

Product Overview

Pressure transmitter

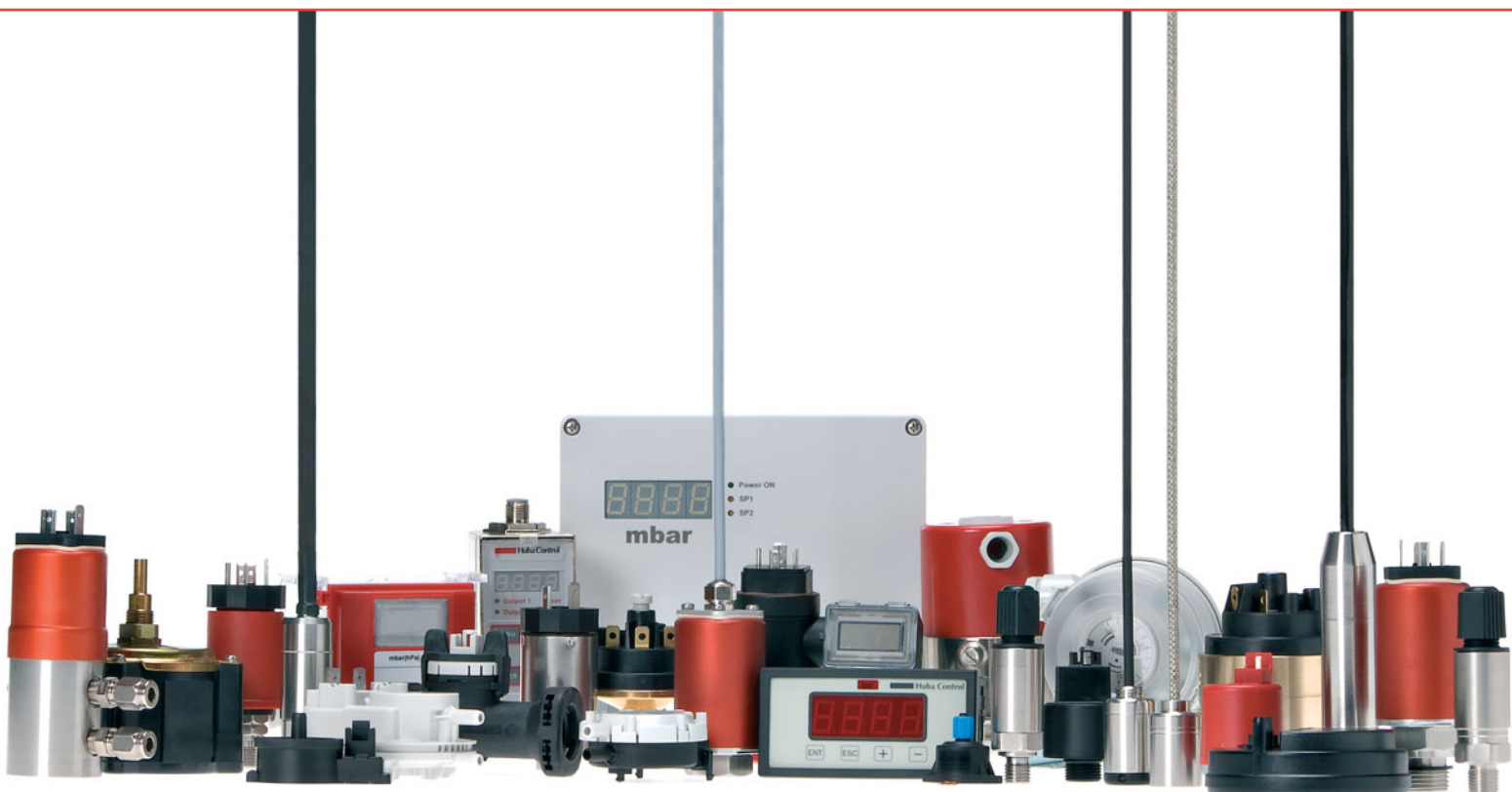
Pressure level transmitter

Pressure switch

Flow sensor

Pressure measuring cells

Digital indicating devices





Huba Control AG develops, manufactures and markets components designed exclusively for the measurement of pressure and flow.

1 mbar ... 1000 bar
0.9 ... 150 l/min

View the latest data sheets, operating instructions and certificates at

www.hubacontrol.com

Product Overview

Type	Pressure range	Page	Pressure			Medium			
			Relative	Absolute	Differential	Air and neutral gases	Flammable gases	Liquids	Refrigerants
<u>Pressure transmitter</u>									
400 OEM	0 ... 10 – 100 mbar	6	■			■		■	
500 OEM	-1 ... 0 – 600 bar	6	■	■		■		■	
501 OEM	-1 ... 0 – 60 bar	6	■	■		■		■	
503 OEM	0 ... 2.5 – 25 bar	7	■			■		■	
505 OEM	0 ... 4 bar	7	■			■		■	
506 OEM	-1 ... 7 – 60 bar	7	■			■		■	■
507	-1 ... 0 – 600 bar	8	■	■		■		■	
510 OEM	0 ... 2.5 – 600 bar	8	■			■		■	■
511 OEM	-1 ... 0 – 600 bar	8	■	■		■		■	
512 OEM	0 ... 2.5 – 600 bar	9	■			■		■	
515 OEM	-1 ... 0 – 600 bar	9	■	■		■		■	
516 OEM	-1 ... 0 – 16 bar	9	■	■		■		■	
520	0 ... 2.5 – 600 bar	10	■			■		■	■
528	-1 ... 0 – 60 bar	10	■	■		■		■	
680	0 ... 0.1 – 1000 bar	10	■	■		■		■	
691	-1 ... 0 – 600 bar	11	■	■		■		■	
<u>Differential pressure transmitter</u>									
401 OEM	0 ... 3 – 8 mbar	12	■		■	■			
402	0 ... 3 – 50 mbar	12	■		■	■			
403 OEM	0 ... 3 – 8 mbar	12	■		■	■	■		
652	0 ... 50 – 1000 mbar	13	■		■	■		■	
663	-5 ... 5 mbar / 0 ... 5 – 2000 mbar	13	■	■	■	■			
692	0 ... 0.1 – 25 bar	13	■		■	■		■	
694	-0.5 ... 0.5 mbar / 0 ... 1 – 50 mbar	14	■		■	■			
698	-5 ... 5 mbar / 0 ... 10000 mbar	14	■		■	■			
699	-1 ... 1 mbar / 0 ... 0.3 – 50 mbar	14	■		■	■			
<u>Pressure level transmitter</u>									
681	0 ... 0.1 – 25 bar	15	■						■
700 OEM	0.8 ... 1.4 – 10 bar	15		■					■
<u>Electronic pressure switch</u>									
511 OEM	-1 ... 0 – 600 bar	16	■	■		■		■	
615	-1 ... 0 – 600 bar	16	■	■		■		■	
616	0 ... 0.1 – 25 bar	16	■		■	■		■	
619	-1 ... 0 – 600 bar	17	■			■		■	
<u>Mechanical pressure switch</u>									
604	0.2 ... 50 mbar	18	■		■	■			
605 OEM	20 ... 400 Pa	18	■		■	■			
610	-320 ... 500 mbar	18	■		■	■			
620 / 625	-900 ... 6000 mbar	19	■		■	■			■
630	6 ... 5500 mbar	19	■		■	■			■
<u>Flow sensor</u>									
200 OEM	0.9 ... 150 l/min.	20							■
210	0.9 ... 150 l/min.	20							■
230	1.8 ... 150 l/min.	20							■
<u>Pressure measuring cells</u>									
509 OEM	0 ... 2.5 – 250 bar	21	■			■		■	
513 OEM	-1 ... 0 – 600 bar	21	■	■		■		■	
513 OEM barometric sensor	0.8 ... 1.4 bar	21	■	■		■		■	
<u>Digital indicating devices</u>									
800		22							
801		22							

