

OEM General Purpose Pressure Transmitter Model OT-1

WIKA Datasheet OT-1

Applications

- Low pressure hydraulic systems
- Pneumatic systems
- Pumps and compressors
- HVAC

Special Features

- Pressure ranges from 100 PSI to 500 PSI
- Compound ranges available
- Durable thin film sensor technology
- Environmental protection to NEMA 4X / IP 67



OT-1 Pressure Transmitter

Description

OT-1 pressure transmitters are precision engineered for low pressure HVAC, compressor, and pump applications where performance and durability are critical. Many different process and electrical connections are available allowing the OT-1 to be easily integrated with a wide variety of applications.

The all welded thin film measuring cell eliminates the need for additional soft sealing materials that may deteriorate over time. The thin film sensor uses sputtered technology that provides excellent long-term stability in applications producing frequent pressure cycles. The glass reinforced PBT plastic case has been used in under hood automotive applications for many years. A metal sleeve inside the case provides excellent EMI protection to 100v/m. The electrical connections meet NEMA 4X / IP 67 environmental protection ratings.

The OT-1 is specifically designed for OEM applications in the HVAC, compressor, and automotive industry. It is manufactured on a fully automated production line providing consistent quality and highly competitive pricing in large quantities. Custom modifications are available for large quantity requirements.

Specifications

Model OT-1

Pressure range	-30INHG/100PSI	-30INHG/200PSI	100PSI	150PSI	250PSI	300PSI	500PSI
Maximum pressure*	290PSI	464PSI	290PSI	464PSI	725PSI	725PSI	1160PSI
Burst pressure**	1450PSI	2320PSI	1450PSI	2320PSI	3625PSI	3625PSI	5800PSI

*Pressure applied up to the maximum rating will cause no permanent change in specifications but may lead to zero and span shifts

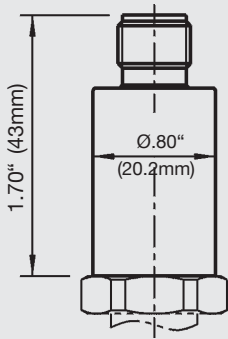
**Exceeding the burst pressure may result in destruction of the transmitter and possible loss of media

Materials			
■ Wetted parts		Stainless steel	
■ Case		Fiberglass-reinforced polybutylene terephthalate (PBT)	
Signal output,		Signal output	Power supply U_B
Power supply U_B and		4 ... 20 mA, 2-wire	8 ... 36 DC V
Maximum load R_A		1 ... 6 V, 3-wire	9 ... 36 DC V
		1 ... 5 V, 3-wire	8 ... 36 DC V
		0 ... 10 V, 3-wire	14 ... 36 DC V
		0.5 ... 4.5 V, ratiometric	5 ± 0.5 DC V
			Maximum load R _A
			R _A ≤ (U _B - 8 V) / 0.02 A
			R _A > 2500
			R _A > 2500
			R _A > 5000
			R _A > 4500
Response time (10 ... 90 %)	ms	≤ 2	
Isolation voltage	DC V	500	
Accuracy	% of span	≤ 0.5 (BFSL)	
	% of span	≤ 1.0 (BFSL) for pressure ranges ≤ 150 PSI	
	% of span	≤ 1.0 (limit point calibration)	
	% of span	≤ 2.0 (limit point calibration) for pressure ranges ≤ 150 PSI (Includes linearity, hysteresis and repeatability)	
Non-repeatability	% of span	≤ 0.3	
1-year stability	% of span	≤ 0.3 (at reference conditions)	
Permissible temperature of			
■ Medium *)		-40 ... +257 °F	-40 ... +125 °C
■ Ambient *)		-40 ... +212 °F	-40 ... +100 °C
		With cable version limited temperature range from (-40 ... +194 °F) -40 ... +90 °C	
■ Storage *)		-40 ... +248 °F	-40 ... +120 °C
		With cable version limited temperature range from (-40 ... +194 °F) -40 ... +90 °C	
		*) Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3	
Compensated temperature range		+32 ... +176 °F	0 ... +80 °C
Temperature coefficients (TC) within compensated temperature range			
■ Mean TC of zero	% of span	≤ 0.3 / 10K (special pressure ranges may have increased zero TC)	
■ Mean TC of range	% of span	≤ 0.2 / 10K	
CE -conformity		89/336/EWG interference emission and immunity see EN 61 326 interference emission limit class A and B 97/23/EG Pressure equipment directive	
Wiring protection		Protected against short circuiting signal + against U _B - / 0V and Protected against reverse polarity except ratiometric output signals	
Weight	oz.	Approx. 2.1	

