OEM PRESSURE TRANSMITTER**

TYPE 506

Type 506 pressure transmitters are suitable for different applications in the field of industrial refrigeration due to it's application specific pressure connections. Automated manufacturing allows the efficient production of large quantities, resulting in an excellent price / performance ratio.

# **MEDIUM**

Refrigerants

#### PRESSURE RANGE

-1 ... 7 - 60 bar

#### OUTPUT

ratiom. 10 ... 90%, 0 ... 5 V, 1 ...6 V 0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Connector DIN EN 175301-803-A or C, Cable 1.5 m, M12x1

#### PRESSURE CONNECTION

Inside thread or outside thread

- Compact construction
- + Automated manufacture in large quantities for ideal price / performance ratio
- Robust ceramic sensor technology
- + High resistance to extreme temperatures

# **OEM PRESSURE TRANSMITTER**



TYPE 511

Type 511 pressure transmitters meet the highest specifications for longevity, accuracy, temperature stability and EMC characteristics, making them suitable for an extremely wide range of demanding industrial applications.

#### MEDIUM

Liquids and gases

#### PRESSURE RANGE

-1 ... 0 - 600 bar

#### OUTPUT

0 ... 5 V, 1 ... 6 V, 0 ... 10 V, 4 ... 20 mA

#### ACCURACY

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cable 1.5 m, swift connector, AMP JPT, M12x1, connector DIN EN 175301-803-C

## PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction for highest operational reliability
- + No media egress when exceeding rupture pressure
- + Negligible temperature influence on accuracy
- Excellent EMC capacity
- + Saving the costumer time with the swift connector cable mounting system





TYPE 512

The pressure transmitter type 512 with cable connection meets the highest demands of industrial and mobil hydraulic applications. This sensor is available with protection standard IP 69K. The standard pressure orifice prevents damage due to pressure peaks. The compact and rugged design meets the requirement of shock- and vibration stability according Kfz-norm ISO 16750. The pressure transmitter type 512 guarantees highest EMC stability according to various road vehicle regulations with test level up to 100V/m.

### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 40 - 1000 bar

#### OUTPUT

ratiom. 10 ... 90%, 0 ... 5 V, 1 ... 6 V, 0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cabel PUR 1.5 m

# PRESSURE CONNECTION

Outside thread

- + Rugged PUR cable with IP 69K
- + Welded construction no elastomer
- + Negligible temperature influence on accuracy
- + Excellent EMC capacity
- + Compact and rugged construction for highest operational reliability

# **OEM PRESSURE TRANSMITTER**



Type 515 pressure transmitter with cable connection meets the highest demands for industry and vehicle manufacturing applications. The compact and robust mechanical design incorporating IP69K protection allows for use in the most stringent of conditions.

# **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

-1 ... 0 - 600 bar

#### **OUTPUT**

ratiom. 10 ... 90%, 0 ... 5 V, 1 ... 6 V, 0 ... 10 V, 4 ... 20 mA

### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cabel 1.5 m

## PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction for highest operational reliability
- + Negligible temperature influence on accuracy
- + Excellent EMC capacity
- + IP 69K

# PRESSURE TRANSMITTER



TYPE 519

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.

#### MEDIUM

Liquids and gases

### PRESSURE RANGE

0 ... 0.4 - 60 bar

#### **OUTPUT**

ratiom. 10 ... 90%, 0 ... 5 V, 1 ... 6 V, 0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

± 0.3.% fs

# **ELECTRICAL CONNECTION**

Connector DIN EN 175301-803-A or C, connector M12x1

#### PRESSURE CONNECTION

Outside thread

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







TYPE 520

The compact Type 520 pressure transmitter is based upon the Huba Control developed thick film technology where the pressure measuring cell is fully welded. This transmitter meets the high burst protection demands and is suitable for the use in all types of refrigerants including ammonia.



# **MEDIUM**

Liquids, gases and refrigerants

#### PRESSURE RANGE

-1 ... 9 bar / 0 ... 2.5 - 1000 bar

# OUTPUT

0 ... 5 V, 1 ... 6 V, 0 ... 10 V, ratiom. 10 ... 90% & , 4 ... 20 mA &, IO-Link

#### **ACCURACY**

typ. < 0.3% fs

# **ELECTRICAL CONNECTION**

Swift connector, metri pack serie 150, connector DIN 175301-803-A or C, M12x1, braids, connector RAST 2.5

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Welded construction no elastomer seals
- + Saving time by quick cable mounting by the customer with swift connector
- + Wide choice of connections available

# PRESSURE TRANSMITTER

**TYPE 522** 

The compact Type 522 pressure transmitter for shipbuilding is based upon the Huba Control developed thick film technology where the pressure measuring cell is fully welded. Applications requiring high burst pressure can be met with the Type 522 which is also certificated to meet the leading shipbuilding requirements.

