

E920 Pressure transmitter with flush diaphragm

Pressure and vacuum measurements, absolute or gauge

Ceramic, TRANSBAR® sensing element

Zero adjustment ($\pm 10\%$ of range)

Welded construction – reinforced product

Modularity of electrical and hydraulic connections

Stainless steel flush diaphragm

Conforms to CE

Highly resistant to severe process conditions

Many approval (Bureau Veritas, DNV...)

An all stainless steel construction with flush diaphragm connection makes these transmitters ideally suited for measurements on viscous and heavy fluids such as paint, pulp and paper, and most uses in the refrigeration field.

Hydraulic connections: G 1/2, G 3/4, G 1, 1/2 NPT.



Technical Data (20 °C)

Measurement range	0 ... 1.6 bar to 0 ... 600 bar compound pressure, gauge or absolute pressure (according to the pressure connection)	Operating temperature	
Output signal	E922 : 0 ... 10 Vdc / E924 : 1 ... 5 Vdc E923 : 4 ... 20 mA / E926 : 0 ... 20 mA	Ambiant (Ta)	Standard : - 15 ... + 85 °C Option : Low T° : - 40 ... + 85 °C / High T° : - 25 ... + 100 °C - 25 ... + 100 °C (Ta ≤ 50 °C) High T° - 25 ... + 150 °C (Ta ≤ 50 °C) Option
Supply voltage	E922 : 14 ... 40 Vdc E923 - E924 : 11 ... 40 Vdc E926 : 8 ... 40 Vdc Option : High voltage : up to 48 Vdc Low voltage : 8 ... 32 Vdc (E923, E924)	Fluid	Option
Insulation	> 100 MΩ at 250 Vdc. Option : 500 Vdc	Zero thermal drift	± 0.025 % EM/°C max. Option : ± 0.015 %FS/°C max
Maximum input current	E922 / E924 : 6 mA E926 : < 25 mA	Span thermal drift	Typ. : ± 0.01 %/°C - Max : ± 0.015 %/°C
Load impedance (+ M /-M)	E922 : ≥ 2,5 kΩ E924 : ≥ 1 kΩ E923 : $R_{\Omega} \leq (U_{supply} - 11) / 0.02$ E923 : $R_{\Omega} \leq (U_{supply} - 8) / 0.02$ (low voltage option) E926 : $R_{\Omega} \leq (U_{supply} - 6) / 0.02$	Wetted parts	St. steel flush diaphragm 1.4404 (316 L) + 1 or 2 NBR o'rings
CE -conformity	EMC Directive 89/336 CE (EN50082-1 and -2, EN50081-1 and -2) with screened cable, screen connected at both ends PED Directive 97/23/CE.	Connection	Electrical : connecteur DIN 43650 (standard) Pressure : G1/2 (flush diaphragm), 1 or 2 o'rings Filling oil : LRS 1, - 15 ... + 150 °C (standard) LRS 5, - 40 ... + 150 °C LRS 7, - 20 ... + 80 °C (paint application) Many options available
Global error (linearity, hysteresis and repeatability) by reference to BFSL	Typ. : ± 0.2 % of F.S. / Max. : ± 0.3 % of F.S. For P = 600 bar : Typ. : ± 0.6 % of F.S. / Max. : ± 1 % of F.S.	Protection rating	IP65 (connecteur DIN) Option : IP67 or IP68 (depending on connection)
Storage temperature	- 40 ... + 85 °C	Typical response time	≤ 3 ms
Compensated temperature range (zero and sensitivity)	- 10 ... + 55 °C. Option : - 10 ... + 70 °C	Vibration resistance	1,5 mm (10 - 55 Hz), 20 g (55 Hz - 2 kHz)
		Shock resistance	25 falls from 1 m on concrete ground
		Weight	From 0.300 to 0.900 kg. Depending on versions

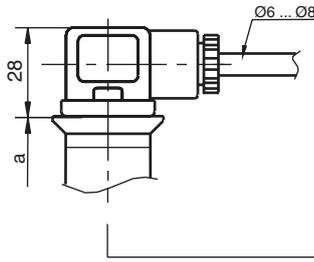
**BOURDON
HAENNI**

made to measure

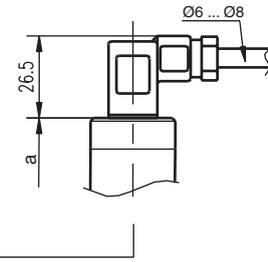
Configuration and dimensions (mm) of the transmitter

