



Pressure transmitter

Huba Control

Pressure transmitter

Type 560

The Pressure Transmitter 560 offers best-in-class performance with quality «Made in Switzerland». The well-known and field-proven Huba Control stainless steel sensor technology features a hermetically welded design with high overpressure resistance. As there are no internal sealings, a considerable risk for internal leakage is removed.

The 560 is perfectly suited for a wide range of demanding applications in refrigeration, hydraulics, compressed air and other industries, where reliability, long-term stability and precision are crucial. The stainless steel technology allows usage of common refrigerants, like R32, R290, CO2 and Ammonia.



Pressure range

-1 ... 7 bar

0 ... 10 – 150 bar

- + Compact and robust stainless steel design
- + Hermetic Layout, no sealing, no leakage risk
- + 100% automated in-line leakage test with helium
- + Compliant with DIN EN 60335-2-40
- + Variety of configurations
- + Easy to install, maintenance-free
- + VDE compliant according to EN IEC 60335-2-40 and EN IEC 60335-2-89

Technical overview

Pressure range

Relative -1 ... 7 bar / 0 ... 10 – 150 bar

Operating conditions

Medium		Refrigerants, hydraulic oils, and non-corrosive gases
Temperature	Medium	Medium ratiom. 10 ... 90% -40 ... +125 °C
	Medium	4 ... 20 mA -40 ... +120 °C (other temperatures on request)
	Ambient	-40 ... +85 °C
	Storage	-40 ... +100 °C
Tolerable overload		3 x fs ¹⁾
Rupture pressure		6 x fs ²⁾

Materials

Cover		Stainless steel 1.4301 / 1.4404
Plug accommodation		Polyacrylamide 50% GF UL94 V0
Materials in contact with medium ³⁾	Thread	Stainless steel 1.4301 / AISI 304
	Soldering connection	CuDHP / CW024A
	Sensor	Stainless steel 1.4016

Electrical overview

	Output	Power supply	Load	Current consumption
2 wire	4 ... 20 mA	8 ... 32 VDC	< $\frac{\text{supply voltage} - 8V}{600\Omega}$	< 23 mA
3 wire	ratiom. 10 ... 90%	3 ... 5.5 VDC	>10 kOhm / < 10 nF	< 7 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.			
Insulation voltage	500 VDC			

Dynamic response

Response time	ratiom. 10 ... 90%	< 5 ms (typ. 2 ms)
	4 ... 20 mA	< 5 ms (typ. 2 ms)

Electrical connection

	Protection standard	Protection class
Metri Pack 150 P2S Series ⁴⁾	(two coloured design, black or grey)	IP 67 ⁵⁾
Swift connector	(two coloured design, black or grey)	IP 67 ⁵⁾

Pressure connection

Inside thread	$\frac{7}{16}$ - 20 UNF	sealing cone 45° and Schrader
	$\frac{7}{16}$ - 20 UNF	sealing cone 45°
Outside thread	$\frac{1}{4}$ -18 NPT	sealing in thread
	G $\frac{1}{4}$	sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in FKM
	G $\frac{1}{4}$	sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in EPDM
Soldering connection ⁶⁾	Tube Ø 6 mm	L = 35 mm

Installation arrangement

Unrestricted

Tests / Admissions

UL	ANSI/UL 61010-1 acc. E325110
VDE	EN IEC 60335-2-40, Cert.No. 40061092
	EN IEC 60335-2-89, Cert.No. 40061092
Electromagnetic compatibility	CE-Conform acc. EN 61326-2-3:2013
Hermetic sealing	Tested according to EN ISO 14903:2017
Surface temperature during operation and individual faults	Assessment according to DIN EN 60335-2-40
Vibration	Tested according to EN/IEC 60068-2-6
Shock	Tested according to IEC 60068-2-27

Weight

~ 90 g

Packaging (recycleable)

Multiple packaging in cardboard (25 pcs.)
min. order quantity 100 pcs.

Accuracy

Parameter	Unit	
Accuracy*	%FS	0.75
Total Error Band (-25 ... +85 °C)	% FS	1
Total Error Band (-40 ... +125 °C)	% FS	1.5

* (linearity, hysteresis, repeatability, @ 25 °C, 5.0 VDC for ratiometric or 24 VDC for 4-20 mA)

¹⁾ Soldering tube with pressure range ≥ 90 bar: max. 200 bar with media contact. ⁴⁾ Delivery without female connector. approval

²⁾ Soldering tube with pressure range ≥ 90 bar: max. 600 bar

³⁾ The application medium must be suitable for the materials of the pressure transmitter with a matching plug of the corresponding protection class; IP test not part of UL61010-1

⁵⁾ The specified protection class only applies when connected with a matching plug of the corresponding protection class; IP test not part of UL61010-1

⁶⁾ Soldering tube with end stop, without end stop on request.

