E930 Transmitter for sanitary use

Stainless steel 1.4404 (316L) flush diaphragm
Measurement of vacuum, absolute or gauge pressure
TRANSBAR® ceramic technology
Zero adjustment as standard (± 10 % of range)
Welded construction – reinforced product
Various types of pressure ports : CLAMP, SMS, DIN , or homogeneizer (0 ... 60 bar to 0 ... 400 bar)
Modularity of electrical and hydraulic connections
Conforms to CE
Highly resistant to severe process conditions
3A approval (option)

The hygiene flush diaphragm transmitters of the **E930** series are ideally suited to fulfill the pressure measurement requirements of the food, dairy and pharmaceutical industries among others.
The cleanliness requirements of the food processing industry have dictated the "hygienic" design of these transmitters. They can also withstand without damage the various cleaning phases specific to these industries : sterilizing cycles, autoclaving and steam flushing.

Technical Data (20 °C)

Measurement range 0 ... 0.25 bar to 0 ... 40 bar Compound, gauge or absolute pressure
0 ... 60 bar to 0 ... 400 bar homogeneization version

Output signal **E932 :** 0 ... 10 Vdc / **E934 :** 1 ... 5 Vdc
E933 : 4 ... 20 mA / **E936 :** 0 ... 20 mA

Supply voltage **E932 :** 14 ... 40 Vdc
E933 - E934 : 11 ... 40 Vdc
E936 : 8 ... 40 Vdc
Option *High voltage : up to 48 Vdc*
Low voltage : 8 ... 32 Vdc (E933, E934)

Insulation > 100 MΩ at 250 Vdc. *Option 500 Vdc*

Maximum input current **E932 / E934 :** 6 mA
E936 : < 25 mA

Load impedance (+ M / - M) **E932 :** ≥ 2,5 kΩ
E934 : ≥ 1 kΩ
E933: $R_{\Omega} \leq (U_{supply}-11)/0.02$
E933: $R_{\Omega} \leq (U_{supply}-8)/0.02$ (low voltage option)
E936: $R_{\Omega} \leq (U_{supply}-6)/0.02$

CE -conformity Directive 89/336 CE (EN50082-1 and -2, EN50081-1 and -2) with screened cable, screen connected at both ends
Directive 97/23/CE : 3.3 for PS < 200 bar and cat 1 for PS ≥ 200 bar.

Protection rating (EN 60529) IP65 (DIN connector)
Option : IP67 or IP68 (depending on connection)

Global error (linearity, hysteresis and repeatability) by reference to BFSL
Typ. : ± 0.2 % F.S. / Max. : ± 0.3 % F.S.

Compensated temperature range (zero and sensitivity)
- 10 ... + 55 °C. *Option : - 10 ... + 70 °C*

Operating temperature
Ambient (Ta) Standard - 15 ... + 85 °C
Option *T° - 25 ... + 100 °C (only for DIN 43650 connector)*
Fluid - 15 ... + 100 °C (Ta ≤ 50 °C)
Option *High T° - 15 ... + 150 °C (Ta ≤ 50 °C)*
Sterilizing 140 °C max for 30 minutes
Storage - 40 ... + 85 °C

Zero thermal drift ± 0.025 % FS/°C max. *Option : ± 0.015 % FS/°C max*
± 0.04 % FS/°C max. pour P < 1 bar

Span thermal drift Typ. : ± 0.01 %/°C - Max : ± 0.015 %/°C

Wetted parts Stainless steel 1.4404 (316L)

Connections **Electrical :** DIN 43650 connector (standard)
Pressure : Clamp, DIN, SMS, welded conical threaded nipple. Filling oil (FDA approved) : LRS1, - 15 ... + 150 °C (standard)
Many options available

Typical response time ≤ 3 ms

Vibration resistance (EN 60068-2-6) 1,5 mm (10 - 55 Hz), 20 g (55 Hz - 2 kHz)

Shock resistance (EN 60028-2-32) 25 falls from 1 m on concrete ground

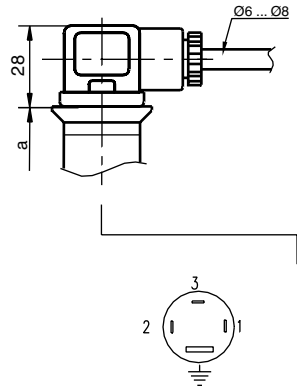
Weight From 0.300 à 1.5 kg depending on versions

