

OEM pressure transmitter with thin film technology for general applications Model OT-1

WIKA Data Sheet PE 81.42

Applications

- Pneumatics
- Hydraulics
- Automotive industry

Special Features

- Pressure ranges 0 ... 6 bar to 0 ... 60 bar
- Signal outputs 4 ... 20 mA, 1 ... 5 V, 1 ... 6 V, 0 ... 10 V, 0.5 ... 4.5 V ratio @ 5 V
- Ingress Protection IP 67
- Fully automated production according to ISO/TS 16 949



Fig. Pressure Transmitter Model OT-1

Description

For universal application

The OT-1 is the ideal product for customers who want to use a cost optimised pressure transmitter for which no sealing materials are required.

As many electrical output signals and pressure connections are available, the pressure transmitter can be easily integrated into a wide variety of applications.

The case consists of a highly resistive, fiberglass-enforced plastic material (PBT). This material has been successfully used in the automotive industry for many years. Inside the case a metal pod is responsible for a good EMI-protection.

Excellent performance

The hermetically welded, dry thin film measuring cell guarantees long-term leak tightness. There are no additional sealing materials required.

The thin film measuring cell is made of high quality stainless steel using sputtering technology to offer high long-term stability and excellent burst pressure values.

Interesting price/performance ratio

The pressure transmitter OT-1 has been specially developed for OEM applications in the machine building industry, in the pneumatics sector and for compressors as well as automotive applications. The transmitter is manufactured on a fully automated production line.

Especially for high-volume OEM requirements this product concept is particularly interesting due to its excellent price/performance ratio.

Individual versions to customer specifications

Due to its manufacturing know-how gained in many years of experience WIKA can offer customised solutions.

Specifications

Model OT-1

Pressure ranges	bar	6	10	16	25	40	60
Over pressure safety	bar	20	20	32	50	80	120
Burst pressure	bar	100	100	160	250	400	550
		Gauge pressure and compound ranges are available					
Materials							
■ Wetted parts		Stainless steel					
■ Case		Highly resistive, fiberglass-enforced plastic (PBT)					
		Signal output		Power supply		Maximum load RA	
		4 ... 20 mA, 2-wire		8 ... 36 VDC		RA ≤ (UB – 8 V) / 0.02 A	
		1 ... 6 V, 3-wire		9 ... 36 VDC		RA > 2.5 kOhm	
		1 ... 5 V, 3-wire		8 ... 36 VDC		RA > 2.5 kOhm	
		0 ... 10 V, 3-wire		14 ... 36 VDC		RA > 5 kOhm	
		0.5 ... 4.5 V, ratiometric		5 ± 0.5 VDC		RA > 4.5 kOhm	
Response time (10 ... 90 %)	ms	≤ 2					
Dielectric strength	VDC	500					
Accuracy	% of span	≤ 0.5 (BFSL)					
	% of span	≤ 1.0 (BFSL) for pressure ranges ≤ 16 bar					
	% of span	≤ 1.0 *)					
	% of span	≤ 2.0 *) for pressure ranges ≤ 16 bar					
	*) Including non-linearity, hysteresis, non-repeatability, zero point and full scale error (corresponds to error of measurement per IEC 61298-2).						
Non-linearity	% of span	≤ 0.4 (BFSL) according to IEC 61298-2					
1-year stability	% of span	≤ 0.3 (at reference conditions)					
Permissible temperature of							
■ Medium **)	°C	-40 ... +125					
■ Ambience **)	°C	-40 ... +100					
		With cable version limited temperature range from -40 ... +90 °C (-40 ...+194 °F)					
■ Storage **)	°C	-40 ... +120					
		With cable version limited temperature range from -40 ... +90 °C (-40 ...+194 °F)					
	**) Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3						
Compensated temperature range	°C	0 ... +80					
Temperature coefficients within compensated temp range							
■ Mean TC of zero	% of span	≤ 0.3 / 10 K (for special pressure ranges increased TC of zero)					
■ Mean TC of range	% of span	≤ 0.2 / 10 K					
CE-conformity							
■ Pressure equipment directive		97/23/EG					
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61 326					
Wiring protection							
■ Short-circuit proofness		Sig+ towards UB-					
■ Reverse polarity protection		UB+ towards UB-					
Mass	g	Ca. 70					

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.