Market performance

With its clear focus on pressure measurement technology Huba Control is able to develop innovative products across a very broad spectrum, covering an extensive range of applications for the optimisation of machine, system and plant processes.

Sales engineers at the headquarters in Switzerland, in our own branch offices in Germany, France, Great Britain, Netherlands, Singapore and China as well as representatives all over the world guarantee the optimum in technical advice.

Production competence

Huba Control production department is designed for the assembly, setting and adjustment of pressure switches and pressure transmitters. The individual stages of the process are carried out with varying degrees of rationalisation. A key strength is our expertise in complex automated production processes, including automatic adjustment.

Quality - Security - Environment

We achieve the requirements for the conversion of our strategy, company policy and targets with our integrated process orientated management system complying to the legal obligations in force and further demands.

With well managed processes and our skilled employees we master the quality, environment and security demands.

The philosophy of our employees is:

«I steadily improve and aspire to make no mistakes.»

Certifications

ISO 9001 Certification

ISO/ITS 16949 Certification

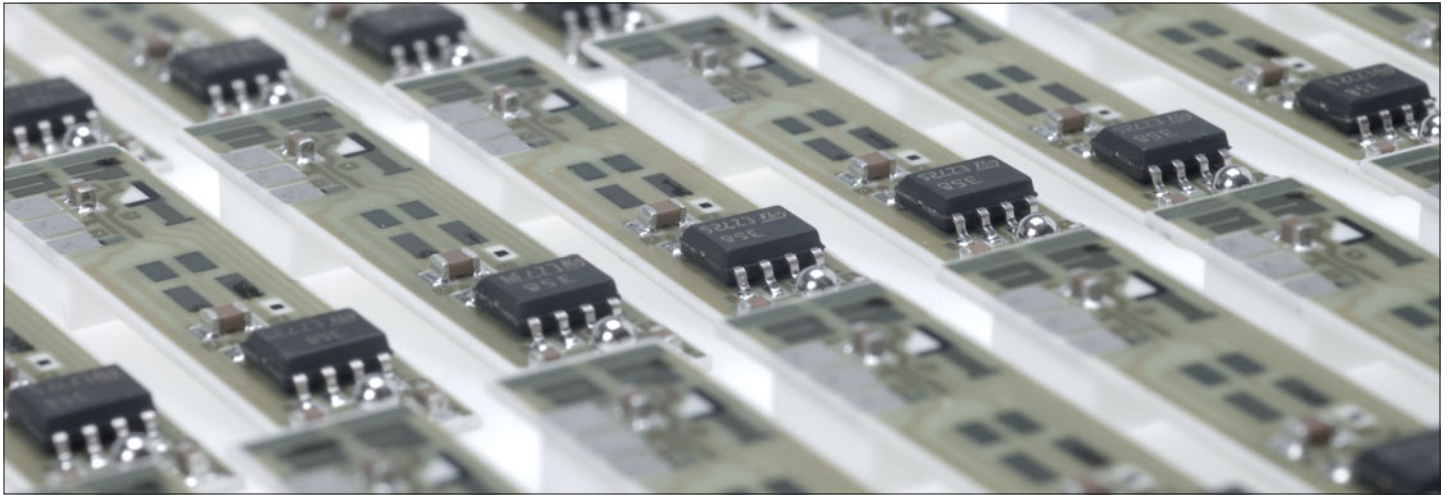
ISO/IEC 17025 Accreditation

ISO 14001 Certification



Cantilevered ceramic beam technology from Huba Control

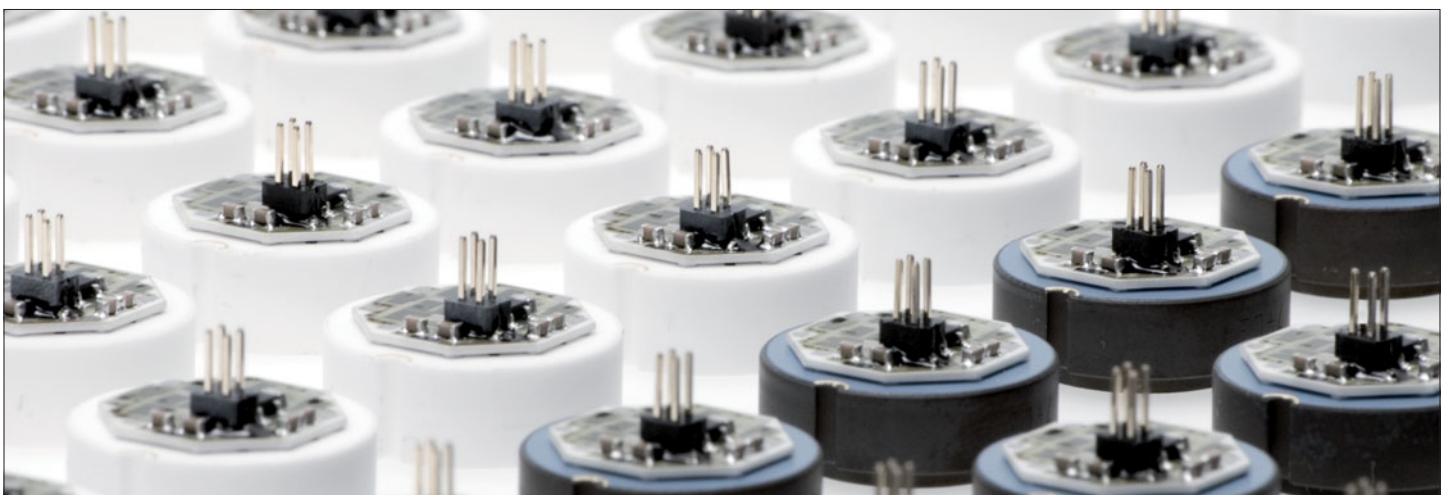
The excellent synergy of our unique diaphragm in combination with our ceramic cantilever beam sensors allow us to produce transmitters with long term stability for very fine measurement in the Pascal range. This technology has been proven on millions of sensors in many different applications.