# **MEDIUM**

Liquids, gases and refrigerants

#### PRESSURE RANGE

0 ... 2.5 - 600 bar

#### **OUTPUT**

0 ... 10 V, 4 ... 20 mA 🖾

#### **ACCURACY**

typ. < 0.3% fs

### **ELECTRICAL CONNECTION**

Connector DIN 175301-803-A, M12x1, swift connector

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Welded construction no elastomer seals
- + Certified for shipbuilding with: Germanischer Lloyd | American Bureau of Shipping | Bureau Veritas | Det Norske Veritas | Lloyd`s Register

# PRESSURE TRANSMITTER



TYPE 525

The pressure transmitter type 525 has a compact and robust design and a very high measurement accuracy.

The pressure transmitter with it's large variety of pressure- and electrical connection has also pressure ranges from 50 mbar full scale. The compact 525 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 0.05 - 0.6 bar

#### OUTPUT

0 ... 5 V, 0 ... 10 V, 4 ... 20 mA ratiom. 10 ... 90%

#### **ACCURACY**

± 0.35% FS

# **ELECTRICAL CONNECTION**

Stecker DIN 175301-803-A oder C, M12x1, swift connector

#### PRESSURE CONNECTION

Inside thread or outside thread

- + Very high measurement accuray
- + Excellent thermal characteristic
- + Compact and rugged construction
- + Large selection of electrical and pressure connections available
- + Pressure ranges from 50 mbar full scale available







TYPE 526

The compact type 526 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago. The pressure transmitter with it's large variety of pressure- and electrical connection has also pressure ranges from 100 mbar full scale. These units are available in high quantities for OEM customers with an excellent price to performance ratio.

# **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 0.1 - 0.6 bar

#### OUTPUT

ratiom. 10 ... 90%

#### **ACCURACY**

± (1.8 mbar + 0.2% fs)

### **ELECTRICAL CONNECTION**

Connector DIN 175301-803-A or C, M12x1

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Ideal price / performance ratio
- + Pressure ranges from 100 mbar full scale available
- + Large selection of electrical and pressure connections available

# PRESSURE TRANSMITTER



**TYPE 527** 

The compact Type 527 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago. These transmitters are suitable for applications across a broad spectrum of industries and shipbuilding.

# **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 1 - 60 bar

### OUTPUT

0 ... 10 V, 4 ... 20 mA 🖘

#### **ACCURACY**

typ. < 0.3% fs

# **ELECTRICAL CONNECTION**

Connector DIN 175301-803-A, M12x1, swift connector

#### PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Negligible temperature influence on accuracy
- + Certified for shipbuilding with: Germanischer Lloyd | American Bureau of Shipping | Bureau Veritas Det Norske Veritas | Lloyd`s Register

# PRESSURE TRANSMITTER



TYPE 528

The compact Type 528 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago.

These transmitters are suitable for applications across a broad spectrum of industries.

# **IO**-Link

### MEDIUM

Liquids and gases

### PRESSURE RANGE

-1 ... 0 - 60 bar

#### OUTPUT

0 ... 5 V, 1 ... 6 V, 0 ... 10 V, ratiom. 10 ... 90% s , 4 ... 20 mA s, IO-Link

#### **ACCURACY**

typ. < 0.3% fs

# **ELECTRICAL CONNECTION**

Swift connector, metri pack serie 150, connector DIN 175301-803-A or C, M12x1, braids, connector RAST 2.5

# PRESSURE CONNECTION

Inside thread or Outside thread

- + Compact and rugged construction
- + Negligible temperature influence on accuracy
- + Saving the customer time with the swift connector cable mounting system
- + Wide choice of connections available







TYPE 540

The µP-regulated, programmable pressure transmitter Type 540 has a robust industry design. The parameters are easily adjustable with two function keys in the configuration menu which enable up to two switching points to be set. All systems are equipped with a diagnostic function. The large 4 digit LED display assures a good accuracy of reading.