⁷⁾ incl. zero point, full scale, linearity, hysteresis and repeatability

				1	2	3	4	5	6	7	8	9	10	11	
Order code selection table in bar				560.	X	X	X	X	X	X	X	X	X	X	
Pressure range (relative)	-1 ... 7 bar			9	1	1		0,5							
	0 ... 10 bar			9	1	2		0,5							
	0 ... 16 bar			9	1	3		0,5							
	0 ... 18 bar			9	1	4		0,5							
	0 ... 30 bar			9	1	5									
	0 ... 45 bar			9	1	6									
	0 ... 50 bar			9	1	7									
	0 ... 60 bar			9	1	8									
	0 ... 90 bar			9	1	9									
	0 ... 150 bar			9	1	A									
Output / power supply	Ratiom. 10 ... 90%	3 ... 5.5 VDC	3 wire					7							
	Analog 4 ... 20 mA	8 ... 32 VDC	2 wire					3							
Electrical connection	Swift connector (black)	2L: IN=1 / OUT=3	3L: IN=1 / OUT=2 / GND=3					0							
	Swift connector (grey)	2L: IN=1 / OUT=3	3L: IN=1 / OUT=2 / GND=3					A							
	Metri Pack 150 P2S (black) ¹⁾	2L: IN=B / OUT=A	3L: IN=B / OUT=C / GND=A					5							
	Metri Pack 150 P2S (grey) ¹⁾	2L: IN=B / OUT=A	3L: IN=B / OUT=C / GND=A					B							
Pressure connection	Inside thread	$\frac{7}{16}$ -20 UNF with Schrader						K	0	0	0	0			
		$\frac{7}{16}$ -20 UNF						2	0	0	0	0			
	Outside thread	$\frac{1}{4}$ -18 NPT							Y	0	0	0	0		
		G $\frac{1}{4}$ sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in FKM							4	A	0	0	0		
		G $\frac{1}{4}$ sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in EPDM							4	B	0	0	0		
Soldering connection	Tube \varnothing 6mm	L = 35 mm						W	0	0	0	0			
Pressure range variation (optional)	Indicate W and state range on order (e.g. W -1 ... +3 bar/Out 10 ... 90%)													W	

				1	2	3	4	5	6	7	8	9	10	11	
Order code selection table in psi				560.	X	X	X	X	X	X	X	X	X	X	
Pressure range (relative)	-15 ... 100 psi			9	A	1		0,5							
	0 ... 145 psi			9	A	2		0,5							
	0 ... 230 psi			9	A	3		0,5							
	0 ... 260 psi			9	A	4		0,5							
	0 ... 435 psi			9	A	5									
	0 ... 650 psi			9	A	6									
	0 ... 725 psi			9	A	7									
	0 ... 870 psi			9	A	8									
	0 ... 1300 psi			9	A	9									
	0 ... 2170 psi			9	A	A									
Output / power supply	Ratiom. 10 ... 90%	3 ... 5.5 VDC	3 wire					7							
	Analog 4 ... 20 mA	8 ... 32 VDC	2 wire					3							
Electrical connection	Swift connector (black)	2L: IN=1 / OUT=3	3L: IN=1 / OUT=2 / GND=3					0							
	Swift connector (grey)	2L: IN=1 / OUT=3	3L: IN=1 / OUT=2 / GND=3					A							
	Metri Pack 150 P2S (black) ¹⁾	2L: IN=B / OUT=A	3L: IN=B / OUT=C / GND=A					5							
	Metri Pack 150 P2S (grey) ¹⁾	2L: IN=B / OUT=A	3L: IN=B / OUT=C / GND=A					B							
Pressure connection	Inside thread	$\frac{7}{16}$ -20 UNF with Schrader						K	0	0	0	0			
		$\frac{7}{16}$ -20 UNF						2	0	0	0	0			
	Outside thread	$\frac{1}{4}$ -18 NPT							Y	0	0	0	0		
		G $\frac{1}{4}$ sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in FKM							4	A	0	0	0		
		G $\frac{1}{4}$ sealed at back ISO 1179-2 (DIN 3852-E) with profile seal ring in EPDM							4	B	0	0	0		
Soldering connection	Tube \varnothing 6mm	L = 35 mm						W	0	0	0	0			
Pressure range variation (optional)	Indicate W and state range on order (e.g. W -15 ... +45 psi/Out 10 ... 90%)													W	

Variation

Deviation factor	0.33 ... 1.33 (must not be undercut or exceeded)
Accuracy	Standard accuracy / Deviation factor (for Deviation factor < 1)
Lowest adjustable pressure value	-1 bar / -15psi
Highest adjustable pressure value	150 bar / 2170 psi

Ex. 1: Sensor with a measuring range of 0 ... 10 bar is to be calibrated to 0 ... 4 bar.

Deviation factor = $\frac{4 \text{ bar}}{10 \text{ bar}} = 0.4 \rightarrow$ ok, because the deviation factor is within 0.33 ... 1.33.

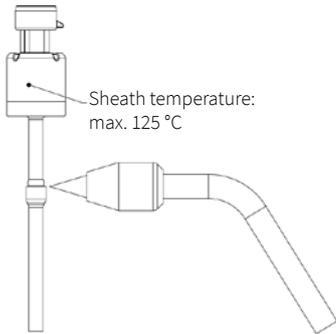
Ex. 2: Sensor with a measuring range of 0 ... 10 bar is to be calibrated to 0 ... 2 bar.

