Pressure Transmitter Non-incendive
Model N-10, standard version
Model N-11, flush diaphragm

FM APPROVED

Applications

- Gas compressors
- CO_2 and water injection pressure
- Casing tubing pressure
- Flow computers

Special Features

- FM-approved Non-incendive for Class I Division 2 hazardous locations
- Engineered to meet harsh demands
- NACE MR-01-75 compliant
- Retrofits existing compressor applications
- Low power voltage signal outputs available

Fig. left Pressure transmitter N-10
Fig. right Pressure transmitter N-11

Description

Type N-1X pressure transmitters are specifically designed to meet the durability and performance requirements of gas compressor systems.

These pressure transmitters feature an industry standard 4 ... 20 mA 2 wire signal output (optional low power output 0.5 ... 4.5 V / 1 ... 5 V), NEMA 4 X (IP 67) ingress protection, and are extremely resistant to pressure spikes, vibration and moisture intrusion.

NACE MR-01-75 compliance provides extra resistance against sulfide stress cracking when exposed to gases containing sulphur.

Type N-11 pressure transmitters feature a flat, non clogging diaphragm for applications using media incompatible with the standard NPT version.

The transmitters are engineered to meet Class I Division 2 Non-incendive protection in hazardous environments.

Each undergoes extensive quality control testing and calibration to achieve an accuracy of $\leq$ 0.5 %.

In addition, each pressure transmitter ist temperature compensated to assure accuracy and long term stability when exposed to sever ambient temperature varations.

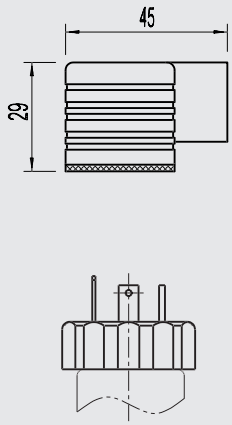
Pressure transmitter for general applications	*Model S-1X*	*see data sheet PE 81.01*
Pressure transmitter Intrinsic safe	*Model IS-1X*	*see data sheet PE 81.22*
Pressure transmitter Explosion proof	*Model E-1X*	*see data sheet PE 81.27*

Specifications		Model N-10 / N-11										
Pressure ranges	bar	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5	4	6	10
Over pressure safety	bar	1	1,5	2	2	4	5	10	10	17	35	35
Burst pressure	bar	2	2	2,4	2,4	4,8	6	12	12	20,5	42	42
Pressure ranges	bar	16	25	40	60	100	160	250	400	600	1000 [1]	
Over pressure safety	bar	80	50	80	120	200	320	500	800	1200	1500	
Burst pressure	bar	96	96	400	550	800	1000	1200	1700 [2]	2400 [2]	3000	
		{Vacuum, gauge pressure, compound range, absolute pressure are available}										
Materials												
■ Wetted parts												
➢ Model N-10		Stainless steel (≥ 25 bar stainless steel and Elgiloy)										
➢ Model N-11		Stainless steel {Hastelloy}										
		O-ring: NBR {Viton}										
■ Case		Stainless steel										
Internal transmission fluid		Synthetic oil (only for pressure ranges up to 0 ... 25 bar or flush diaphragm units)										
Power supply U_B	DC V	$10 < U_B < 30$ for 4 ... 20 mA, 2-wire										
		$6 < U_B < 30$ for 1 ... 5 V, 3 wire low power system										
Signal output and		4 ... 20 mA, 2-wire $R_A \leq (U_B - 10\ V) / 0.02\ A$ with R_A in Ohm and U_B in Volt										
maximum load R_A		1 ... 5 V, 3-wire $R_A > 10$ kOhm										
Adjustability zero/span	%	± 10 via potentiometers in the instrument										
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)										
Accuracy [3]	% of span	≤ 0.5 (limit point calibration)										
	% of span	≤ 0.25 (BFSL)										
Hysteresis	% of span	≤ 0.1										
Repeatability	% of span	≤ 0.05										
1-year stability	% of span	≤ 0.2 (at reference conditions)										
Permissible temperature of												
■ Medium		-30 ... +100 °C {-40 ... +105 °C}						-22 ... +212 °F {-40 ... +221 °F}				
■ Ambient		-30 ... +100 °C {-40 ... +105 °C}						-22 ... +212 °F {-40 ... +221 °F}				
■ Storage		-40 ... +105 °C {-50 ... +105 °C}						-40 ... +221 °F {-58 ... +221 °F}				
Compensated temp. range		0 ... +80 °C						32 ... +176 °F				
Temperature coefficients in												
compensated temp range												
■ Mean TC of zero	% of span	≤ 0.2 / 10 K (< 0.4 for pressure range < 250 mbar)										
■ Mean TC of range	% of span	≤ 0.2 / 10 K										
EMI specifications		89/336/EWG interference emission and immunity see EN 61 326										
Approval authority		■ Factury mutual (FM / CSA) non-incendive for:										
		Class 1, Division 2, Groups A, B, C and D										
		■ Dust ignitionproof for:										
		Class 2 and 3, Division 1, Groups E, F and G										
		FM Standards according to class number 3600, 3611 and 3811										
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)										
Wiring protection		Protected against reverse polarity, overvoltage and short circuiting										
Ingress protection		Per IEC 60529 / EN 60529, see page 3										
Weight	kg	Approx. 0.2 (0.4 lb)										