The pressure transmitter Type 540 is based upon the Huba Control developed thick film technology where the pressure measuring cell is fully welded.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 60 - 600 bar

#### OUTPUT

0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 1.0% fs

# **ELECTRICAL CONNECTION**

M12x1

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Clearly readable display
- + Diagnostic function
- + Up to 2 programmable switching

# + High over pressure

- outputs

## PRESSURE TRANSMITTER

**TYPE 548** 

The µP-regulated, programmable pressure transmitter Type 548 has a robust industry design. The parameters are easily adjustable with two function keys in the configuration menu which enable up to two switching points to be set. All systems are equipped with a diagnostic function. The large 4 digit LED display assures a good accuracy of reading. The pressure transmitter Type 548 is based upon the well proven ceramic technology developed by Huba Control over 20 years ago.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

-1 ... 0 - 40 bar

#### OUTPUT

0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 1.0% fs

# **ELECTRICAL CONNECTION**

M12x1

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + High over pressure
- + Clearly readable display
- Diagnostic function
- Up to 2 programmable switching outputs

# PRESSURE TRANSMITTER



TYPE 550

The pressure transmitter type 550 meets the highest requirements for mobile hydraulic applications. This sensor is available with protection standard IP 67 or IP 69K. The standard pressure orifice prevents damage due to pressure peaks. The compact and rugged design meets the requirement of shock- and vibration stability according road vehicle standards ISO 16750. The pressure transmitter type 550 guarantees highest EMC stability according to various road vehicle regulations with test level up to 100V/m.

#### MEDIUM

Liquids and gases

### PRESSURE RANGE

0 ... 40 - 600 bar

### OUTPUT

0 ... 5 V, 0 ... 10 V, 4 ... 20 mA, ratiom. 10 ... 90%

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Kostal SLK 2.8, AMP-JPT, AMP Superseal 1.5, Deutsch DT04-3P, Deutsch DT04-4P, M12x1, Metri Pack Serie 150

# PRESSURE CONNECTION

Outside thread

- + Compact and rugged construction for high operating reliability
- + Welded construction no elastomer
- + Negligible temperature influence on accuracy
- Excellent EMC capacity
- Wide choice of connections available





TYP 555

The pressure transmitter type 555 has been developed for alternative drive systems. This high-pressure transmitter is suitable for vehicles and stationary applications thanks to the hydrogen approval acc. EC79.

The compact and rugged design meets the requirement of shock- and vibration stability according to the road vehicle standards ISO 16750. The measuring cell is based upon the Huba Control developed thick film technology on stainless steel and is fully hermetically welded.

#### **MEDIUM**

Gaseous hydrogen

#### Pressure range

0 ... 40 - 900 bar

# Output

0 ... 5 V, 0 ... 10 V, 4 ... 20 mA ratiom. 10 ... 90%

#### **ACCURACY**

< 0.5% FS

# **ELECTRICAL CONNECTION**

Kostal SLK 2.8, AMP-JPT, AMP Superseal 1.5, Deutsch DT04-3P, Deutsch DT04-4P, M12x1, Metri Pack Serie 150

# PRESSURE CONNECTION

Inside thread

- + Suitable for gaseous hydrogen
- + Compact and rugged construction for highest operational reliability
- + Welded without sealing parts, no elastomer seals
- + Excellent EMC capacity
- + Negligible temperature influence on accuracy

# PRESSURE TRANSMITTER



TYPE 558

The pressure transmitter type 558 meets the highest requirements for the industry and vehicle manufacturing. This sensor is available with protection standard IP67 or IP69K. The optional pressure orifice prevents damage due to pressure peaks. The compact and rugged design meets the requirement of shock- and vibration stability according road vehicle standards ISO 16750. The pressure transmitter type 558 guarantees highest EMC stability according to various road vehicle regulations with test level up to 100V/m.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 6 - 60 bar

# OUTPUT

0 ... 5 V, 0 ... 10 V, 4 ... 20 mA ratiom. 10 ... 90%

### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Kostal SLK 2.8, AMP-JPT, AMP Superseal 1.5, Deutsch DT04-3P, Deutsch DT04-4P, M12x1, Metri Pack Serie 150

# PRESSURE CONNECTION

Outside thread

- Compact and rugged construction for high operating reliability
- + Negligible temperature influence on accuracy
- + Excellent EMC capacity
- + Wide choice of connections available

## PRESSURE TRANSMITTER



pressure transmitters with piezoresistive measuring elements have compensated, calibrated and amplified sensor signals which are available as standard voltage or current outputs. The transmitter housing is available with various pressure and electrical connections.

