Pressure transmitter for general industrial applications
Model A-10

Applications

- Mechanical engineering
- Machine tools
- Process control & automation
- Hydraulics & Pneumatics
- Pumps & Compressors

Special Features

- Pressure ranges: from 0 … 15 psi up to 0 … 10,000 psi
- Non-linearity: ≤ ± 0.5% BFSL (≤ ± 0.25% available)
- Signal output: 4-20 mA, 0-10 V, 0-5 V, others
- Electrical connection: DIN 175301-803 A and C, M12x1, 6 ft. cable, others
- Pressure connection: 1/4 NPT , 1/2 NPT , SAE #4, others available

A-10 Pressure Transmitters

Description

The WIKA A-10 pressure transmitter is precision engineered and manufactured to fit many industrial and OEM pressure measurement applications. The rugged design provides resistance to vibration, shock, wide temperature variations, RFI and other extreme environmental conditions that are typical of industrial and OEM applications.

Performance and reliability is enhanced by the all stainless steel welded measuring cell that eliminates the need for soft sealing materials that may deteriorate over time. The state-of-the-art manufacturing and assembly process increases the long term reliability of the A-10.

Primary applications include process control and automation, hydraulics, pneumatics, and machine controls.

Datasheets for related models
Pressure transmitter for general applications; Model S-10; see Datasheet PE 81.01

Specifications		Model A-10							
Pressure ranges	psi	15	25	30	50	100	160	200	300
Over pressure safety	psi	30	60	60	100	200	290	400	600
Burst pressure	psi	75	150	150	250	500	500	1500	1500
Pressure ranges	psi	500	1000	1500	2000	3000	5000	10000	
Over pressure safety	psi	1000	1740	2900	4000	6000	10000	17400	
Burst pressure	psi	2500	7975	11600	14500	17400	24650	34800	
	{Absolute pressure: 0 ... 15 psi up to 0 ... 300 psi}.								
Vacuum resistance		Ranges greater then 150 psi							
Fatigue life		10 million load cycles maximum							
Materials									
■ Wetted parts									
» Pressure Connection		316 L							
» Pressure sensor		316 L (as of ≥0 ... 150 psig are PH 13-8 ss)							
■ Internal transmission fluid		Silicone oil (only with pressure ranges up to 0 ... 100 psig and 0 ... 300 psi absolute)							
■ Case		316 L							
Power supply UB	UB in VDC	8 ... 30 (14 ... 30 with signal output 0 ... 10 V)							
maximum ohmic load RA		0 ... 10 V, 3-wire R_A > 10 k							
		0 ... 5 V, 3-wire R_A > 5 k							
		1 ... 5 V, 3-wire R_A > 5 k							
		0.5 ... 4.5 V, 3-wire R_A > 4.5 k {Other signal output on request}							
Response time	ms	< 4							
Current consumption	mA	Signal current (max. 25) for current output							
		Max. 8 for voltage output signal							
Isolation voltage	VDC	500 [1]							
	[1] For power supply, use a circuit with energy limitation (EN/UL/IEC 61010-1, section 9.3) with the following maximum values for the current: where UB = 30 V (DC): 5 A. Provide a separate switch for the external power supply.								
	Alternative for North America: The connection may also be made to “Class 2 Circuits” or “Class 2 Power Units” according to CEC (Canadian Electrical Code) or NEC (National Electrical Code).								
Non-linearity	% of span	≤ ± 0.5% BFSL according to IEC 61298-2							
		{≤ ± 0.25 BFSL}							
Accuracy [2]	% of span	≤ ± 1.0 (with non-linearity 0.5 %)							
		{≤ ± 0.5 }(with non-linearity 0.25 %}							
		{ ≤ ± 0.6 }(with non-linearity 0.25 % and with signal output 0 ... 5 V}							
	[2] Includes non-linearity, hysteresis, zero point and full scale error accordingly to IEC 61298-2								
	Calibrated in vertical mounting position with pressure connection facing down								
Zero offset	% of span	≤ 0.15 typ., ≤ 0.4 max. (with non-linearity 0.25%)							
		≤ 0.5 typ., ≤ 0.8 max. (with non-linearity 0.5%)							
Hysteresis	% of span	≤ 0.16							
Non-repeatability	% of span	≤ 0.1							
Long-term drift	% of span	≤ 0.1 according to IEC 61298-2							
Signal noise	% of span	≤ 0.3							
Permissible temperature of									
■ Medium		32 ... +176 °F {-22 ... +212 °F}	0 ... +80 °C {-30 ... +100 °C}						
■ Ambient		32 ... +176 °F {-22 ... +212 °F}	0 ... +80 °C {-30 ... +100 °C}						
■ Storage		-4 ... +176 °F {-22 ... +212 °F}	-20 ... +80 °C {-30 ... +100 °C}						
Operating temperature range		32 ... +176 °F	0 ... +80 °C						
Temperature error within	% of span	≤ 1.0 typ., ≤ 2.5 max.							
operating temperature range									