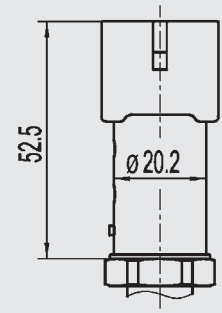
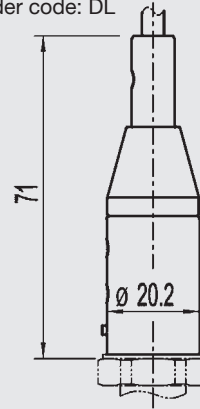
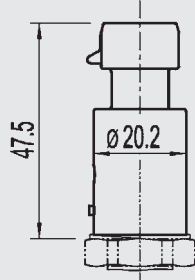
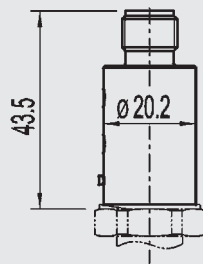
Electrical connections

Circular connector
M 12x1, 4-pin
IP 67
Order code: M4

Connector
Metri Pack Serie 150
IP 67
Order code: R3

Flying leads with 1.5 m of cable,
conductor cross section up to
max. 0.34 mm², with end spli-
ces, conductor outer diameter
5.2 mm
IP 67
Order code: DL

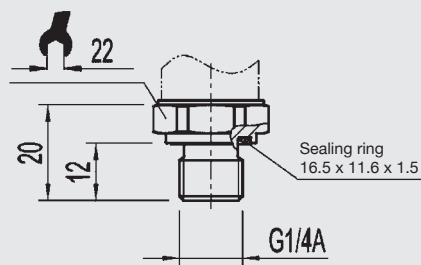
Connector
AMP Superseal 1.5
3-pin
IP 67
Order code: S3



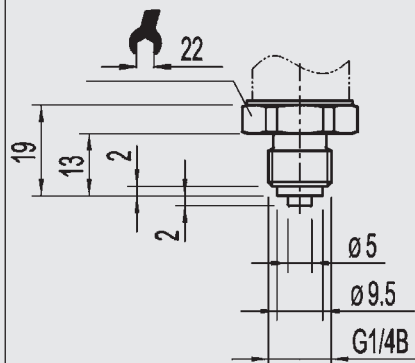
Others on request.

Pressure connections

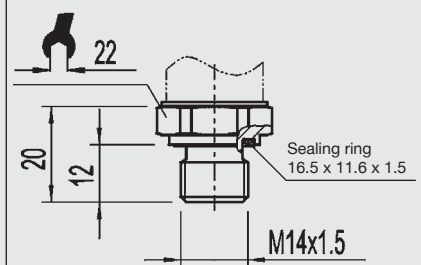
G 1/4
DIN 3852-E
Order code: HD



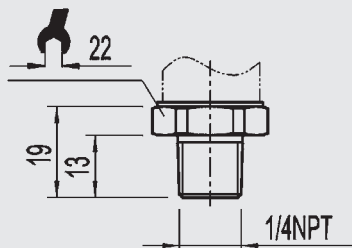
G 1/4
EN 837
Order code: GB



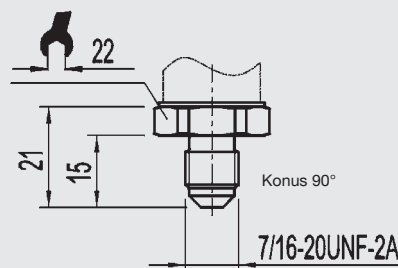
M 14x1,5
DIN 3852-E
Order code: HN



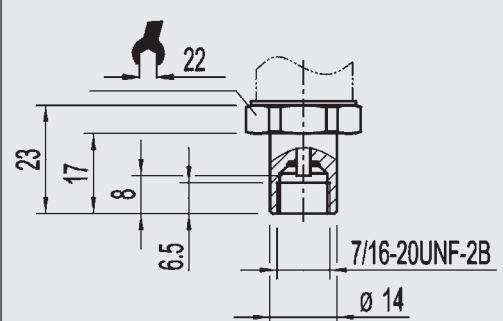
1/4 NPT
per „Nominal size for
US standard tapered pipe thread
NPT“
Order code: NB



7/16-20 UNF-2A
Order code: MV



7/16-20 UNF-2A
Schrader internal thread
Order code: U3



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

Electrical connections

	2-wire	3-wire
M 12x1, 4-pin Circular connector		
Connector Metri Pack Serie 150		
Flying leads		
Connector AMP Superseal 1.5		
additional PIN assignments on request		
Legend: <div> power supply load (e.g. display) </div>		

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.



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