#### MEDIUM

Liquids and gases

#### PRESSURE RANGE

0 ... 0.1 - 1000 bar

#### OUTPUT

0... 5 V, 0 ... 10 V, 4 ... 20 mA €

#### **ACCURACY**

< 0.25% fs (< 0.05% fs on request)

### **ELECTRICAL CONNECTION**

Cable in several lengths, Lumberg RSF4 or RSF50, connector DIN EN 175301-803-A, Binder 723

#### PRESSURE CONNECTION

Inside thread or outside thread

- + Effective overload protection due to chemically eteched chip diaphragm and specially designed glass gland
- + Compact construction with SMD technology enhances operational reliability in the presence of shock and vibration
- Welded construction provides 100% sealing against media







# **OEM DIFFERENTIAL PRESSURE TRANSMITTER**

TYPE 401

Type 401 pressure transmitters sense ultra fine changes in air pressure and are designed to provide optimum control. The dual component diaphragm with it's unique geometry, gives highly sensitive operation and excellent repeatability, even in the range below 20 Pascal.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

0 ... 3 - 8 mbar

#### OUTPUT

0.5 ... 4.5 V

#### **ACCURACY**

< 0.3% fs

# **ELECTRICAL CONNECTION**

Connector RAST 2.5

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- Special development for optimize of combustion mixture in gas boilers
- + With the special diaphragm geometry inherently stable due to homogeneous manufacture
- + Ideal dimensioning for high sensitivity and with long term stability
- + Excellent repeatability even in the lower pressure range (< 20 Pascal)

# **DIFFERENTIAL PRESSURE TRANSMITTER**



TYPE 402

Type 402 pressure transmitters are ideally suited to measuring fine air flow in air conditioning systems, and fine pressures in the environmental / medical technology sectors. Individually ranged sensors ensure optimum accuracy and long term stability of measurement. Location is quick and easy, either via a mounting plate or directly onto a PCB.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

0 ... 3 - 50 mbar

#### OUTPUT

0.5 ... 4.5 V

#### **ACCURACY**

< 0.6% fs

### **ELECTRICAL CONNECTION**

Connector RAST 2.5, pins for PCB mounting

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- + Attractive price / performance ratio
- + Excellent synergy of diaphragm technology and ceramic elements
- Special adapter for top-hat rail mounting
- Direct pcb mounting with simple snap-on system

# **OEM DIFFERENTIAL** PRESSURE TRANSMITTER



TYPE 403

Type 403 pressure transmitters sense ultrafine changes in gas pressure for use in air / gas ratio control systems. All materials used are compatible with flammable gas. When used in combination with our Type 401 pressure transmitter, the optimum air / gas ratio can be achieved.

#### MEDIUM

Flammable gas

#### PRESSURE RANGE

0 ... 3 - 8 mbar

#### OUTPUT

0.5 ... 4.5 V

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Connector RAST 2.5

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- Special development for optimize of combustion mixture in gas boilers
- + With the special diaphragm geometry inherently stable due to homogeneous manufacture
- + Ideal dimensioning for high sensitivity and with long term stability
- Excellent repeatability even in the lower pressure range (< 20 Pascal)







# **DIFFERENTIAL PRESSURE TRANSMITTER**

TYPE 450

The pressure transmitter type 450 is a robust sensor integrated in a compact housing for the use in various applications with air or neutral gases. Pollutions with small particles do not harm the function of this pressure transmitter.

The type 450 is ideal for HVAC applications. Additionally to the analogue output the pressure transmitter type has a digital output I2C. These output signals are temperature compensated, linear and reinforced. The transmitter is fitted directly on a PCB.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

-1.5 ... 3 - 100 mbar

#### OUTPUT

0.5 ... 4.5 V, Digital ZACWire™ 10 ... 90% of 2<sup>14</sup> Digits, Digital I<sup>2</sup>C<sup>™</sup> 10 ... 90% of 2<sup>14</sup> Digits, ratiom. 10 ... 90%

#### **ACCURACY**

< 1.5% fs

# **ELECTRICAL CONNECTION**

Pins for PCB mounting

# PRESSURE CONNECTION

Hose connector

- Suitable for low pressure measure
- + Excellent accuracy and long-term stabi lity over the entire measuring range
- Temperature compensated, linear and amplified output signal

# DIFFERENTIAL PRESSURE TRANSMITTER



TYPE 652

Type 652 pressure transmitters are ideally suited to the continuous monitoring of liquid and gas flow (or level) in heating, ventilation and process technology. Their especially rugged construction allows a single port over-pressure of up to 20 bar, depending upon pressure range.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 50 - 1000 mbar

#### OUTPUT

0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA

#### **ACCURACY**

< 1.5% fs

# **ELECTRICAL CONNECTION**

Screw terminals

# PRESSURE CONNECTION

Inside thread

- High overpressure safety margin 10/20 bar on P1
- + 3 standardised output signals for direct Processing in control / monitoring systems
- Functionally simple, rugged mechanics with high operating reliability
- Attractive price / performance ratio

# **DIFFERENTIAL PRESSURE** TRANSMITTER



**TYPE** 664

The pressure transmitter type 664 is designed for low pressure measurements in air and neutral gases environments. The type 664 is based on silicon technology with good accuracy and long term performance characteristics.