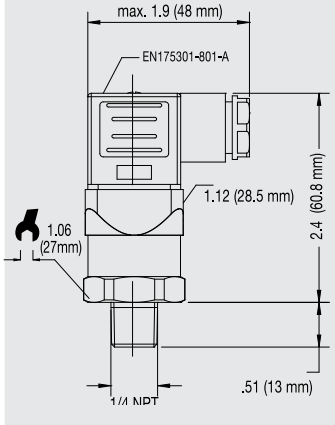
Specifications		Model A-10
Approvals		UL, CSA, GOST
RoHS-conformitiy		Yes
CE-conformitiy		
■ Pressure equipment directive		97/23/EC
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61 326
Shock resistance	g	500 according to IEC 60068-2-27 (mechanical shock)
Vibration resistance	g	10 according to IEC 60068-2-6 (vibration under resonance)
Wiring protection		
■ Overvoltage protection	VDC	32; 36 with 4 ... 20 mA
■ Short-circuit protection		Sig+ to UB-
■ Reverse polarity protection		UB+ to UB-
Test reference conditions		According to IEC 61298-1
■ Relative humidity	%	45 ... 75
■ Temperature	%	59 ... 77 °F (15 ... 25 °C)
■ Atmospheric Pressure	KPa	86 … 106 (25.4…31.3 inhg)
Weight	oz.	Approx. 2.8 oz. (80 g)

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

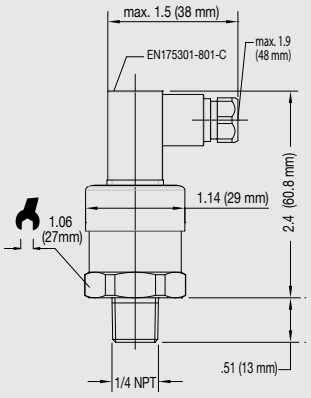
Dimensions in inches (mm)

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 equivalent ingress protection.

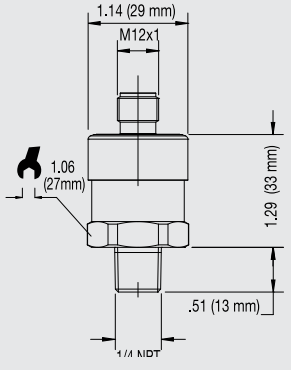
DIN 175301-803 A
L-connector
conductor outer diameter
.24" to .32"
IP 65



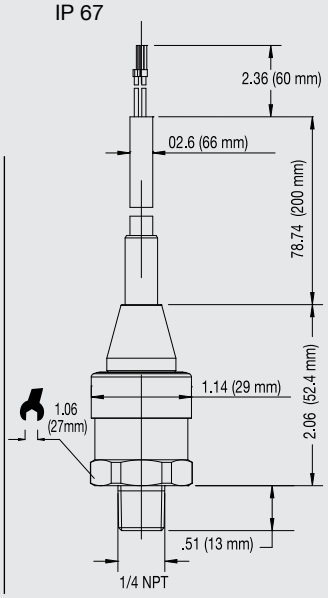
DIN 175301-803 C
L-connector
conductor outer diameter
.18" to .24"
IP 65