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.



OEM Type 400

0 ... 10 – 100 mbar



Type 400 pressure transmitters are specially designed for large-scale production, and are ideally suited for continuous level measurement in vessels.

Manufacturing is fully automated, including in-line zero point and end value adjustment.

Medium	Liquids and neutral gases
Output / Power supply	ration. 10 ... 70% 5 VDC ±5%
Accuracy	< 0.3% FS
Electrical connection	Connector RAST 2.5
Pressure connection	Hose connector Ø 6.2 mm
Snap-mounting	

OEM Type 500

-1 ... 0 – 600 bar



Type 500 pressure transmitters have proven ceramic technology to give an adjusted and amplified sensor signal, available in a range of standardised voltage or current outputs.

These transmitters are ideally suited to various industrial applications in high quantities due to their rugged construction and laser adjustment.

Medium	Liquids and gases
Output / Power supply	ration. 10 ... 90% 5 VDC (4.5 ... 6.0 VDC)
	0 ... 5 V, 1 ... 6 V 11 ... 33 VDC
	0 ... 10 V 18 ... 33 VDC
	4 ... 20 mA 11 ... 33 VDC
Accuracy	< 0.4% fs
Electrical connection	Cable 1.5 m, connector DIN EN 175301-803-A, connector M12x1
Pressure connection	Inside thread or outside thread

OEM Type 501

-1 ... 0 – 60 bar



Type 501 pressure transmitters, with partially 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
Output / Power supply	ration. 10 ... 90% 5 VDC ± 5%
	0 ... 5 V 9 ... 33 VDC
	1 ... 6 V 10.4 ... 33 VDC
	0 ... 10 V 16.2 ... 33 VDC
	4 ... 20 mA 8 ... 33 VDC
Accuracy	< 0.5% FS
Electrical connection	Cable 1.5 m, connector DIN EN 175301-803-A or C, connector M12x1
Pressure connection	Inside thread or outside thread

OEM Type 503

0 ... 2.5 – 25 bar



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	
Output / Power supply	ratiom. 10 ... 90%	5 VDC ± 5%
	0 ... 5 V	9.0 ... 33 VDC
	0 ... 10 V	16.2 ... 33 VDC
	4 ... 20 mA	10 ... 33 VDC
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	

OEM Type 505

0 ... 4 bar



Type 505 pressure transmitters are particularly suitable for measuring water pressure rates in heating and industrial circular flow.

Due to partially automated manufacturing we are able to handle customer orders in high quantities.

Medium	Liquids and gases	
Output / Power supply	ratiom. 10 ... 70%	5 VDC ± 5%
	0.5 ... 3.5 V	8.5 ... 30 VDC
Accuracy	< 1.0% fs	
Electrical connection	Connector RAST 2.5	
Pressure connection	Outside thread or plug connector	

OEM Type 506

-1 ... 7 – 60 bar



Type 506 pressure transmitters are suitable for different applications in the field of industrial refrigeration due to its application specific pressure connections.

Partially automated manufacturing allows the efficient production of large quantities, resulting in an excellent price / performance ratio.

Medium	Refrigerants	
Output / Power supply	ratiom. 10 ... 90%	5 VDC ±5%
	0 ... 5 V	9 ... 33 VDC
	1 ... 6 V	10.4 ... 33 VDC
	0 ... 10 V	16.2 ... 33 VDC
	4 ... 20 mA	8 ... 33 VDC
Accuracy	< 0.5% fs	
Electrical connection	Connector DIN EN 175301-803-A or C, cable 1.5 m connector M12x1	
Pressure connection	Inside thread or outside thread	



Type 507

-1 ... 0 – 600 bar



Type 507 pressure transmitters can be produced individually from single pieces to medium sized production batches.

The wide variety of versions and large number of pressure ranges allow many different applications. Additionally, customers have the option of zero point and slope adjustment.

Medium	Liquids and gases	
Output / Power supply	0 ... 5 V, 1 ... 6 V	11 ... 33 VDC
	0 ... 10 VDC	18 ... 33 VDC / 24 VAC ± 15%
	4 ... 20 mA	11 ... 33 VDC
Accuracy	< 0.3% fs	
Electrical connection	Connector DIN EN 175301-803-A, cable 1.5 m	
Pressure connection	Inside thread or outside thread	

OEM Type 510

0 ... 2.5 – 600 bar



Type 510 pressure transmitters are suitable for use with all types of refrigerants, including ammonia.

The newly designed pressure measuring cell incorporates a fully welded construction within the transducer housing.



Medium	Liquids, gases and refrigerants incl. ammoniac	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
	0 ... 5 V, 1 ... 6 V	8 ... 33 VDC
	0 ... 10 V	12.3 ... 33 VDC / 24 VAC ± 15%
	4 ... 20 mA	8 ... 33 VDC
Accuracy	< 0.5% fs	
Electrical connection	Cable 1.5 m, swift connector, connector M12x1, connector DIN EN 175301-803-C	
Pressure connection	Inside thread or outside thread	

OEM Type 511

-1 ... 0 – 600 bar



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	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
	0 ... 5 V, 1 ... 6 V	8 ... 33 VDC
	0 ... 10 V	11.4 ... 33 VDC / 24 VAC ± 15%
	4 ... 20 mA	8 ... 33 VDC
Accuracy	< 0.3% fs	
Electrical connection	Cable 1.5 m, swift connector, connector M12x1, connector AMP JPT, connector DIN EN 175301-803-C	
Pressure connection	Inside thread or outside thread	

OEM Type 512

0 ... 2.5 – 600 bar



The OEM pressure transmitters type 512 with cable connection meet the highest demand for industry and vehicle manufacturing applications. The compact and robust mechanical design incorporating protection standard IP69K allows the use in stringent conditions.

This special sensor is based on the by Huba Control developed thick-film technology on stainless-steel welded without sealing on the pressure transducer.

Medium	Liquids and gases	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
	0 ... 5 V, 1 ... 6 V	8 ... 33 VDC
	0 ... 10 V	11.4 ... 33 VDC
	4 ... 20 mA	8 ... 33 VDC
Accuracy	< 0.5% fs	
Electrical connection	Cable 1.5 m	
Pressure connection	Inside thread or outside thread	

OEM Type 515

-1 ... 0 – 600 bar



Type 515 pressure transmitter with cable connection meets the highest demands for industry and vehicle manufacturing applications.