The compact housing dimensions of the type 664 makes suitable for applications where the size plays an important role, it is also provided with I2C digital output additionally to analogue and ratiometric outputs.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

-5 ... 5 mbar / 0 ... 5 - 2000 mbar

#### **OUTPUT**

Digital I<sup>2</sup>C<sup>™</sup> 10 ... 90% von 2<sup>15</sup> Digits, ratiom. 10 ... 90%, 0.5 ... 4.5 V

#### **ACCURACY**

< 0.4% fs

# **ELECTRICAL CONNECTION**

3 pole connector RAST 2.5, custom solderable pins

#### PRESSURE CONNECTION

Hose connector, Plastic screw connection

- + The output signal is temperature compensated (from -20 up to +70 °C), linearized and amplified
- + Mounting on PCB possible
- + Robust design







# **DIFFERENTIAL PRESSURE** TRANSMITTER

TYPE 692

Type 692 pressure transmitters have a unique, well proven ceramic technolgy. There are variety of pressure and electrical connections available, together with several standardised output signals. The wide variety of options makes these transmitters ideal for applications across a broad spectrum of industries.

# **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0 ... 0.1 - 25 bar

#### OUTPUT

0 ... 5 V, 0 ... 10 V, 4 ... 20 mA

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cable 1.5 m, Connector DIN EN 175301-803-A, Connector DIN EN 60130-9

# PRESSURE CONNECTION

Hose connector or screw fitting, outside thread, adapter inside- and outside thread

- + Very low temperature sensitivity
- + High resistance to extreme temperatures
- + No mechanical creepage
- + Modular system and choice of materials to suit individual applications

# **DIFFERENTIAL PRESSURE** TRANSMITTER

TYPE 698

The pressure modules Type 698 are suitable for monitoring pressure and flow in air conditioning systems and in the laboratory sector. The module is optionally available with a 3 digit LED display, two limit value switches (potential free) as well as a square root extraction.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

-5 ... 5 mbar / 0 ... 10000 mbar

#### OUTPUT

0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA

#### **ACCURACY**

< 1.0% fs

# **ELECTRICAL CONNECTION**

Screw terminals

# PRESSURE CONNECTION

Hose connector conical 4 ... 7 mm or quick fitting

- Rugged measured value detector, owing to outstanding synergy obtained by combining diaphragm technology with a cermaic element
- + High overpressure safety margin, even in the lowest pressure range
- Easy to install and commission
- + No maintenance required

# **DIFFERENTIAL PRESSURE** TRANSMITTER



TYPE 699

The Type 699 transmitters are available in switchable pressure ranges and with or without digital device. The full-version includes customer specific adjustment possibilities. Especially developed sensors for each pressure range ensure accurate long term stable measurement and the large variety of options provide the perfect platform for use in air conditioning technology as well as for fine measurement in the industrial and medical environment.

#### MEDIUM

Air and neutral gases

#### PRESSURE RANGE

-1 ... 1 mbar / 0 ... 0.3 - 50 mbar

#### OUTPUT

0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Screw terminals

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- + Available with or without LCD display or modbus
- + Switchable output signals
- + Switchable response curve (linear or root-extracted)
- Resettable Zero Point (reset button)
- + Full scale adjustable







# **DIFFERENTIAL PRESSURE** TRANSMITTER

TYPE 699M

The pressure transmitter 699M is used primarily for the monitoring of air and neutral gasses. The unit is optionally available with one or two differential pressure sensors, which allows the observation of differential pressure or volumetric flow at two individual points in the system. This makes the 699M ideally suited for a multitude of tasks in the HVAC industry.

The 699M communicates via Modbus® RTU and features two universal inputs in addition to two analog outputs.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

0 ... 500 - 7000 Pa

#### **OUTPUT**

0 ... 10 V

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cable bushing for cable

# PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- High accuracy
- + Available with one or two differential pressure sensor units
- + Up to two universal inputs for 0 ... 10 V or passive temperature elements
- Two 0 ... 10 V analog outputs
- + Simple installation, reduced wiring ef fort through decentralized node

# PRESSURE LEVEL 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 LEVEL TRANSMITTER

TYPE 712

The level sensing pressure transmitter Type 712 is manufactured using a relative or absolute pressure measuring cell with an adjusted and amplified sensor signal and is available with various cable lengths from 2 to 30 meters. The Type 712 offers Ex protection as well as versions with integrated temperature measurement. In addition to voltage and current outputs the Type 712 is available with ratiometric outputs.