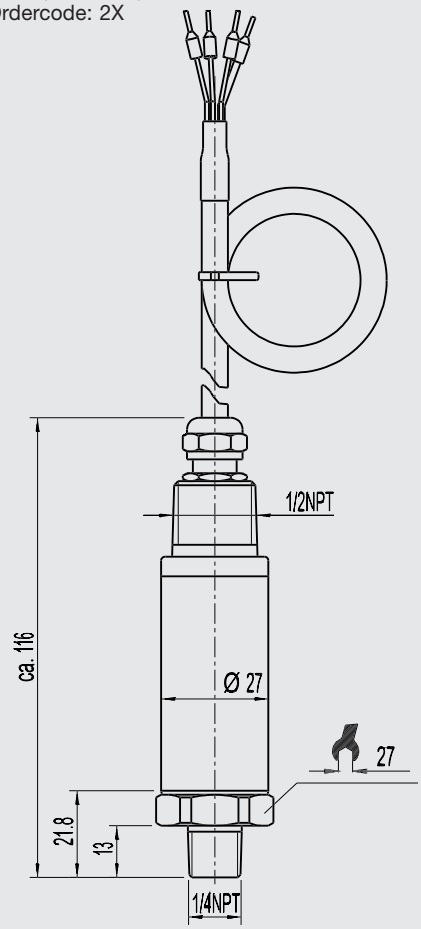
1) Only Model N-10.
2) For model N-11: the value specified in the table applies only when sealing is realised with the sealing ring underneath the hex. Otherwise max. 1500 bar applies.
3) Including linearity, hysteresis and reproducibility. Limit point calibration in vertical mounting position with lower pressure connection.
{ } Items in curved brackets are optional extras for additional price.