The compact and robust mechanical design incorporating protection standard IP69K allows the use in stringent conditions.

Medium	Liquids and gases	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
	0 ... 5 V, 1 ... 6 V	8 ... 33 VDC
	0 ... 10 VDC	11.4 ... 33 VDC
	4 ... 20 mA	8 ... 33 VDC
Accuracy	< 0.5% fs	
Electrical connection	Cable 1.5 m	
Pressure connection	Inside thread or outside thread	

OEM Type 516

-1 ... 0 – 16 bar



Being used in combination with a unique integrated electronic design the type 516 gives a high degree of accuracy for all temperature ranges.

This technology, with its amplified ratiometric output signal, allows direct assembly without the need of user temperature or pressure adjustment.

Medium	Liquids and gases	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
	ration. 10 ... 60% ± 1.2 V	5 VDC ± 5%
Accuracy	< 0.5% fs	
Electrical connection	Flexible connector contact spacing 2.54 mm	
Pressure connection	Quick fitting	

Type 520

0 ... 2.5 – 600 bar



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 inclusive ammonia.



Medium	Liquids, gases and refrigerants incl. ammonia
Output / Power supply	0 ... 5 V, 1 ... 6 V 8 ... 33 VDC
	0 ... 10 V 12 ... 33 VDC / 24 VAC ± 15%
	ratiom. 10 ... 90% 5 VDC ± 10%
	4 ... 20 mA 7 ... 33 VDC
	⊕ 4 ... 20 mA 10 ... 30 VDC
Accuracy	< 0.8% fs
Electrical connection	Swift connector, connector DIN EN 175301-803-A or C, Metri Pack Serie 150, connector M12x1, braids, connector RAST 2.5
Pressure connection	Inside thread or outside thread

Type 528

-1 ... 0 – 60 bar



The compact type 528 pressure transmitter is based upon the Huba Control developed and since over 20 years well proven ceramic technology.

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

Medium	Liquids and gases
Output / Power supply	0 ... 5 V, 1 ... 6 V 8 ... 33 VDC
	0 ... 10 V 12 ... 33 VDC / 24 VAC ± 15%
	ratiom. 10 ... 90% 5 VDC ± 10%
	4 ... 20 mA 7 ... 33 VDC
	⊕ 4 ... 20 mA 10 ... 30 VDC
Accuracy	< 0.8% fs
Electrical connection	Swift connector, connector DIN EN 175301-803-A or C, Metri Pack Serie 150, connector M12x1, braids, connector RAST 2.5
Pressure connection	Inside thread or outside thread

Type 680

0 ... 0.1 – 1000 bar



Type 680 pressure transmitters with piezoresistive silicon pressure measuring cells are available in

over 20 pressure ranges, and with a wide variety of pressure and electrical connections.

Medium	Liquids and gases
Output / Power supply	0 ... 5 V, 0 ... 10 V 15 ... 30 VDC
	4 ... 20 mA 9 ... 33 VDC
	⊕ 4 ... 20 mA 9 ... 28 VDC
Accuracy	< 0.25% fs (< 0.05% fs on request)
Electrical connection	Cable in several lengths, Binder 723, Lumberg RSF4, RSF50, connector DIN EN 175301-803-A,
Pressure connection	Inside thread or outside thread

Type 691

-1 ... 9 bar / 0 ... 600 bar



Type 691 pressure transmitters have a unique and well proven ceramic technology.

Beside a wide range of pressure and electrical connections we are able to provide many pressure ranges from 300 mbar upwards.

Medium	Liquids and gases	
Output / Power supply	0 ... 5 V	11 ... 33 VDC / 24 VAC ±15%
	0 ... 10 V	18 ... 33 VDC / 24 VAC ±15%
	4 ... 20 mA	11 ... 33 VDC
Accuracy	< 0.3% fs	
Electrical connection	Cable 1.5 m, connector DIN EN 175301-803-A, connector DIN EN 60130-9	
Pressure connection	Inside thread or outside thread	



OEM Type 401

0 ... 3 – 8 mbar



Type 401 pressure transmitters sense ultra-fine changes in air pressure, and are designed to provide optimum control.

The dual-component diaphragm, with its unique geometry, gives highly sensitive operation and excellent repeatability, even in the range below 20 Pascal.

Medium	Air and neutral gases	
Output / Power supply	0.5 ... 4.5 V	10.4 ... 18 VDC
Accuracy	< 0.3% fs	
Electrical connection	Connector RAST 2.5	
Pressure connection	Hose connector Ø 6.2 mm	

Snap-mounting or mounting bracket

Type 402

0 ... 3 – 50 mbar



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	
Output / Power supply	0.5 ... 4.5 V	10.2 ... 33 VDC
Accuracy	< 0.6% fs	
Electrical connection	Connector RAST 2.5 Pins for PCB mounting	
Pressure connection	Hose connector Ø 6.2 mm	

Snap-mounting or screw mounting

OEM Type 403

0 ... 3 – 8 mbar



Type 403 pressure transmitters sense ultra-fine 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	
Output / Power supply	0.5 ... 4.5 V	10.4 ... 18 VDC
Accuracy	< 0.5% fs	
Electrical connection	Connector RAST 2.5	
Pressure connection	Hose connector Ø 6.2 mm	

Snap-mounting or mounting bracket

Differential pressure transmitter

Type 652

0 ... 50 – 1000 mbar



Type 652 pressure transmitters are ideally suited to the continuous monitoring of liquid and gas flow (or level) in heating, ventilation and process technology.

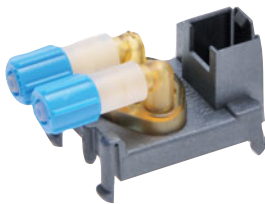
Their especially rugged construction allows a single port over-pressure of up to 20 bar, depending upon pressure range.

Medium	Liquids and neutral gases
Output	0 ... 10 V , 0 ... 20 mA , 4 ... 20 mA
Power supply	20 ... 30 VDC oder 24 VAC +15% / -10%
Accuracy	< 1.5% fs
Electrical connection	Screw terminals
Pressure connection	Inside thread G $\frac{1}{4}$

Mounting bracket for screw mounting

Type 663

-5 ... 5 mbar / 0 ... 5 – 2000 mbar



Type 663 pressure transmitters are designed for use with media such as air or non-aggressive gases.

The output signals are temperature compensated, linear and amplified.