Electrical connections

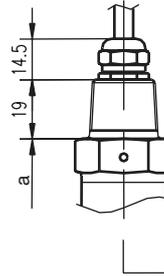
DIN 43650 connector (standard)



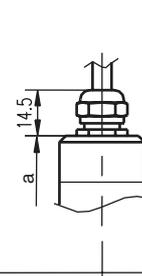
DIN 43650C micro plug



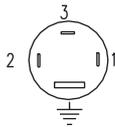
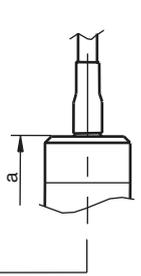
Pig tail cable outlet with 1/2 NPT male (1.5 m)



Pig tail + PG7 cable gland (1.5 m)



pig tail (1.5 m)

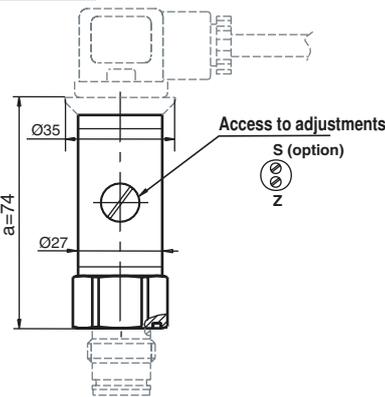


	E923	E922/4/6
1	+A	+M
2	-A	-A / -M
3		+A
	Ground	

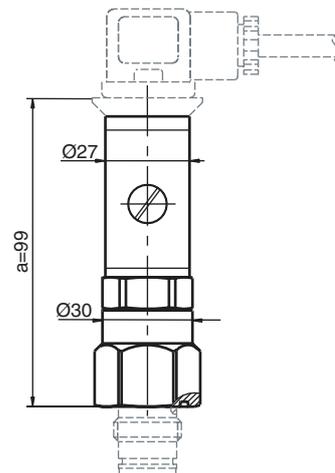
	E923	E922/4/6
White	+A	
Blue	-A	-A / -M
Red		+A
Yellow		+M
Ground	Ground	

Transmitter body

Type A:
G1/2 (standard),
4 ≤ P ≤ 100 bar

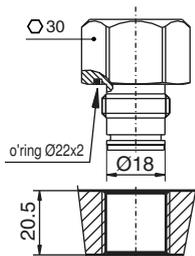


Type B:
G1/2, P > 100 bar
G3/4, P ≥ 2.5 bar
G1, P ≥ 1.6 bar
1/2 NPT, P ≥ 4 bar



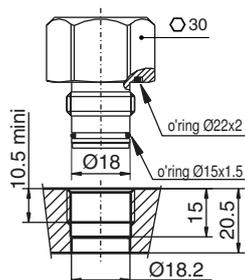
Hydraulic connections

G1/2, 1 o-ring



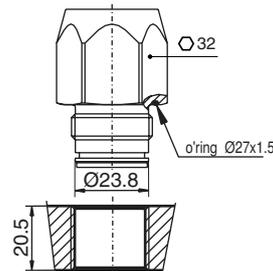
Code: **G**

G1/2, 2 o-rings



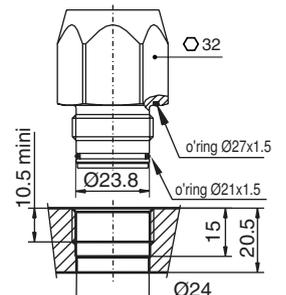
Code: **L**

G3/4, 1 o-ring



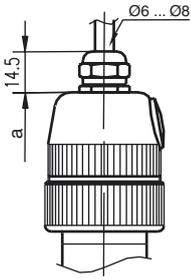
Code: **K**

G3/4, 2 o-rings

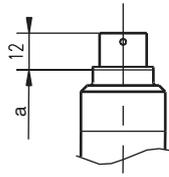


Code: **M**

**Terminal strip outlet +
screwed cap**

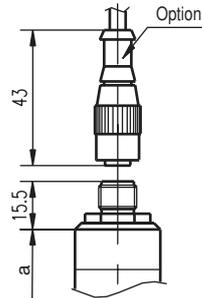


6 contacts HE302 plug



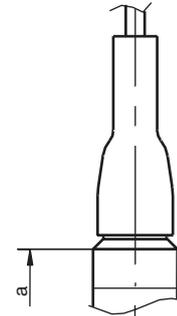
	E923	E922/4/6
A	+A	+A
B		-A / -M
C	-A	+M
D		
E	Ground	
F		