Deviation factor = $\frac{2 \text{ bar}}{10 \text{ bar}} = 0.2 \rightarrow$ cannot be synchronized, as the deviation factor is not within 0.33 ... 1.33.

¹⁾ Delivery without female connector

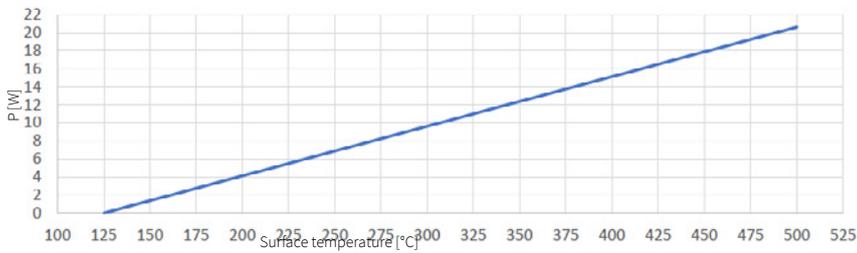
Set - Swift connector (female) (included in delivery)	117312
Set - Metri Pack 150 P2S Series (female) (3 wire)	120345

Mounting instruction soldering

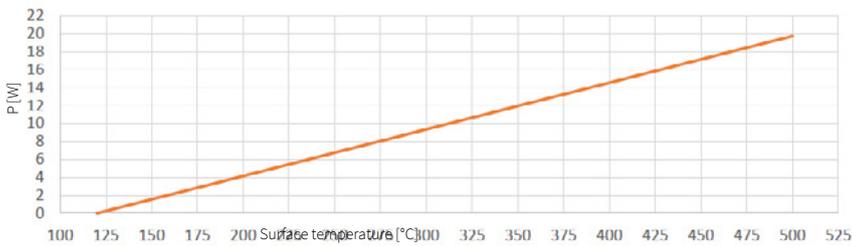


Surface temperature of the sensor in the event of a fault as a function of the supply power. Measured according to EN60335-2-40

Ratiometer 10 ... 90%



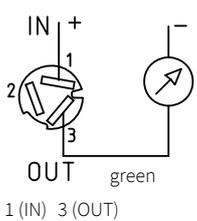
Analog 4 ... 20 mA



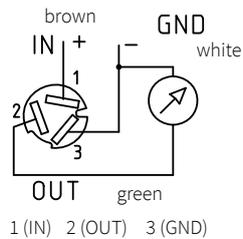
Electrical connections

Swift connector

2 wire

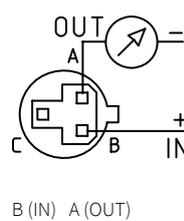


3 wire

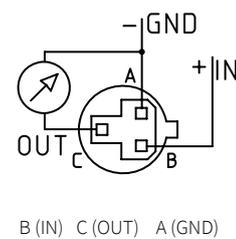


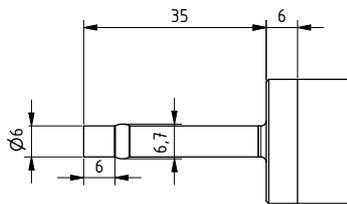
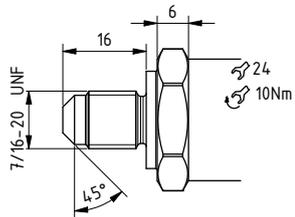
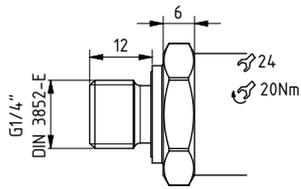
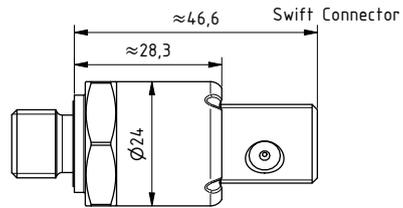
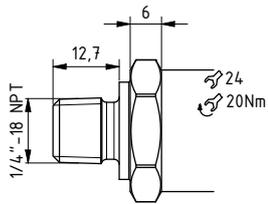
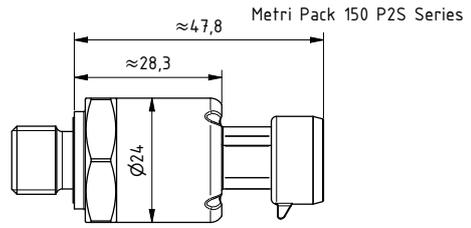
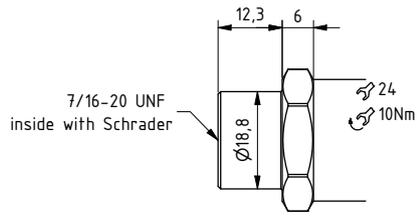
Metri Pack Series 150

2 wire



3 wire





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