Medium	Air and neutral gases
Output / Power supply	0.5 ... 4.5 V 8.5 ... 30 VDC
Accuracy	< 0.5% fs
Electrical connection	Connector RAST 2.5 or Pins for PCB mounting
Pressure connection	Hose connector Ø 4.8 mm, quick fitting

Snap-mounting

Type 692

0 ... 0.1 – 25 bar



Type 692 pressure transmitters have a unique, well proven ceramic technology. 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	Air and gases
Output / Power supply	0 ... 5 V 11 ... 33 VDC / 24 VAC ± 15%
	0 ... 10 V 18 ... 33 VDC / 24 VAC ± 15%
	4 ... 20 mA 11 ... 33 VDC
Accuracy	< 0.5% fs
Electrical connection	Cable 1.5 m, connector DIN EN 175301-803-A, connector DIN EN 60130-9
Pressure connection	Hose connection or screw fitting, outside thread $\frac{7}{16}$ -20 UNF, adapter inside or outside thread G $\frac{1}{4}$

Mounting bracket for screw mounting

Differential pressure transmitter

Type 698

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



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
Output	0 ... 10 V , 0 ... 20 mA , 4 ... 20 mA Potential-free limit value switch
Power supply	17 ... 33 VDC / 24VAC ± 15%, 24 VAC, 115 VAC oder 230 VAC
Accuracy	< 1.0% fs
Electrical connection	Screw terminals
Pressure connection	Hose connector conical 4 ... 7 mm or quick fitting
Screw mounting	

Type 699

-1 ... 1 mbar / 0 ... 0.3 – 50 mbar



These pressure 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

allow a physically correct and long term stable measurement. The large variety offers a manifold use in the air-conditioning technique as well as for fine measurement in industry or medical applications.

Medium	Air and neutral gases
Output / Power supply	0 ... 10 V 13.5 ... 33 VDC / 24 VAC ± 15% 0 ... 20 mA 13.5 ... 33 VDC / 24 VAC ± 15% 4 ... 20 mA 13.5 ... 33 VDC / 24 VAC ± 15% 4 ... 20 mA 8.0 ... 33 VDC
Accuracy	< 0.6% fs
Electrical connection	Screw terminals
Pressure connection	Hose connector Ø 6.2 mm
Screw mounting	

Definition of accuracy

Maximal negative or positive deviation of set-point.

Sum of linearity, hysteresis and repeatability at room temperature.

Detailed technical information according to the product specific datasheet.

Level pressure transmitter

Type 681

0 ... 0.1 – 25 bar



Type 681 level sensing pressure transmitters have a piezo-resistive encased silicon measuring cell. There are 13 pressure ranges from 100 mbar fs upwards available.

Atmospheric pressure compensation is ensured by a capillary tube in the cable.

Medium	Fluides, aggressive fluides, potable water	
Output / Power supply	0 ... 5 VDC, 0 ... 10 V	12 ... 30 VDC
	4 ... 20 mA	9 ... 33 VDC
	⊕ 4 ... 20 mA	9 ... 28 VDC
Accuracy	< 0.5% fs (< 0.1% on request)	

OEM Type 700

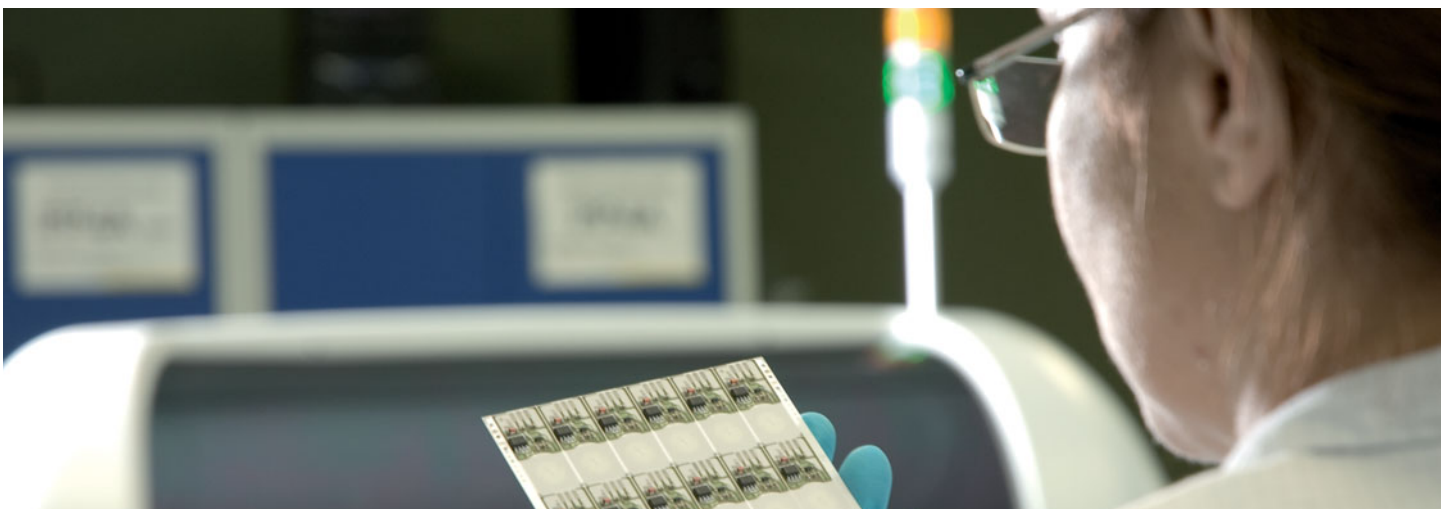
0.8 ... 1.4 – 10 bar



Type 700 level sensing pressure transmitters have a ceramic absolute pressure measuring cell.

They are specially designed for industrial OEM applications, and have an excellent price / performance ratio.

Medium	Liquids	
Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
Accuracy	< 0.5% fs	



Electronic pressure switch

OEM Type 511

-1 ... 0 – 600 bar



Type 511 electronic pressure switches meet the highest demands for operational reliability, and are especially suited to demanding industrial

applications. The switching points are factory set by laser adjustment.

Medium	Liquids and gases	
Power supply	8 ... 33 VDC	
Upper switching point	8 ... 100% fs	
Lower switching point	5 ... 97% fs	
Switching contacts	High-Side switch (PNP)	N/C contact / N/O contact
	Low-Side switch (NPN)	N/C contact / N/O contact
Switching capacity	High-Side switch 500 mA	Low-Side switch 150 mA
Accuracy	< 0.3% fs	
Electrical connection	Cable 1.5 m, swift connector, connector AMP JPT, connector M12x1, connector DIN EN 175301-803-A or C	
Pressure connection	Inside thread or outside thread	

Type 615

-1 ... 0 – 600 bar



The switching points of the electronic pressure switch type 615 are adjustable with potentiometer by the customer, or set in our factory. Many

different pressure and electrical connections offer a wide range of uses.