#### **MEDIUM**

Fluides

#### PRESSURE RANGE

0 ... 0.1 - 16 bar

#### OUTPUT

4 ... 20 mA 🖾

#### **ACCURACY**

< 0.3% fs

### **ELECTRICAL CONNECTION**

Cable in several lengths

- Suitable for drinking water
- + Ex-version availabe
- + Sea water resistant
- + High accuracy
- + Large variety of cable length
- + Certified for shipbuilding with: Germanischer Lloyd | American Bureau of Shipping | Bureau Veritas Det Norske Veritas | Lloyd`s Register

**MEDIUM** 

Fluides

#### PRESSURE RANGE

0 ... 0.3 - 3 bar

#### **OUTPUT**

0 ... 10 V, 4 ... 20 mA <sup>€</sup>S, ratiom. 10 ... 90%

#### **ACCURACY**

< 0.5% fs

# **ELECTRICAL CONNECTION**

Cable in several lengths

- Suitable for drinking water
- lintrinsically safe execution with Voltage- and current output
- With integrated temperature measurement
- Suitable for fitting within a 1 inch diameter pipe





# PRESSURE LEVEL TRANSMITTER

TYPE 713

The pressure level transmitter type 713 is used for continuous fluid level measurement of ground and drinking water. The compact design allows the transmitter to be used in applications with restricted access as small as 3/4 inch i.d. pipe. As well as a current output the pressure level transmitter type 713 has been enhanced with energy efficient ratiometric and digital outputs making it ideal for battery powered applications.

# **MEDIUM**

Fluides

#### PRESSURE RANGE

0 ... 0.6 - 16 bar

#### OUTPUT

4 ... 20 mA, ratiom. 10 ... 90%, 3000 ... 11000 Digits

#### **ACCURACY**

< 0.4% fs

# **ELECTRICAL CONNECTION**

Cable in several lengths

- + Ceramic sensor Al<sub>2</sub>O<sub>3</sub> 99.6%
- + Suitable for drinking water
- + Excellent linearity and long term stability
- + Applicable in 3/4 inch pipes
- + Available with temperature measurement

# **ELECTRONIC PRESSURE** SWITCH



TYPE 521

The compact Type 521 pressure switch is based upon the Huba Control developed thick film technology where the pressure measuring cell is fully welded. Switching points set in the factory and are available both N/C and N/O function. Various electrical and pressure connections are available to suit given applications.

#### **MEDIUM**

Liquids and gases

#### PRESSURE RANGE

0...2.5 - 600 bar

#### **UPPER SWITCHING POINT**

8 ... 100% fs

#### LOWER SWITCHING POINT

5 ... 97% fs

### **ACCURACY**

typ. < 0.3% fs

# **ELECTRICAL CONNECTION**

Swift connector, M12x1

# PRESSURE CONNECTION

Inside thread or outside thread

- Compact and rugged construction
- + Welded construction no elastomer seals
- Saving the customer time with the swift connector cable mounting system
- Wide choice of connections available

# **ELECTRONIC PRESSURE SWITCH**



TYPE 529

The compact Type 529 pressure switch is based upon the Huba Control developed unique ceramic technology used for the last 20 years in millions of applications. Switching points set in the factory and are available both N/C and N/O function. Various electrical and pressure connections are available to suit given applications.

#### MEDIUM

Liquids and gases

### PRESSURE RANGE

-1 ... 0 - 60 bar

#### **UPPER SWITCHING POINT**

8 ... 100% fs

#### LOWER SWITCHING POINT

5 ... 97% fs

### **ACCURACY**

tvp. < 0.3% fs

# **ELECTRICAL CONNECTION**

Swift connector, M12x1

# PRESSURE CONNECTION

Inside thread or outside thread

- + Compact and rugged construction
- + Negligible temperature influence on accuracy
- Saving the customer time with the swift connector cable mounting system
- Wide choice of connections available







# **MECHANICAL PRESSURE SWITCH**

TYPE 604

The Type 604 pressure switch is used as a  $\Delta p$ flow switch in ventilation ducts for the control of filters and fans, and in primary and secondary control systems for the control of air dampers. The 604 pressure monitoring switches are also ideally suited to protect heating coils from overheating and for monitoring industrial air cooling circuits.

# **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

0.2 ... 50 mbar

#### **ELECTRICAL CONNECTION**

Screw terminals, flat connector 6.3 or 4.8 mm

#### PRESSURE CONNECTION

Hose connector Ø 6.2 mm or inside thread

- Easy to install
- Multi-layer gold plated contact
- + Combi-bracket for vertical or horizontal installatione
- + Cable strain relief integrated in PG11
- + Long-term stability of switching points through trapezoidal bead diaphragm

# **OEM MECHANICAL PRESSURE SWITCH**

TYPE 605

Type 605 pressure switches are specially developed for use in gas fired heating systems. There are more than 40 million switches in use worldwide. Produced on a fully automated production line. High setting accuracy and repeatability, combined with excellent reliability characterise a quality of switch above the industry norm.

