

OEM Pressure Transmitters

Type 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: $\leq \pm 0.5\%$ BFSL ($\leq \pm 0.25\%$ 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

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.



A-10 Pressure Transmitters

[Datasheet: A-10](#)

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 than 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		$R_A > 10 \text{ k}$						
		0 ... 5 V, 3-wire		$R_A > 5 \text{ k}$						
		1 ... 5 V, 3-wire		$R_A > 5 \text{ k}$						
		0.5 ... 4.5 V, 3-wire		$R_A > 4.5 \text{ k}$				{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	$\leq \pm 0.5\%$ BFSL according to IEC 61298-2								
		$\{\leq \pm 0.25 \text{ BFSL}\}$								
Accuracy ²⁾	% of span	$\leq \pm 1.0$ (with non-linearity 0.5 %)								
		$\{\leq \pm 0.5\}$ (with non-linearity 0.25 %)								
		$\{\leq \pm 0.6\}$ (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 ... +185 °F} 0 ... +80 °C {-20 ... +85 °C}										
■ Ambient										
32 ... +176 °F {-4 ... +176 °F} 0 ... +80 °C {-20 ... +80 °C}										
■ Storage										
-4 ... +176 °F -20 ... +80 °C										
Operating temperature range		32 ... +176 °F				0 ... +80 °C				
Temperature error within operating temperature range	% of span	≤ 1.0 typ., ≤ 2.5 max.								

Specifications

Model A-10

Approvals		UL, CSA, GOST
RoHS-conformity		Yes
CE-conformity		
■ 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)

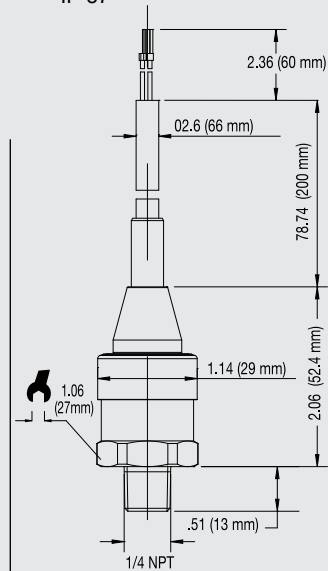
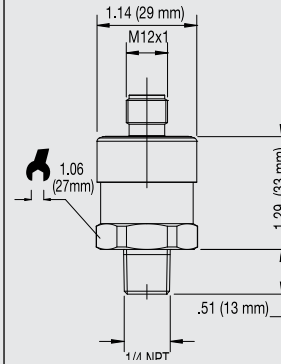
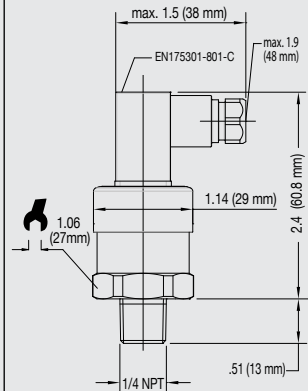
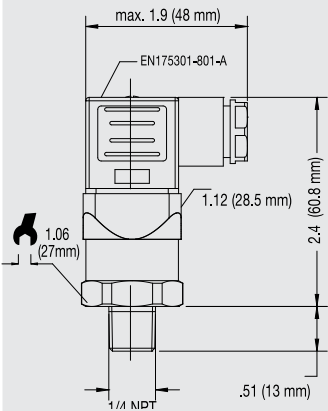
Ingress protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the equivalent ingress protection.

Flying leads,
conductor cross section
.013 in²,
conductor outer diameter
.26",
PUR cable - unshielded,
IP 67

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

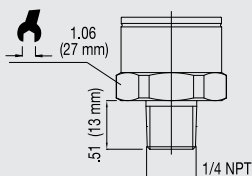
M 12x1, 4-pin
IP 67



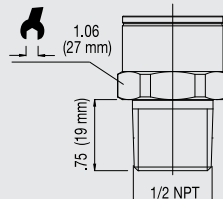
For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de

Pressure connections

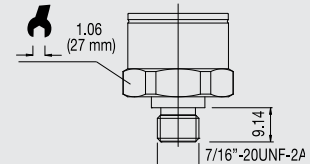
1/4 NPT



1/2 NPT Male

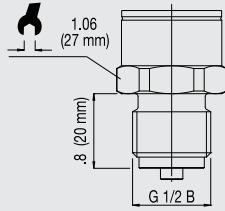


7/16 - 20 UNF
O-ring boss

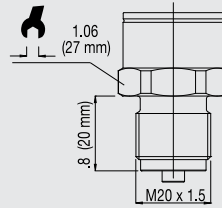


Pressure connections

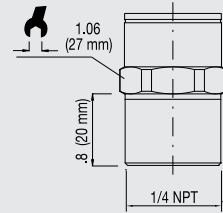
G 1/2 B



M20 x 1.5
with sealing ring



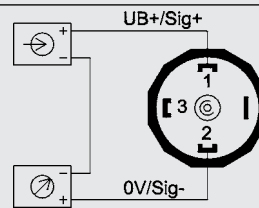
1/4" NPT female



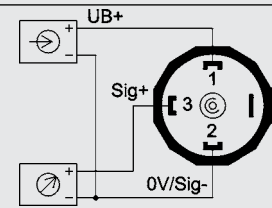
Electrical connections

DIN 175301-803 A
L-connector

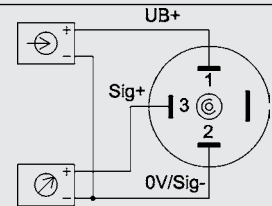
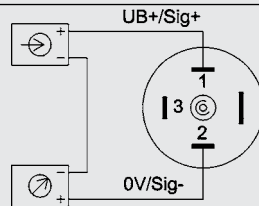
2-wire