Baumer

Configuration and dimensions (mm) of the transmitter

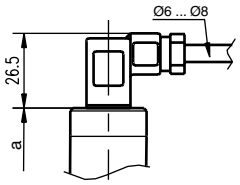
Electrical connections

DIN 43650 connector (standard)

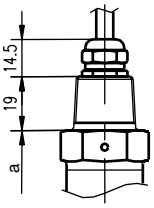


	E933	E932 / 4 / 6
1	+A	+M
2	-A	-A / -M
3		+A
⏚	Ground	

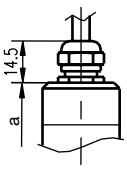
Option 08
DIN 43650C micro plug



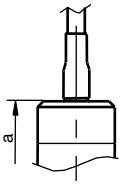
Option 54
Pig tail cable outlet with 1/2 NPT male (1.5 m)



Option 23
Pig tail + PG7 cable gland (1.5 m)



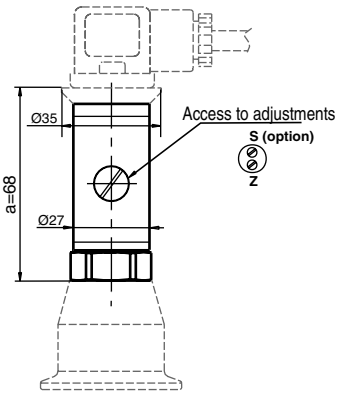
Option 22
pig tail (1.5 m)



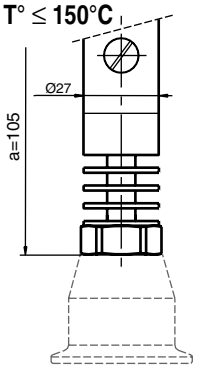
	E933	E932 / 4 / 6
White	+A	
Blue	-A	-A / -M
Red		+A
Yellow		+M
Ground	⏚	

Transmitter body

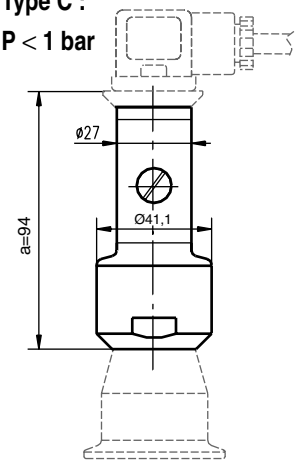
Type A :
G1/2 standard
P ≥ 1 bar



Type B :
high temperature option
T° ≤ 150°C

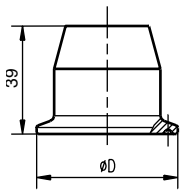


Type C :
P < 1 bar



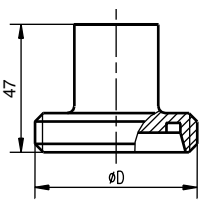
Hydraulic connections

CLAMP ISO 2852



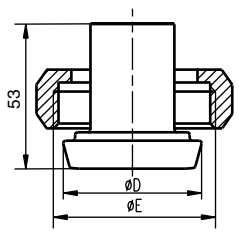
DN	øD	Bar
DN25	ø50.5	2.5 ≤ P ≤ 25
DN38	ø50.5	0.4 ≤ P ≤ 25
DN51	ø64	0.25 ≤ P ≤ 25

DIN 11851FF



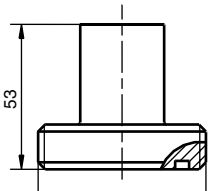
DN	øD	Bar
DN32	58x1/6"	0.6 ≤ P ≤ 40
DN40	65x1/6"	0.4 ≤ P ≤ 40
DN50	78x1/6"	0.25 ≤ P ≤ 40

DIN 11851FL



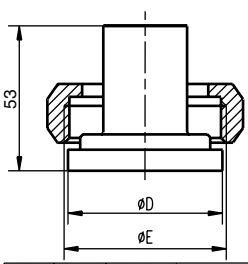
DN	øD	øE	Bar
DN32	ø50	58x1/6"	0.6 ≤ P ≤ 40
DN40	ø56	65x1/6"	0.4 ≤ P ≤ 40
DN50	ø68	78x1/6"	0.25 ≤ P ≤ 40

SMS 1145FF



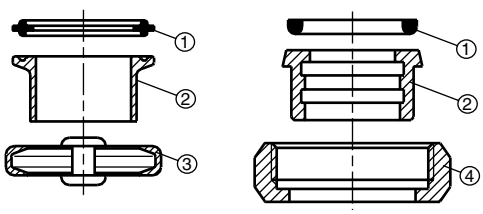
DN	øD	Bar
DN38	60x1/6"	0.4 ≤ P ≤ 40
DN51	70x1/6"	0.25 ≤ P ≤ 40