#### **MEDIUM**

Air and neutral gases

#### PRESSURE RANGE

20 ... 400 Pa

#### **ELECTRICAL CONNECTION**

Flat connector 6.3 or 4.8 mm

#### PRESSURE CONNECTION

Hose connector Ø 6.2 mm

- Fitting of the switch
  - · Fast mounting with snap bracket system
- + High contact strength (typically 10 cN) and self cleaning roll operation contact
  - Not susceptible to contact pollution

# **OEM MECHANICAL PRESSURE SWITCH**



TYPE 620/625

Type 620 and 625 pressure switches, with 13 pressure ranges, are suitable for liquids and gases. Body materials are available in plastic, brass and aluminium, with a choice of NBR, FPM, EPDM and silicone diaphragms. Very high precision through finely tuned measurement stages and high long term stability. Rugged design and especially suitable for use in general industrial equipment construction, process technology and food automation.

#### MEDIUM

Liquids and neutral gases

#### PRESSURE RANGE

-900 ... 6000 mbar

#### **ELECTRICAL CONNECTION**

Screw terminals, Flat connector 6.3 mm

#### PRESSURE CONNECTION

Inside thread M5, hose connector Ø 6 mm, outside thread

- High accuracy by 13 ideally designed pressure range increments
- + Switching differences adjustable
- + Customer specific switching points adjustable in factory
- Rugged industrial switch with excellent Price / performance ratio







# **MECHANICAL PRESSURE SWITCH**

TYPE 630

Differential pressure, vacuum and overpressure switches of Type 630 are suitable for monitoring neutral and slightly aggressive liquids and gases. Switching element isolated from medium. Ideal for use as flow monitor in sanitary piping / heating installations or for level monitoring in general process technology applications. Extremely rugged construction with high functionality due to 20 bar safety margin in both pressure chambers.

# **MEDIUM**

Liquids and neutral gases

#### PRESSURE RANGE

6 ... 5500 mbar

#### **ELECTRICAL CONNECTION**

Screw terminals, Flat connector 6.3 mm

#### PRESSURE CONNECTION

Inside thread

### Mounting bracket

- Repeatability up to  $< \pm 0.4$  mbar
- + Funcionally simple, rugged mechanics with high operating reliability
- + High overpressure safety margin at both connections (P1 + P2) up to 10/20 bar

# **OEM FLOW SENSOR**



**TYPE 200** 

The flow sensor Type 200 is based on the Karman Vortex principle. You can choose between various versions. The Type 200 is available with or without temperature measurement. With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

### **MEDIUM**

Fluides

#### FLOW RANGE

0.5 ... 150 l/min

#### **NOMINAL DIAMETERS**

DN 6 / 8 / 10 / 15 / 20 / 25

#### OUTPUT

Frequency output 12 ... 483 Hz

### TEMP. MEASURMENT

NTC / PT1000

# **ELECTRICAL CONNECTION**

Connector RAST 2.5, M12x1

# **TUBE CONNECTION**

Plastic - connection copper tube

Plastic - outside thread

- + Low cost product with high levels of accuracy
- + Drinking water approval WRAS, KTW, W270, ACS
- + Wide application temperature range
- + Measuring element not sensitive to debris

### **FLOW SENSOR**



TYPE 210

The flow sensor Type 210 is based on the Karman Vortex principle. In comparison to the OEM flow sensor (Type 200), the Type 210 is available with an increased range of power supply and output signals all with and without temperature measurement. With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

#### **MEDIUM**

Fluides

#### FLOW RANGE

0.5 ... 150 l/min

#### **NOMINAL DIAMETERS**

DN 6 / 8 / 10 / 15 / 20 / 25

#### **OUTPUT**

Frequency output 12 ... 483 Hz Analogue signal 0 ... 10 V, 4 ... 20 mA

# TEMP. MEASURMENT

PT1000

# **ELECTRICAL CONNECTION**

Connector M12x

# **TUBE CONNECTION**

Plastic - connection copper tube

Plastic - outside thread

- + Flow measuring with voltage, current, pulse or frequency output
- + Drinking water approval WRAS, KTW, W270, ACS
- + Measuring element not sensitive to
- Temperature non-sensitive measuring principle0







### **FLOW SENSOR**

TYPE 212

The flow sensor type 212 is based on the Kármán vortex trail. Vortex trail principle. This flow sensor convinces due to the additional digital indicating device which shows the flow rate and the media temperature. The type 212 is available with and without temperature measurement. With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