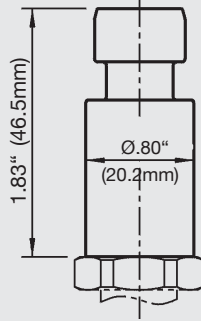
Dimensions in inches (mm)

Electrical connections

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

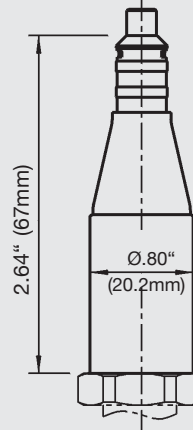


Metri Pack Connector
Series 150
NEMA 4 / IP 67
Order code: R3

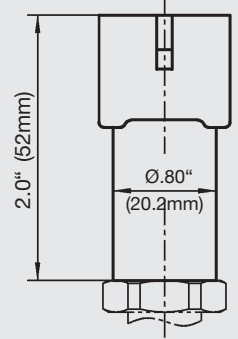


Ingress Protection (IP) per IEC 60 529

Flying leads
NEMA 4 / IP 67
Order code: DL

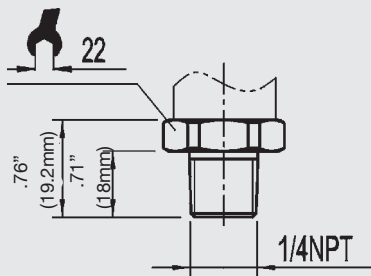


AMP Superseal 1.5
3-pin Connector
NEMA 4 / IP 67
Order code: S3

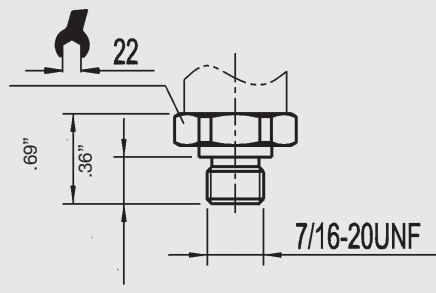


Pressure connections

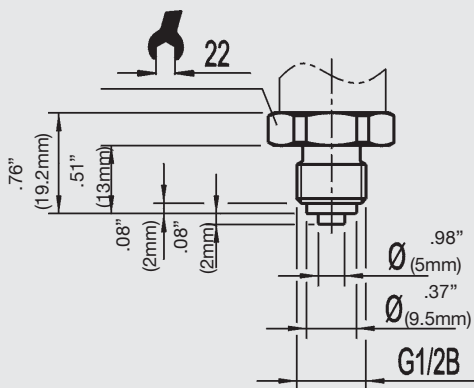
1/4 NPT male
Order code: NB



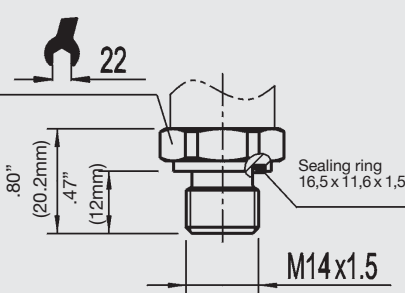
SAE #4 7/16-20 UNF-2A
male o-ring boss
Order code: UA