M12 4 contacts plug



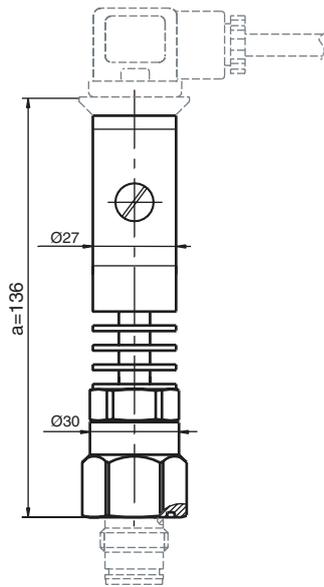
	E923	E922/4/6
1	+A	+A
2		+M
3	Ground	
4	-A	-A / -M

Submersible cable (IP68)



	E923	E922/4/6
White	+A	+M
Blue	-A	-A / -M
Red		+A
Ground		⏏

Type C :
high temperature
option
 $T^{\circ} \leq 150^{\circ}C$

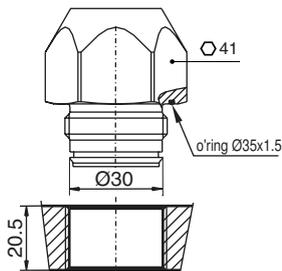


**Body transmitter dimension according to
the electrical connection (a in mm)**

	a (mm)	Type A	Type B	Type C
DIN 43650 connector		74	99	136
Micro DIN 43650C connector		74	99	136
Pig tail		78.5	103.5	140.5
Pig tail + PG7 cable gland		78.5	103.5	140.5
Pig tail cable outlet with 1/2 NPT		78	103	140
Terminal strip outlet + screwed cap		113	138	175
6 contacts HE302 plug		83.5	108.5	145.5
M12, 4 contacts plug		77	102	139
Submersible cable, IP68 ⁽¹⁾		81.5	106.5	143.5

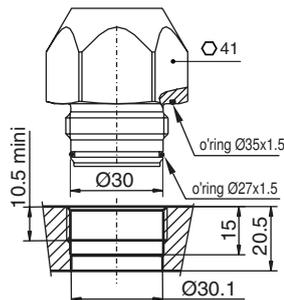
⁽¹⁾ no access to adjustments

G1, 1 o'ring



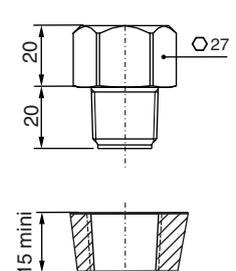
F

G1, 2 o'ring



N

1/2 NPT



5

Options

Degreased. **Code 0764**

Lightning protection. **Code 0809**

Marine version. **Code 0808**

Supply voltage (high⁽¹⁾ - **Code 2180**) (low⁽¹⁾ - **Code 2181**)

Ambient temperature (high⁽¹⁾ - **Code 2221**) (low⁽¹⁾ - **Code 2220**)

Compensated temperature range (- 10 ... + 70 °C). **Code 2158**

Zero thermal drift : ± 0.015 % of range/°C max. **Code 2159**

Span adjustment ± 10 % of range. **Code 2151**

⁽¹⁾ see specifications for details

Span adjustment ± 50 % of range (except for 0 +1.6 and 0 + 600 bar). **Code 2152**

Calibration of sensor with certificate : Q1060

Other hydraulic connections

Additional length of cable

Filling oil : LRS5, LRS7

Stainless steel surface mounting brackets. **Code 0409**

Other units : kPa (code D), MPa (code E), kg/cm² (code F),

psi (code H), mbar (code N)