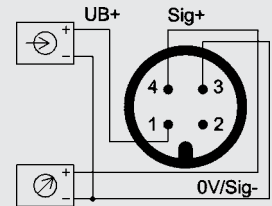
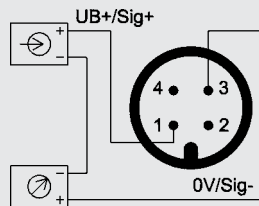
3-wire



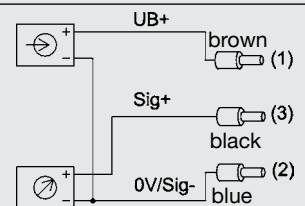
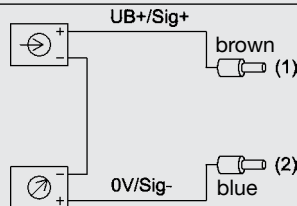
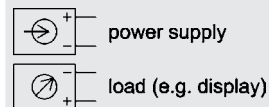
DIN 175301-803 C
L-connector



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.

Type A-10 OEM Pressure Transmitter

Standard Features

- **Signal Output:** 4-20 mA 2-wire or 0-10 V 3-wire
- **Supply Voltage:** 8-30 DC (14-30 VDC)
- **Process Connection:** 1/4 NPT Male
- **Electrical Connection:** DIN EN 175301-803 (DIN 43 650) with plug connector
- **Non-Linearity:** $\leq \pm 0.5\%$ B.F.S.L.



Description		
Range	Part #	
	4-20 mA 2-wire	0-10 V 3-wire
0 ... 15 psia	50426354	50426737
0 ... 100 psia	50426389	50426761
0 ... 15 psi	50426397	50426770
0 ... 25 psi	50426401	83928788
0 ... 50 psi	50426427	50426800
0 ... 100 psi	50372475	50426818
0 ... 200 psi	50398083	50426834
0 ... 300 psi	50426460	50426842
0 ... 500 psi	50426478	50426851
0 ... 1000 psi	50426486	50426869
0 ... 1500 psi	50426494	50426877
0 ... 2000 psi	50426508	50426885
0 ... 3000 psi	50426516	50426893
0 ... 5000 psi	50372483	50426907
0 ... 10,000 psi	50426532	50426915

NOTE: Ready-to-ship part numbers shown in **bold, blue** print.

A-10 Option List

Feature	Feature
Non-Linearity	Sealing
≤ ± 0.5% B.F.S.L	FPM/FKM N/C
≤ ± 0.25% B.F.S.L	Copper
Unit	Stainless steel
psi	without
other	Temperature Range of Medium
Absolute or Relative Pressure	0 ... +80 °C
gauge	-30 ... +85 °C
absolute	Signal Output
compound	4 ... 20 mA, 2-wire
Pressure Range	0 ... 10 V, 3-wire
0 ... 15 psig 0 ... 15 psia	0 ... 5 V, 3-wire
0 ... 25 psig 0 ... 25 psia	1 ... 5 V, 3-wire
0 ... 30 psig 0 ... 30 psia	0.5 ... 4.5 V, 3-wire ratiometric
0 ... 50 psig 0 ... 50 psia	other
0 ... 100 psig 0 ... 100 psia	Power Supply
0 ... 160 psig	8...30 V DC
-30 inHg ... 160 psi	14...30 V DC
0 ... 200 psig 0 ... 200 psia	5 V DC +/- 10%
0 inHg ... 200 psi	other
0 ... 300 psig 0 ... 300 psia	Electrical Connection
-30 inHg ... 300 psi	valve connector, size A
0 ... 500 psig	valve connector, size A with cable
0 ... 1000 psig	valve connector, size C
0 ... 1500 psig	valve connector, size C with cable
0 ... 2000 psig	circular connector M12x1, 4-pin
0 ... 3000 psig	angled connector M12x1, 4 pin. with cable
0 ... 5000 psig	straight connector M12x1, 4 pin. with cable
0 ... 10000 psig	Cable with free ends (IP 67)
other	Cable Length
Process Connection	without
1/4 NPT	6 feet (only with: AK,CK, MG, MI, or DL)
1/4 NPT female	15 feet (only with: AK,CK, MG, or MI)
1/2 NPT	other
7/16"-20 UNF SAE O-Ring Boss	Certificates
M20 x 1.5	without
G 1/4 B	Approvals
G 1/2 B	UL / CSA / GOST ¹⁾
other	Other

1) Not available with ratiometric signal output