Medium	Liquids and gases	
Power supply	10 ... 33 VDC, 24 VAC	
Upper switching point	7 ... 100% fs	
Lower switching point	5 ... 98% fs	
Switching contacts	High-Side switch (PNP)	N/C contact / N/O contact
	Low-Side switch (NPN)	N/C contact / N/O contact
Switching capacity	100 mA	
Accuracy	< 0.5% fs	
Electrical connection	Cable 1.5 m, connector DIN EN 175301-803-A, connector DIN EN 60130-9	
Pressure connection	Inside thread or outside thread	

Type 616

0 ... 0.1 – 25 bar



The switching points of the pressure switch type 616 can be potentiometer adjusted by the customer, or set in our factory.

Many different pressure and electrical connections offer a wide range of uses.

Medium	Liquids and gases	
Power supply	10 ... 33 VDC, 24 VAC	
Upper switching point	7 ... 100% fs	
Lower switching point	5 ... 98% fs	
Switching contacts	High-Side switch (PNP)	N/C contact / N/O contact
	Low-Side switch (NPN)	N/C contact / N/O contact
Switching capacity	100 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 connection or screw fitting, outside thread 7/16 -20 UNF, adapter inside or outside thread G1/8	

Electronic pressure switch

Type 619

-1 ... 0 – 600 bar



The μ P-regulated, programmable pressure transmitter type 619 has a robust industry design. Parameters can easily be programmed with three different configuration menus with easy to operate

operations keys. All systems are equipped with a diagnostic function.

The big 4-digit LED-indication assures a good accuracy of reading.

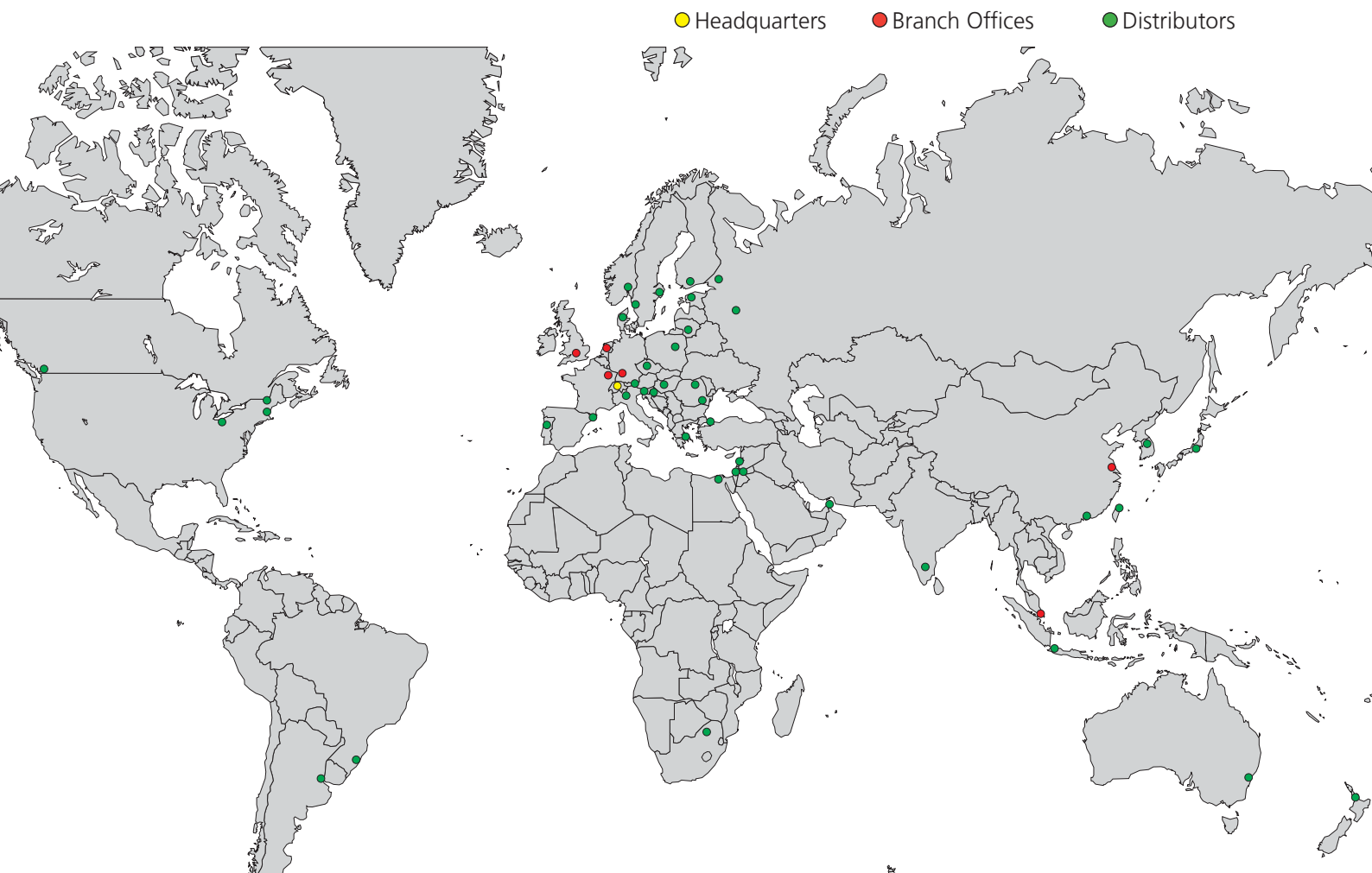
Medium	Liquids and neutral gases	
Output / Power supply	0 ... 10 V	17 ... 33 VDC
	4 ... 20 mA	17 ... 33 VDC
Switching capacity	Digital output	
	max. 200 mA	
Accuracy	< 0.6% fs	
Electrical connection	Connector M12x1	
Pressure connection	Inside thread G $\frac{1}{4}$	

Markets and presence

The target market for Huba pressure and flow measurement technology is divided into several sectors based upon application as special pressure sensors for Industrial automation (INDUSTRY) or components for gas boilers (GAS), heating, ventilation and air conditioning (HVAC) and white goods (WASHING MACHINES).

Huba Control is the market leader in the GAS BOILER and HVAC sectors. 97% of our products are exported. Over 49 specialist agents and own sales engineers in Germany, France, United Kingdom, Netherland, China and Singapore allow us to expand our market presence continually.

Huba's production department is designed for the assembly, balancing and adjustment of pressure switches and pressure transmitters. The individual stages of the process are carried out with varying degrees of rationalisation (fully, semi and partially automated manufacture) depending on the quantities involved. A key strength is our mastery of complex automated routines, including automatic calibration, manufacture of one-off products and large-scale production runs, and the maintenance of short throughput times.



