Pressure Transmitter Explosion proof
Model E-10, standard version
Model E-11, flush diaphragm

FM APPROVED C SA US Ex

Applications

- Wellhead monitoring
- Refining / Petrochemical
- Offshore platforms / pipelines
- Gas measurement

Special Features

- FM-approved Explosion proof for Class I Division 1 hazardous locations
- ATEX-approved Flameproof for II 2G Ex d II C
- Available with 4 ... 20 mA, 2-wire or 1 ... 5 V, 3-wire output signals
- Engineered to meet harsh demands
- Retrofits many existing applications

Fig. left **Pressure transmitter E-10 / ATEX**
Fig. center **Pressure transmitter E-10 / FM, CSA**
Fig. right **Pressure transmitter E-11 (open wires) / FM, CSA**

Description

The Types E-10 and E-11 explosion proof / flameproof pressure transmitters are specifically designed to meet the durability and performance requirements of industrial applications.

These pressure transmitters feature an industry standard 4 ... 20 mA, 2-wire signal output (optional signal output 1 ... 5 V), NEMA 4X (IP 67) ingress protection, and are extremely resistant to vibration, moisture instrusion and pressure spikes. They are applicable for acid gas apllications and therefore they provide extra resistance against sulfide stress cracking when exposed to gases containing sulphur.

The transmitters are engineered to meet Class I Division 1 Explosion proof protection according to FM, CSA or II 2 G Ex d II C according to ATEX for installation in hazardous environments.

Each transmitter undergoes extensive quality control testing and calibration to achieve an accuracy of $\leq$ 0.5 %. In addition, each pressure transmitter is temperature compensated to assure accuracy and long term stability when exposed to severe ambient temperature variations.

Data Sheets for related models:
Pressure transmitter for general applications; model S-1X; see data sheet PE 81.01
Intrinsically Safe Pressure Transmitter for hazardous environments; model IS-2X; see data sheet PE 81.50
Pressure Transmitter Non-incendive; model N-1X; see data sheet PE 81.26

Specifications		Model E-10 / E-11								
Pressure ranges	bar	0.4	0.6	1	1.6	2.5	4	6	10	16
Over pressure safety	bar	2	4	5	10	10	17	35	35	80
Burst pressure	bar	2.4	4.8	6	12	12	20.5	42	42	96
Pressure ranges	bar	25	40	60	100	160	250	400	600	1000 [1]
Over pressure safety	bar	50	80	120	200	320	500	800	1200	1500
Burst pressure	bar	96	400	550	800	1000	1200	1700 [2]	2400 [2]	3000
	{Vacuum, gauge pressure, compound range, absolute pressure are available}									
	[1] Only model E-10.									
	[2] For model E-11: the value specified in the table applies only when sealing is realised with the sealing ring underneath the hex. Otherwise max. 1500 bar applies.									
Materials		(other materials see WIKA diaphragm seal program)								
■ Wetted parts										
» Model E-10		Stainless steel				(> 25 bar Stainless steel and Elgiloy®)				
» Model E-11		Stainless steel				O-ring: NBR {FPM/FKM}				
■ Case		Stainless steel								
■ Internal transmission fluid		Synthetic oil (not for model E-10 with pressure ranges > 25 bar)								
Power supply UB	UB in VDC	10 < UB ≤ 30 with signal output 4 ... 20 mA, 2-wire								
		6 < UB ≤ 30 with signal output 1 ... 5 V, 3-wire								
Signal output and maximum ohmic load R_A	R_A in Ohm	4 ... 20 mA, 2-wire				$R_A \leq (UB - 10\ V) / 0.02\ A$				
		1 ... 5 V, 3-wire				$R_A > 10\ k$				
Response time (10 ... 90 %)	ms	≤ 1 (≤ 10 ms at medium temperatures below -30 °C for pressure ranges up to 25 bar or with flush diaphragm)								
Insulation voltage	VDC	500								
Accuracy	% of span	≤ 0.25				(BFSL)				
	% of span	≤ 0.5 [3]								
	[3] Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2)									
	Adjusted in vertical mounting position with lower pressure connection									
Non-linearity	% of span	≤ 0.2				(BFSL) according to IEC 61298-2				
Non-repeatability	% of span	≤ 0.1								
1-year stability	% of span	≤ 0.2				(at reference conditions)				
Permissible temperature of										
■ Medium [4]	°C	-30 ... +100 °C {-40 ... +105 °C}					-22 ... +212 °F {-40 ... +221 °F}			
■ Ambience [4]	°C	-30 ... +100 °C {-40 ... +105 °C}					-22 ... +212 °F {-40 ... +221 °F}			
■ Storage [4]	°C	-30 ... +105 °C {-40 ... +105 °C}					-22 ... +221 °F {-40 ... +221 °F}			
	[4] Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3									
Compensated temp. range	°C	0 ... +80 °C					+32 ... +176 °F			
Temperature coefficients within compensated temp range										
■ Mean TC of zero	% of span	≤ 0.2 / 10 K								
■ Mean TC of range	% of span	≤ 0.2 / 10 K								
CE-conformitiy										
■ Pressure equipment directive		97/23/EC								
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61 326								
■ Directive ATEX of equipment intended for use in potentially explosive atmospheres		94/9/EC								
Ex-protection	ATEX	Category [5] 2G								
Ignition protection type		Ex d II C T4, Ex d II C T5, Ex d II C T6								
	[5] **Read the operating instructions and** safety relevant data in the **EC-type examination certificate in any case** (KEMA 05 ATEX 2240 X)									
HF-immunity	V/m	10								
BURST	KV	4								
Shock resistance	g	1000 according to IEC 60068-2-27				(mechanical shock)				
Vibration resistance	g	20 according to IEC 60068-2-6				(vibration under resonance)				