# **MEDIUM**

Fluides

#### FLOW RANGE

0.5 ... 150 l/min

#### **NOMINAL DIAMETERS**

DN 6 / 8 / 10 / 15 / 20 / 25

#### OUTPUT

4 ... 14.5 mA, 4 ... 20 mA

### **ELECTRICAL CONNECTION**

Connector M12x1

# TUBE CONNECTION

Plastic - connection copper tube Plastic - outside thread

- Flow measuring with immediate display of flow measuring range and medium temperatur
- + Excellent media resistance
- + Drinking water approval
- + Measuring element not sensitive to



# **FLOW SENSOR**



**TYPE 230** 

The flow sensor Type 230 is based on the Karman Vortex principle. You can choose between various versions as integrated temperature measurement. The Type 230 has a rugged construction of red brass. With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

#### **MEDIUM**

Fluides

#### **FLOW RANGE**

1.8 ... 150 l/min

#### **NOMINAL DIAMETERS**

DN 10 / 15 / 20 / 25

#### **OUTPUT**

Frequency output 13 ... 480 Hz Analogue signal 0 ... 10 V, 4 ... 20 mA

# TEMP. MEASURMENT

PT1000

# **ELECTRICAL CONNECTION**

Connector M12x1

### **TUBE CONNECTION**

Red brass - outside thread

- Flow measuring with voltage, current, pulse or frequency output
- + Drinking water approval WRAS, KTW, W270, ACS
- + Marginal loss of pressure
- Temperature non-sensitive measuring principle

### **OEM FLOW SENSOR**



TYPE 235

The flow sensor Type 235 is based on the Type 200 but incorporates a brass housing. The flow sensor Type 235 is based on the Karman Vortex principle. You can choose between various versions as integrated temperature measurement.

With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

### **MEDIUM**

Fluides

#### FLOW RANGE

0.9 ... 240 l/min

#### **NOMINAL DIAMETERS**

DN 8 / 10 / 15 / 20 / 25 / 32

#### OUTPUT

Frequency output 9 ... 479 Hz

# TEMP. MEASURMENT

NTC / PT1000

# **ELECTRICAL CONNECTION**

Connector RAST 2.5, M12x1

# **TUBE CONNECTION**

Brass - outside thread

- + Low cost product with high levels of accuracy
- + Drinking water approval WRAS,
- + Wide application temperature range
- + Measuring element not sensitive to debris
- Temperature non-sensitive measuring principle





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### **FLOW SENSOR**

TYPE 236

The flow sensor Type 236 is based on the Type 210 but incorporates a brass housing. The Vortex Sensor Type 236 has a rugged construction of brass connection. This flow sensor is available with a larger variety concerning power supply and outputs. You can choose between various versions as integrated temperature measurement. With no moving parts the flow sensor is not sensitive to debris, has marginal pressure loss and high accuracy.

#### **MEDIUM**

Fluides

#### **FLOW RANGE**

0.9 ... 240 l/min

#### **NOMINAL DIAMETERS**

DN 8 / 10 / 15 / 20 / 25 / 32

#### **OUTPUT**

Frequency output 9 ... 479 Hz Analogue signal 0 ... 10 V, 4 ... 20 mA

# TEMP. MEASURMENT

PT1000

## **ELECTRICAL CONNECTION**

Connector M12x1

### TUBE CONNECTION

Brass - outside thread

- + Flow measuring with voltage, current, pulse or frequency output
- + Drinking water approval WRAS, ACS
- + Measuring element not sensitive to debris
- + Temperature non-sensitive measuring principle

# DIGITAL INDICATING DEVICE TYPE 801

Type 801 digital indicators are compatible with all sensors with DIN plug EN 175301-803-A. Independent of the mounting position of the sensor, the display can be rotated to give the ideal reading position. The 801 has a 3 digit liquid-crystal display which is adjustable by the customer, or available factory set.

#### **INPUT SIGNAL**

0 ... 5 V

0 ... 10 V

0 ... 20 mA

4 ... 20 mA

- + Portable plug-in indicator
- + Irrespective of the installation arrangement of your transducer the display module can be rotated and turned to give the ideal reading-position
- Protection class IP 65 with screw fastened DIN EN 175301-803 connectors





# CANTILEVERED CERAMIC BEAM TECHNOLOGY FROM HUBA CONTROL

The excellent synergy of our unique diaphragm in combination with our ceramic cantilever beam sensors allow us to produce transmitters with long term stability for very fine measurement in the Pascal range. This technology has been proven on millions of sensors in many different applications.



# PRESSURE MEASURING CELL TECHNOLOGY FROM HUBA CONTROL

The in-house development and production of pressure measuring cells in combination with the excellent electronic design allows the production of innovative pressure transmitters. Huba Control draws on over 20 years experience in the use of ceramic technology.

The products are proven millionfold in various applications.



# | Huba Control

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