SMS 1145FL

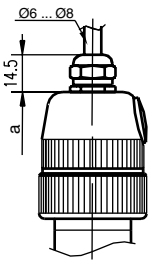


DN	øD	øE	Bar
DN38	ø55.2	60x1/6"	0.4 ≤ P ≤ 40
DN51	ø65.2	70x1/6"	0.25 ≤ P ≤ 40

Connection accessories

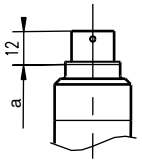


Option 20
Terminal strip outlet + screwed cap



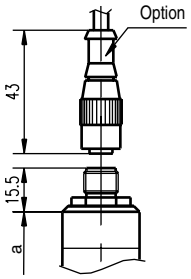
	E933	E932 / 4 / 6
1	+A	+M
2	-A	-A/-M
3		+A
⏚	Masse	

Option 09
6 contacts HE302 plug



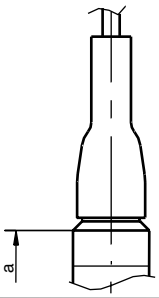
	E933	E932 / 4 / 6
A	+A	+A
B		-A/-M
C	-A	+M
D		
E	Masse	
F		

Option 24
M12 4 contacts plug



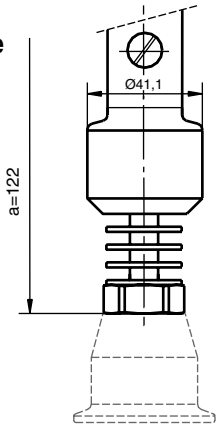
	E933	E932 / 4 / 6
1	+A	+A
2		+M
3	Masse	
4	-A	-A / -M

Option 27
Submersible cable (IP68)



	E933	E932 / 4 / 6
Blanc	+A	+M
Bleu	-A	-A / -M
Rouge		+A
Tresse	⏚	

Type D :
P < 1 bar
High temperature option
T° ≤ 150°C

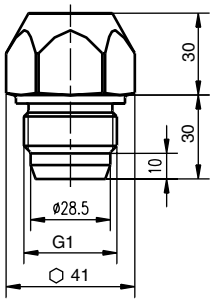


Body transmitter dimension according to the electrical connection (a in mm)

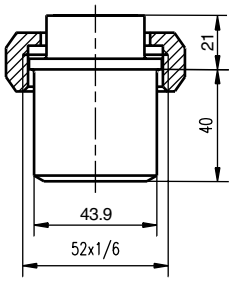
a (mm)	Type A	Type B	Type C	Type D
DIN 43650 connector	68	105	94	122
Micro DIN 43650C connector	68	105	94	122
Pig tail	72.5	109.5	98.5	126.5
Pig tail + PG7 cable gland	72.5	109.5	98.5	126.5
Pig tail cable outlet with 1/2 NPT	72	109	98	126
Terminal strip outlet + screwed cap	107	144	133	161
6 contacts HE302 plug	77.5	114.5	103.5	131.5
M12, 4 contacts plug	71	108	97	125
Submersible cable, IP68[1]	75.5	112.5	101.5	129.5