Mechanical pressure switch

Type 604

0.2 ... 50 mbar



The ideal pressure switch to control air flows in air conditioning and ventilation systems, but equally effective in industrial air monitoring applications. This product range, which is classified in 5 pressure ranges, makes installation easy with

features such as combibracket, screw terminals and snap-on cover. Of unique benefit is the high adjustment accuracy resulting from individual scale engraving.

Medium
Electrical connection

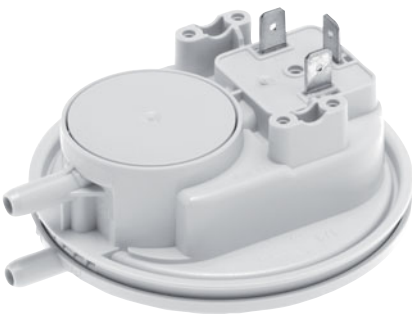
Air and neutral gases
Screw terminals
Flat connector 6.3 or 4.8 mm
Hose connector Ø 6.2 mm
Inside thread G $\frac{1}{8}$

Pressure connection

Mounting bracket or fastening clip

OEM Type 605

20 ... 400 Pa



Type 605 pressure switches are specially developed for use in gas fired heating systems. There are more than 10 million switches in use worldwide. Produced on a fully automated production line.

High setting accuracy and reproducibility, combined with excellent reliability characterise a quality of switch above the industry norm.

Medium
Electrical connection
Pressure connection

Air and neutral gases
Flat connector 6.3 or 4.8 mm
Hose connector Ø 6.2 mm

Mounting bracket or fastening clip

Type 610

-320 ... 500 mbar



Type 610 pressure switches are especially suited to the monitoring of non-flammable gases in general industrial equipment.

Exemplary accuracy is maintained throughout the high pressure range of this switch.

Medium
Electrical connection
Pressure connection

Air and neutral gases
Flat connector 6.3 mm
Hose connector Ø 6 mm

Mounting bracket

Mechanical pressure switch

Type 620/625

-900 ... 6000 mbar



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 longterm stability. Rugged design and especially suitable for use in general industrial equipment construction, process technology and food automation.

Medium
Electrical connection
Pressure connection

Liquids and neutral gases
Screw terminals, flat connector 6.3 mm
Inside thread M5, hose connection Ø 6 mm,
Outside thread M12x1, G $\frac{1}{4}$, G $\frac{1}{8}$

Mounting bracket

Type 630

6 ... 5500 mbar



The pressure switches type 630 are suitable for monitoring flow in sanitary piping/ heating installations or for level monitoring in general in process technology applications.

Their especially rugged construction allows a single port over-pressure of up to 20 bar, depending upon pressure range.

Medium
Electrical connection
Pressure connection

Liquids and neutral gases
Screw terminals, flat connector 6.3 mm
Inside thread G $\frac{1}{8}$

Mounting bracket

**Optimised diaphragm
geometry technology
from Huba Control**

Huba Control has over 40 years experience in the innovation of diaphragm geometries.

The optimised construction of polymer diaphragms produces excellent long term stability, and switching point reproducibility, acting in synergy with our own in-house developed contact systems.

OEM Type 200

0.9 ... 150 l/min.

0.3 ... 5 m/s



The flow sensor type 200 is based on the Kármán vortex street. You can choose between various versions as integrated temperature measurement. This flow sensor without moving

parts is insensitive to pollution and persuade by very few loss of pressure and a very high accuracy.

Medium	Liquids	
Nominal diameters	DN 8 / 10 / 15 / 20 / 25	
Temperature measurement	NTC / PT1000	
Output / Powersupply	Frequency output 12 ... 437 Hz (0 ... 5 V)	5 VDC
Electrical connection	Connector RAST 2.5, connector M12x1	
Tube connection	Plastic - connection copper tube	
	Plastic - outside thread	

Type 210

0.9 ... 150 l/min.

0.3 ... 5 m/s



In comparison to the OEM flow sensor (type 200) the type 210 is available with a larger variety concerning power supply and outputs. You can choose between various versions as integrated temperature measurement.

This flow sensor without moving parts is insensitive to pollution and persuade by very few loss of pressure and a very high accuracy.

Medium	Liquids	
Nominal diameters	DN 8 / 10 / 15 / 20 / 25	
Temperature measurement	PT1000	
Output / Powersupply	Frequency output 12 ... 437 Hz (0 ... U_{in} V)	5 ... 33 VDC
	Analogue signal 0 ... 10 V	11.5 ... 33 VDC
	Analogue signal 4 ... 20 mA	8 ... 33 VDC
Electrical connection	Connector M12x1	
Tube connection	Plastic - connection copper tube	
	Plastic - outside thread	

Type 230

1.8 ... 150 l/min.

0.3 ... 5 m/s



The type 230 consists of a rugged construction of red brass.

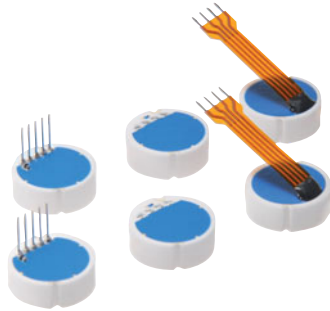
This flow sensor without moving parts is insensitive to pollution and persuade by very few loss of pressure and a very high accuracy.

Medium	Liquids	
Nominal diameters	DN 10 / 15 / 20 / 25	
Temperature measurement	PT1000	
Output / Powersupply	Frequency output 12 ... 382 Hz (0 ... U_{in} V)	5 ... 33 VDC
	Analogue signal 0 ... 10 V	11.5 ... 33 VDC
	Analogue signal 4 ... 20 mA	8 ... 33 VDC
Electrical connection	Connector M12x1	
Rohranschluss-Gehäuse	Red brass - outside thread	

Pressure measuring cells

OEM Type 509

0 ... 2.5 – 250 bar



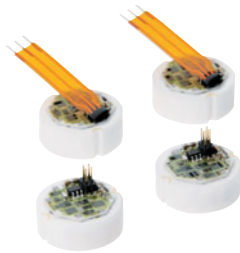
Type 509 pressure measuring cells are based on ceramic technology developed by Huba Control, and used for the last 15 years in millions of applications. Due to the robust design of the ceramic cell there are no significant changes in the sensor

characteristics when mounted by the customer. The pressure measuring cells are delivered either factory set or with TK zero point adjustment. You can choose between various versions as integrated temperature measurement.

Medium	Liquids and gases
Power supply	3 ... 30 VDC
Zero point	(0.2 ± 0.2) mV / V
Range with nominal pressure	(2.5 ± 1.5) mV / V
Accuracy	< 0.5% fs
Electrical connection	Flexible connector contact spacing 2.54 mm, Bondpads (AgPd) contact spacing 1.27 mm Pin-Connector

OEM Type 513

-1 ... 0 – 600 bar



Type 513 pressure measuring cells have an adjusted, amplified sensor signal. They are especially suitable for high quantities in OEM applications.