Specifications		Model E-10 / E-11
Wiring protection		
■ Short-circuit proofness		Sig+ towards UB-
■ Reverse polarity protection		UB+ towards UB-
Weight	kg	Approx. 0.2 (0.4 lbs)

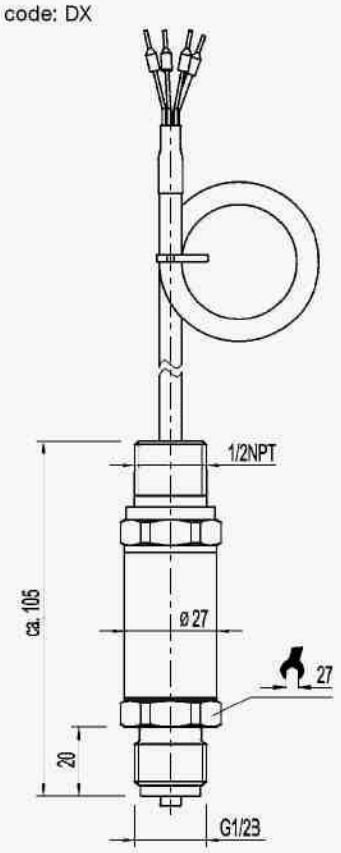
{ } Items in curved brackets are optional extras for additional price.

Dimensions in mm

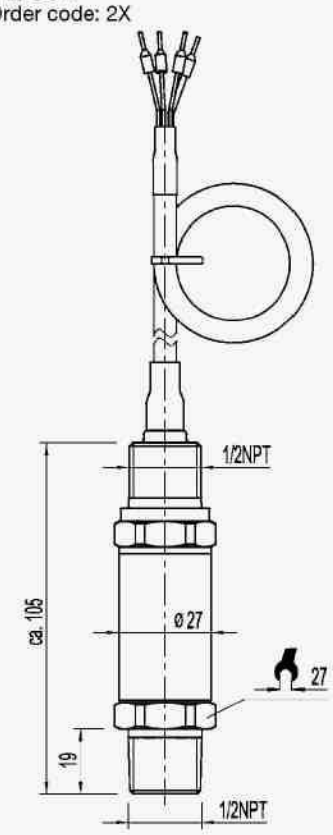
Ingress Protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

Electrical connections

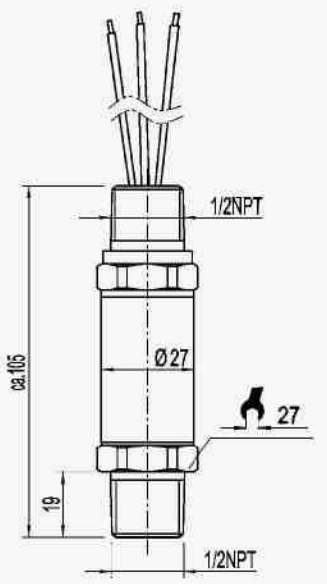
1/2 NPT
conduit with 2 m (6 ft) flying leads
IP 67 (NEMA 4X)
ATEX
Order code: DX



1/2 NPT
male conduit with 2 m (6 ft) flying leads
IP 67 (NEMA 4X)
FM, CSA
Order code: 2X

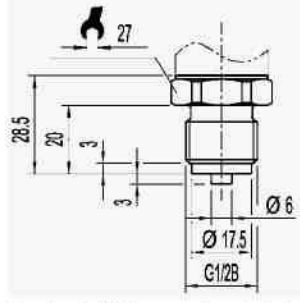


1/2 NPT
male conduit with 2 m (6 ft) open wires
IP 67 (NEMA 4X)
FM, CSA
Order code: 3X