M 12x1, 4-pin
IP 67



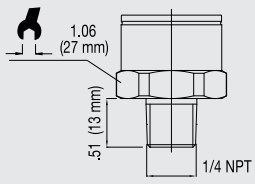
Flying leads,
conductor cross section
.013 in ²,
conductor outer diameter
.26",
PUR cable - unshielded,
IP 67



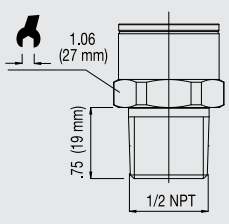
For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de

Pressure connections

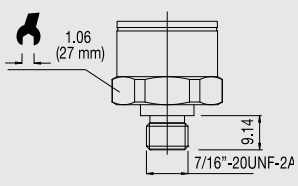
1/4 NPT



1/2 NPT Male

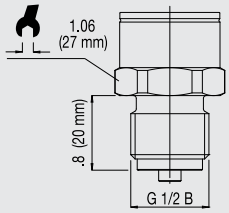


7/16 - 20 UNF
O-ring boss

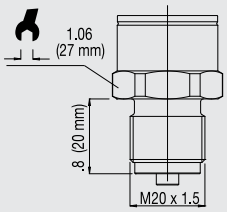


Pressure connections

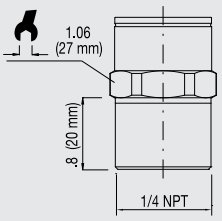
G 1/2 B



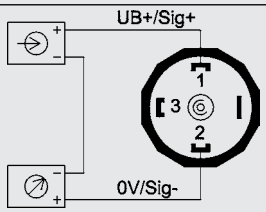
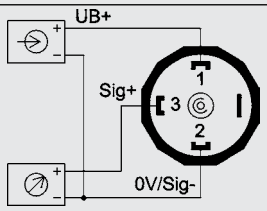
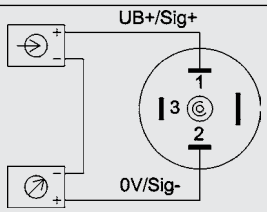
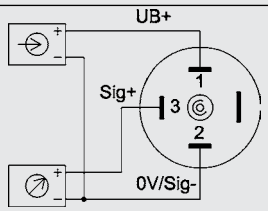
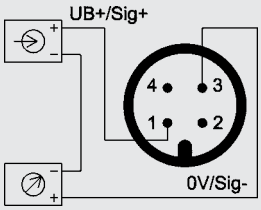
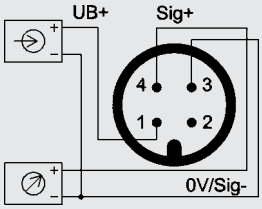
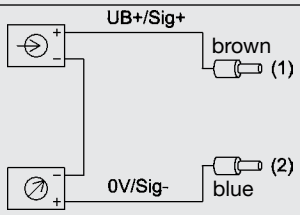
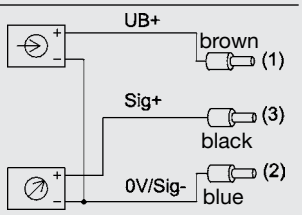
M20 x 1.5
with sealing ring

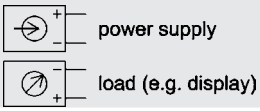


1/4" NPT female



Electrical connections

	2-wire	3-wire
DIN 175301-803 A L-connector		
DIN 175301-803 C L-connector		
M 12x1, 4-pin without angle socket or female cable connectors		
Flying leads		



Specifications and dimensions given in this datasheet 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.

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