Dimensions in mm

L-Connector DIN EN 175301-803, *)
IP 65 (NEMA 5)
Ordercode: AX

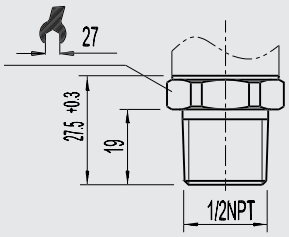


1/2 male conduit with 1,6 m (6 foot) cable
IP 67 (NEMA 4X)
Ordercode: 2X



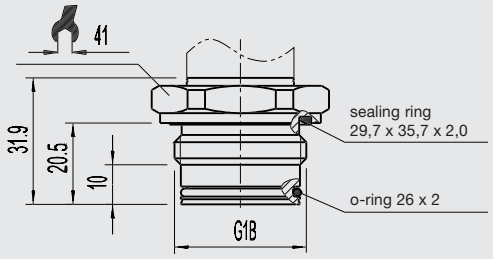
Pressure connection

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

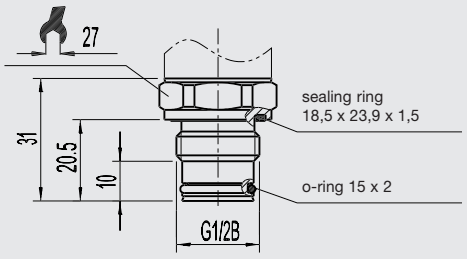


Pressure connections with flush diaphragm

G 1 B with o-ring
(0 ... 0.1 to 0 ... 1.6 bar)
Ordercode: 85



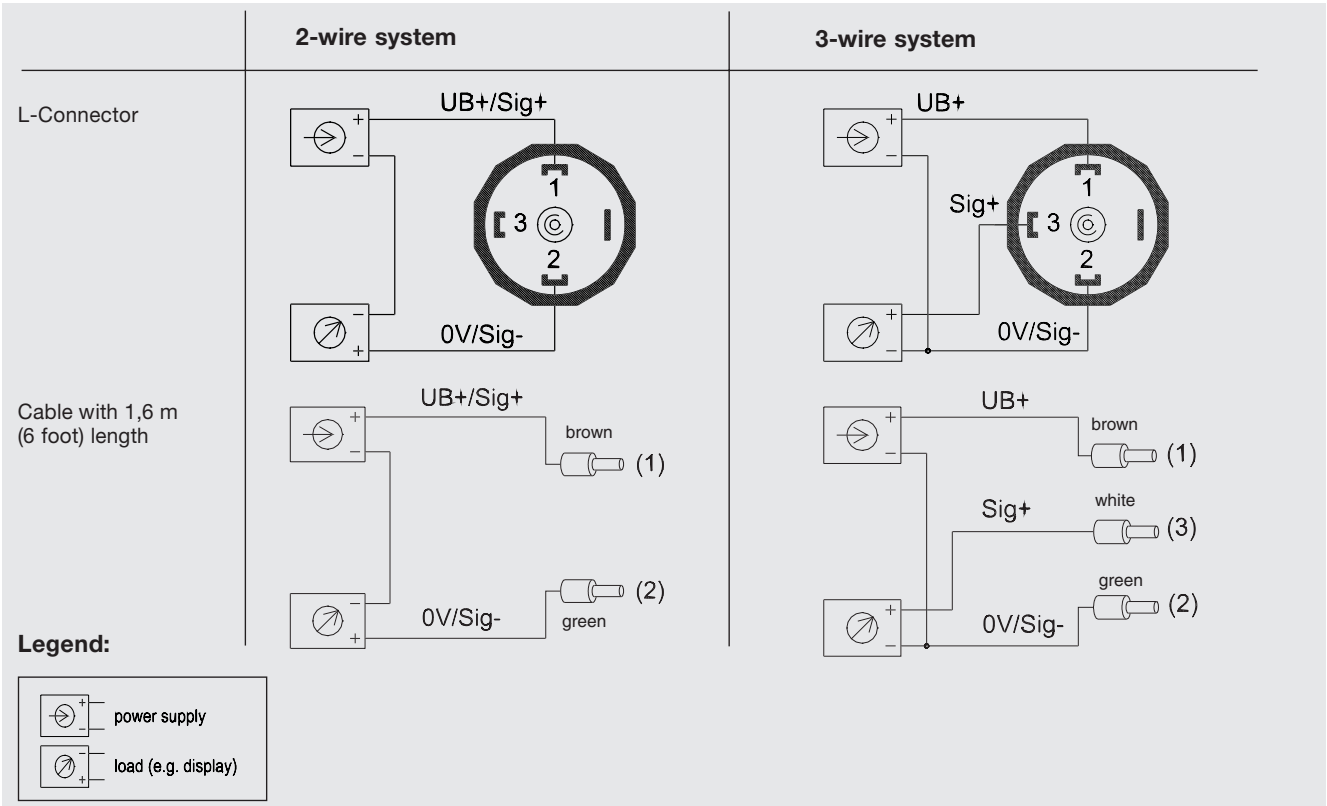
G 1/2 B with o-ring
(0 ... 2.5 to 0 ... 600 bar)
Ordercode: 86



For tapped holes and welding sockets please see data sheet IN 00.14 or our internet page, www.wika.de/download

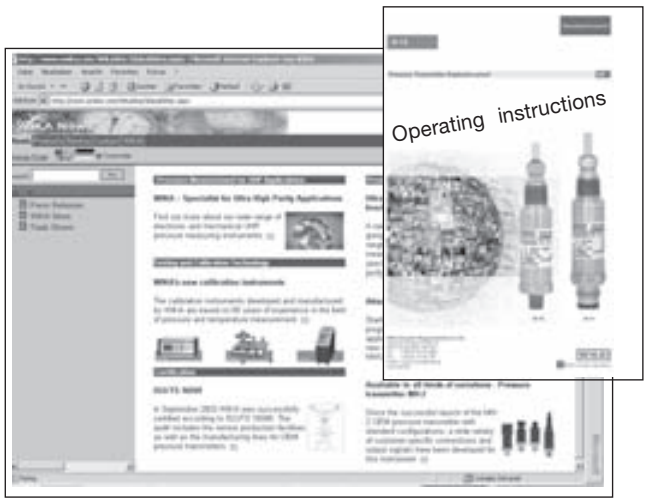
*) On request

Wiring details



Further informations

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



Other pressure transmitters for hazardous areas

Fig. left model E-10 Explosion proof
Fig. right model IS-10 Intrinsic safe

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.

WIKA Alexander Wiegand GmbH & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Phone (+49) 93 72/132-0
Telefax (+49) 93 72/132-406
E-Mail support-tronic@wika.de
www.wika.de

9056327 02/2004 GB