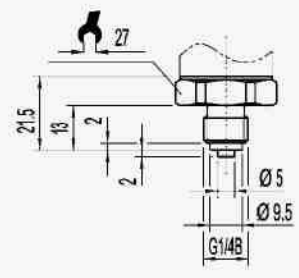


Pressure connections E-10

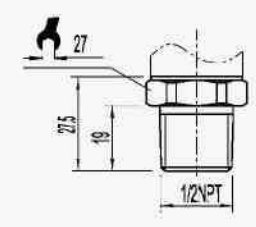
G 1/2
EN 837
Order code: GD



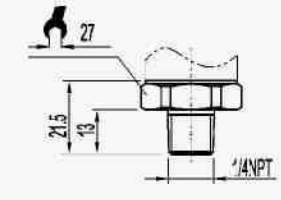
G 1/4
EN 837
Order code: GB



1/ 2 NPT
per „Nominal size for US standard tapered pipe thread NPT“
Order code: ND



1/4 NPT
per „Nominal size for US standard tapered pipe thread NPT“
Order code: NB

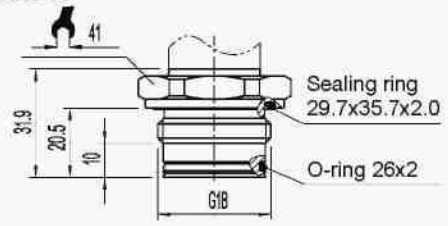


Others on request

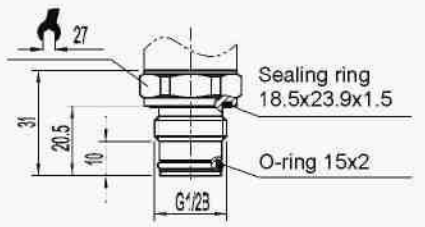
For installation and safety instructions see the operating instructions for this product.
For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de -Service

Pressure connections E-11, flush diaphragm

G 1B with sealing ring
0 ... 0.1 up to 0 ... 1.6 bar
Order code: 85



G 1/2 B with sealing ring
0 ... 2.5 up to 0 ... 600 bar
Order code: 86



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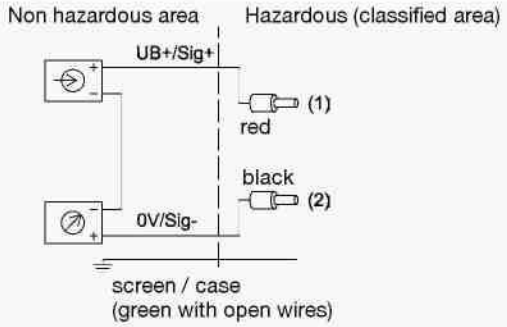
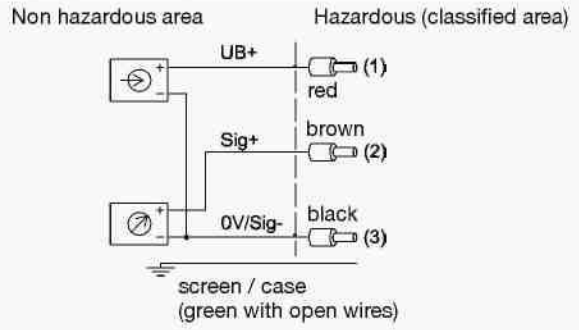
Wiring details

Flying leads / open wires 2-wire



Flying leads / open wires 3-wire



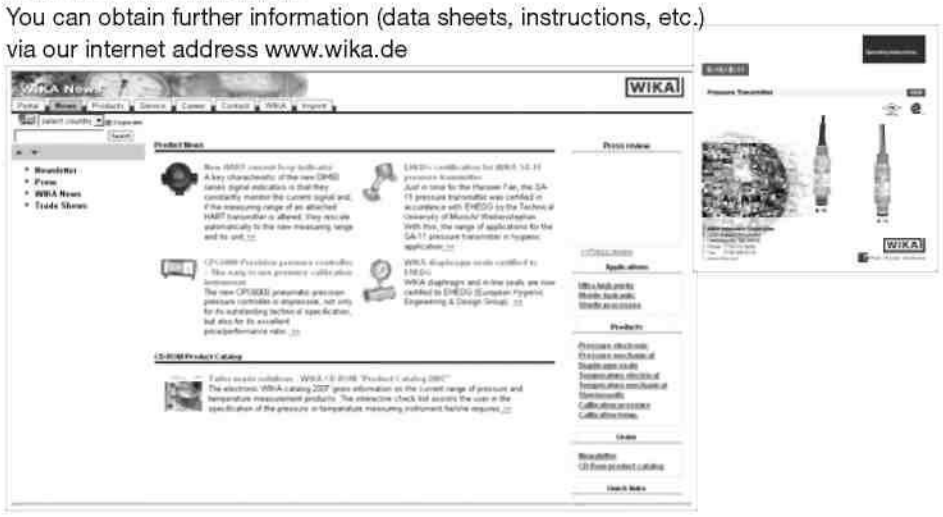
Legend:

power supply

load (e.g. display)

Further information

You can obtain further information (data sheets, instructions, etc.)
via our internet address www.wika.de



Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.

9066438 02/2008 GB