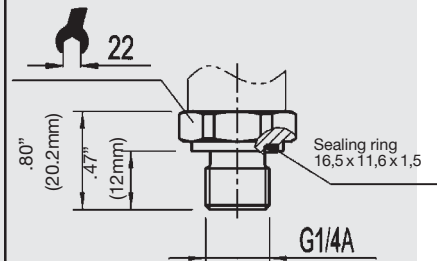
G 1/4
EN 837
Order code: GB



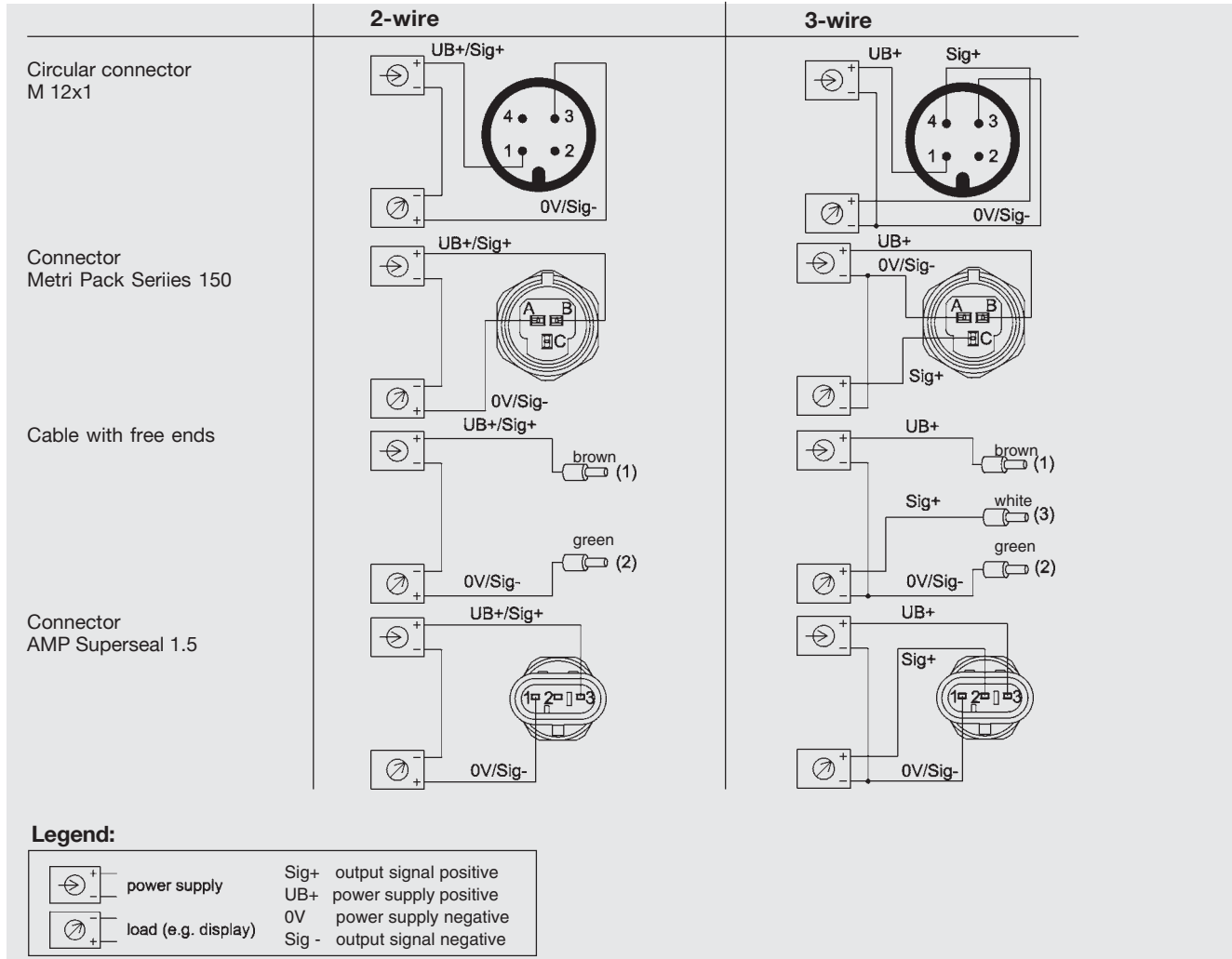
M 14x1,5
per DIN 3852-E
Ordercode: HN



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



Electrical connection



Specifications and dimensions given in this data sheet 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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