[1] no access to adjustments

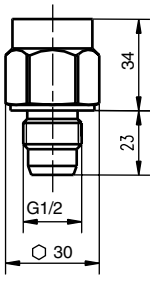
DR0
2.5 ≤ P ≤ 40 bar



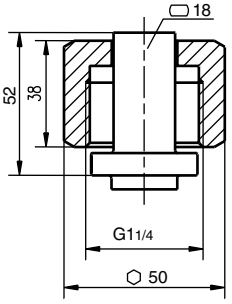
DR2
0.6 ≤ P ≤ 40 bar



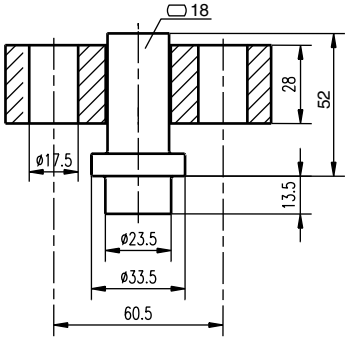
DR8
7 ≤ P ≤ 400 bar

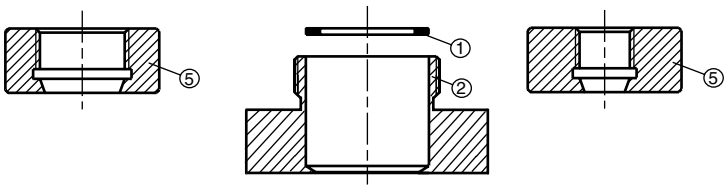


Homogeneizer 622
60 ≤ P ≤ 600 bar



Homogeneizer 623
60 ≤ P ≤ 600 bar





① **Seal (EPDM)**
② **Endpiece**
③ **Collar**
④ **Nut**
⑤ **Welded nipple**

Connection accessories are uncoded options (have to be listed after the code number)

Options

Lightning protection. ***Code 0809***
Supply voltage (high[1] - ***Code 2180***) (low[1] - ***Code 2181***)
Ambient temperature (high[1] - ***Code 2221***) (low[1] - ***Code 2220***)
High temperature (up to 150°C). ***Code 0410***
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***
Span adjustment ± 50 % of range (except for P ≤ 1 bar). ***Code 2152***
Calibration of sensor with certificate : Q1060
Stainless steel surface mounting brackets. ***Code 0409***
Other hydraulic connections (Micro-CLAMP DN 17.2...)
Additional length of cable
Other units : kPa (code D), MPa (code E), kg/cm² (code F), psi (code H), mbar (code N)
3A approval

Other electrical connections:
DIN 43650C micro plug (IP65 [2]). ***Code 2165***
Pig tail (1.5 m) (IP65). ***Code 2160***
Pig tail (1.5 m) + PG7 cable gland (IP65, IP67 [3]). ***Code 2161***
Pig tail cable outlet with 1/2 NPT male (1.5 m) (IP65). ***Code 2162***
Terminal strip outlet + screwed cap (IP65, IP67). ***Code 2166***
Terminal strip outlet + cap with M20x150 thread and gland (IP65, IP67). ***Code 2167***
6 contacts HE302 plug (IP65). ***Code 2163***
M12, 4 contacts plug (IP65). ***Code 2164***
Submersible cable (IP68 version [4]). ***Code 2168***

[1] see specifications for details / [2] IP65 : water spray / [3] IP67 : temporary immersion / [4] IP68 : prolonged immersion

Measuring Ranges (bar)

Pressure range	compound	—	—	—	-1+0	-1+0.6	-1+1.5	-1+3	-1+5	-1+9	-1+15	-1+24	-1+39	—	—	—	—	—	—
	pressure	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600
Measurement range		0.275	0.44	0.66	1.1	1.75	2.75	4.4	6.6	11	17.6	27.5	44	66	110	176	275	440	660
Max. over pressure		1	1	1	3	3	4	8	12	20	32	50	80	120	200	320	500	600	800
Burst pressure		2	2	2	6	6	7	12	18	30	48	75	120	180	300	480	600	800	1000

Ordering - E930

E93xxxxxxx

Model	**1´...3´ digit**
Standard	E93
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**
CLAMP ISO DN 25	15
CLAMP ISO DN 38	18
CLAMP ISO DN 51	11
SMS FF DN 38	28
SMS FF DN 51	21
SMS FL DN 38 + nut	38
SMS FL DN 51 + nut	31
DIN FF DN 32	42
DIN FF DN 40	44
DIN FF DN 50	45
DIN FL DN 32 + nut	52
DIN FL DN 40 + nut	54
DIN FL DN 50 + nut	55
DR0 (G1 with conical threading)	R0
DR2 + nut	R2
DR8 (G1/2 with conical threading)	R8
Homogeneization version with nut (high temperature construction)	62
Homogeneization version with flange (high temperature construction)	63
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
B59	-1 + 0
B72	-1 + 0,6
B74	-1 + 1,5
B76	-1 + 3
B77	-1 + 5
B79	-1 + 9
B81	-1 + 15
B82	-1 + 24
B1L	-1 + 39
B10	0 + 0,25
B11	0 + 0,4
B12	0 + 0,6
B15	0 + 1
B16	0 + 1,6
B18	0 + 2,5
B19	0 + 4
B20	0 + 6
B22	0 + 10
B24	0 + 16
B26	0 + 25
B27	0 + 40
B29	0 + 60
B31	0 + 100
B33	0 + 160
B35	0 + 250
B38	0 + 400
B39	0 + 600

See in the central pages the pressure compatibilities charts according to the hydraulic connection