The unique integrated electronics allow installation without the need for temperature and pressure adjustment by the customer.

Medium	Liquids and neutral gases				
Output / Power supply	<table> <tr> <td>ration. 10 ... 90%</td> <td>5 VDC ± 5%</td> </tr> <tr> <td>ration. 10 ... 60% ±1.2 V</td> <td>5 VDC ±5%</td> </tr> </table>	ration. 10 ... 90%	5 VDC ± 5%	ration. 10 ... 60% ±1.2 V	5 VDC ±5%
ration. 10 ... 90%	5 VDC ± 5%				
ration. 10 ... 60% ±1.2 V	5 VDC ±5%				
Accuracy	< 0.3% fs				
Electrical connection	Flexible connector contact spacing 2.54 mm, connector contact spacing 1.27 mm				

OEM Type 513 barometric sensor

0.8 ... 1.4 bar



This pressure measuring cell, barometric adjusted with protection case is suitable for plug mounting on PCB. The output signal is linear, tempera-

ture compensated and amplified. The robust construction guarantees a long term stable measuring result.

Output / Power supply	ration. 10 ... 90%	5 VDC ± 5%
Accuracy	< 0.3% fs	
Electrical connection	Contact spacing 1.27 mm	

Type 800

Indication in mbar and bar



Type 800 digital indicators are equipped with a 4 digit display, as well as optional switch and analogue outputs. The sensor signal is evaluated and indicated as pressure by the digital display.

The programming of the limit value output can be executed with the buttons on the front or via a data cable from a computer.

Power supply	20 ... 253 V AC oder DC
Input signals	0 ... 5 VDC 0 ... 10 VDC 0 ... 20 mA 4 ... 20 mA
Output signals	0 ... 10 VDC 0 ... 20 mA 4 ... 20 mA Potential-free limit value switch

Type 801

Portable plug-in indicator



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 signals	Power supply
0 ... 5 VDC	11 ... 33 VDC, 24 VAC
0 ... 10 VDC	18 ... 33 VDC, 24 VAC
0 ... 20 mA	18 ... 33 VDC, 24 VAC
4 ... 20 mA	8 ... 33 VDC

Huba Control

FOR FINE PRESSURE AND FLOW MEASUREMENT

In addition to our extensive range of standard products, we are able to develop and produce customer specific solutions designed to meet the demanding conditions required by manufacturers of OEM products.

Conversion table for the most important pressure units

	bar	mbar	Pa	hPa	kPa	MPa	mmH ₂ O	inchH ₂ O	mmHg	inchHg	psi
bar	1	1'000	100'000	1'000	100	0,1	10'197,2	401,463	750,062	29,5300	14,5038
mbar	0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
Pa	0,00001	0,01	1	0,01	0,001	0,000001	0,101972	0,0040146	0,0075006	0,0002953	0,0001450
hPa	0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
kPa	0,01	10	1'000	10	1	0,001	101,972	4,01463	7,50062	0,295300	0,145038
MPa	10	10'000	1'000'000	10'000	1'000	1	101'972	4'014,63	7'500,62	295,300	145,038
mmH ₂ O	0,0000981	0,0980665	9,80665	0,0980665	0,009807	0,0000098	1	0,0393701	0,0028959	0,0014223	0,0001423
inchH ₂ O	0,0024909	2,49089	249,089	2,49089	0,249089	0,0002491	25,4000	1	1,86832	0,0735559	0,0361273
mmHg	0,0013332	1,33322	133,322	1,33322	0,133322	0,001333	13,5951	0,535240	1	0,0393701	0,0193368
inchHg	0,0338639	33,8639	3'386,39	33,8639	3,38639	0,0033864	345,316	13,5951	25,4000	1	0,491154
psi	0,0689476	68,9476	6894,76	68,9476	6,89476	0,0068948	703,070	27,6799	51,7149	2,03602	1

Example: 1 MPa = 10'000 hPa

bar	mbar	Pa	hPa	kPa	MPa	mmH ₂ O	inchH ₂ O	mmHg	inchHg	psi
1	1'000	100'000	1'000	100	0,1	10'197,2	401,463	750,062	29,5300	14,5038
0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
0,00001	0,01	1	0,01	0,001	0,000001	0,101972	0,0040146	0,0075006	0,0002953	0,0001450
0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
0,01	10	1'000	10	1	0,001	101,972	4,01463	7,50062	0,295300	0,145038
10	10'000	1'000'000	10'000	1'000	1	101'972	4'014,63	7'500,62	295,300	145,038
0,0000981	0,0980665	9,80665	0,0980665	0,009807	0,0000098	1	0,0393701	0,0028959	0,0014223	0,0001423
0,0024909	2,49089	249,089	2,49089	0,249089	0,0002491	25,4000	1	1,86832	0,0735559	0,0361273
0,0013332	1,33322	133,322	1,33322	0,133322	0,001333	13,5951	0,535240	1	0,0393701	0,0193368
0,0338639	33,8639	3'386,39	33,8639	3,38639	0,0033864	345,316	13,5951	25,4000	1	0,491154
0,0689476	68,9476	6894,76	68,9476	6,89476	0,0068948	703,070	27,6799	51,7149	2,03602	1

Example: 1 bar = 401.463 inchH₂O

bar	mbar	Pa	hPa	kPa	MPa	mmH ₂ O	inchH ₂ O	mmHg	inchHg	psi
1	1'000	100'000	1'000	100	0,1	10'197,2	401,463	750,062	29,5300	14,5038
0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
0,00001	0,01	1	0,01	0,001	0,000001	0,101972	0,0040146	0,0075006	0,0002953	0,0001450
0,001	1	100	1	0,1	0,0001	10,1972	0,401463	0,750062	0,0295300	0,0145038
0,01	10	1'000	10	1	0,001	101,972	4,01463	7,50062	0,295300	0,145038
10	10'000	1'000'000	10'000	1'000	1	101'972	4'014,63	7'500,62	295,300	145,038
0,0000981	0,0980665	9,80665	0,0980665	0,009807	0,0000098	1	0,0393701	0,0028959	0,0014223	0,0001423
0,0024909	2,49089	249,089	2,49089	0,249089	0,0002491	25,4000	1	1,86832	0,0735559	0,0361273
0,0013332	1,33322	133,322	1,33322	0,133322	0,001333	13,5951	0,535240	1	0,0393701	0,0193368
0,0338639	33,8639	3'386,39	33,8639	3,38639	0,0033864	345,316	13,5951	25,4000	1	0,491154
0,0689476	68,9476	6894,76	68,9476	6,89476	0,0068948	703,070	27,6799	51,7149	2,03602	1

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