Measuring Ranges

Pressure range	compound	-1+0.6 ⁽¹⁾	-1+1.5 ⁽²⁾	-1+3	-1+5	-1+9	-1+15	-1+24	-1+39	—	—	—	—	—	—
	pressure	1.6 ⁽¹⁾	2.5 ⁽²⁾	4	6	10	16	25	40	60	100	160	250	400	600
Measurement range		1.75	2.75	4.4	6.6	11	17.6	27.5	44	66	110	176	275	440	660
Max. over pressure		3	4	8	12	20	32	50	80	120	200	320	500	600	800
Burst pressure		6	7	12	18	30	48	75	120	180	300	480	600	800	1000

⁽¹⁾ G 1 connection only

⁽²⁾ G 3/4 and G 1 connections only

Ordering

		E92xxxxxxx				
Model	1'...3' digit					
Standard		E92				
Output signal	4' digit					
0 ... 10 Vdc		2				
4 ... 20 mA		3				
1 ... 5 Vdc		4				
0 ... 20 mA		6				
Hydraulic connection	5'...6' digit					
G 1/2 flush diaphragm 1 o'ring NBR		3G				
G 1/2 flush diaphragm 2 o'rings NBR		3L				
G 3/4 flush diaphragm 1 o'ring NBR		3K				
G 3/4 flush diaphragm 2 o'rings NBR		3M				
G 1 flush diaphragm 1 o'ring NBR		3F				
G 1 flush diaphragm 2 o'rings NBR		3N				
G 1/2 flush diaphragm 1 o'ring CR		4G				
G 1/2 flush diaphragm 2 o'rings CR		4L				
G 3/4 flush diaphragm 1 o'ring CR		4K				
G 3/4 flush diaphragm 2 o'rings CR		4M				
G 1 flush diaphragm 1 o'ring CR		4F				
G 1 flush diaphragm 2 o'rings CR		4N				
G 1/2 flush diaphragm 1 o'ring EPDM ⁽³⁾		5G				
G 1/2 flush diaphragm 2 o'rings EPDM ⁽³⁾		5L				
G 3/4 flush diaphragm 1 o'ring EPDM ⁽³⁾		5K				
G 3/4 flush diaphragm 2 o'rings EPDM ⁽³⁾		5M				
G 1 flush diaphragm 1 o'ring EPDM ⁽³⁾		5F				
G 1 flush diaphragm 2 o'rings EPDM ⁽³⁾		5N				
G 1/2 flush diaphragm 1 o'ring FKM (Viton®)		9G				
G 1/2 flush diaphragm 2 o'rings FKM (Viton®)		9L				
G 3/4 flush diaphragm 1 o'ring FKM (Viton®)		9K				
G 3/4 flush diaphragm 2 o'rings FKM (Viton®)		9M				
G 1 flush diaphragm 1 o'ring FKM (Viton®)		9F				
G 1 flush diaphragm 2 o'rings FKM (Viton®)		9N				
1/2 NPT flush diaphragm (without o'ring)		E5				
Pressure range	7'...9' digit					
See codes in tables		xxx				
Pressure type	10' digit					
Absolute		A				
Gauge		R				

code	Range in bar			
	Vacuum pressure, Pressure			
B72	-1	+	0.6 ⁽¹⁾	— R
B74	-1	+	1.5 ⁽²⁾	— R
B76	-1	+	3	— R
B77	-1	+	5	— R
B79	-1	+	9	— R
B81	-1	+	15	— R
B82	-1	+	24	— R
B1L	-1	+	39	— R
B16	0	+	1.6 ⁽¹⁾	A R
B18	0	+	2.5 ⁽²⁾	A R
B19	0	+	4	A R
B20	0	+	6	A R
B22	0	+	10	A R
B24	0	+	16	A R
B26	0	+	25	A R
B27	0	+	40	A R
B29	0	+	60	A R
B31	0	+	100	A R
B33	0	+	160	A R
B35	0	+	250	A R
B38	0	+	400	A R
B39	0	+	600	A R

⁽¹⁾ G 1 connection only

⁽²⁾ G3/4 and G 1 connections only

⁽³⁾ for low temperature applications (- 40 °C)

Some products in the E913 range are on one day delivery (ex-works) : *please contact*