General Purpose OEM Pressure Transmitters Type OT-1

Applications

- General purpose high-volume OEM applications

Special Features

- Pressure ranges from 100 psi to 8,000 psi
- Compound ranges available
- Durable thin film sensor technology
- Environmental protection to IP67 / NEMA 4X
- MTTF values over 100 years

Type OT-1 Pressure Transmitter

OT-1 pressure transmitters are precision engineered for 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 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 Type OT-1

Pressure range	-30 InHG/100 psi	-30 InHG/200 psi	100 psi	150 psi	250 psi	300 psi	500 psi
Maximum pressure*	290 psi	464 psi	290 psi	464 psi	725 psi	725 psi	1,160 psi
Burst pressure**	1,450 psi	2,320 psi	1,450 psi	2,320 psi	3,625 psi	3,625 psi	5,800 psi
Pressure range	1,000 psi	1,500 psi	2,000 psi	3,000 psi	5,000 psi	7,500 psi	8,000 psi
Maximum pressure*	1,740 psi	2,900 psi	4,600 psi	7,200 psi	11,600 psi	17,400 psi	17,400 psi
Burst pressure**	7,970 psi	11,600 psi	14,500 psi	17,400 psi	24,650 psi	34,800 psi	34,800 psi

*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

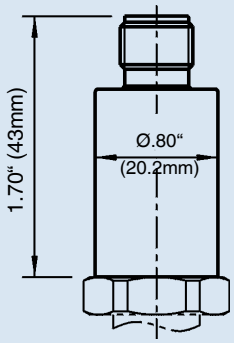
Materials:				
■ Wetted parts		Stainless steel		
■ Case		Fiberglass-reinforced polybutylene terephthalate (PBT)		
Signal output	U_R in DC V	Signal output	Power supply U_B	Maximum load R_A
Power supply U_B	R_A in Ohm	4 ... 20 mA, 2-wire	8 ... 36 DC V	$R_A \leq (U_B - 8\ V) / 0.02\ A$
Signal output and		1 ... 6 V, 3-wire	9 ... 36 DC V	$R_A > 2{,}500$
Maximum load R_A		1 ... 5 V, 3-wire	8 ... 36 DC V	$R_A > 2{,}500$
		0 ... 10 V, 3-wire	14 ... 36 DC V	$R_A > 5{,}000$
		0.5 ... 4.5 V, ratiometric	5 ± 0.5 DC V	$R_A > 240$
Response time (10 ... 90 %)	ms	≤ 2		
Isolation voltage	DC V	500		
Accuracy	% of span	≤ 0.5 (B.F.S.L)		
	% of span	≤ 1.0 (B.F.S.L) for pressure ranges ≤ 150 psi		
	% of span	≤ 0.5 (terminal method)		
	% of span	≤ 1.0 (terminal method) for pressure ranges ≤ 150 psi		
		(Includes non-linearity, non-repeatability, zero point and full scale) error per IEC L1298-2		
Non-repeatability	% of span	≤ 0.2		
Non-linearity	% of span	≤ 0.4 (B.F.S.L.) according to SEC 61298-2		
1-year stability	% of span	≤ 0.3 (at reference conditions)		
Permissible temperature of:				
■ Media *)		-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	≤ 0.15 / 10K (special pressure ranges may have increased zero TC)		
■ Mean TC of range	% of span	≤ 0.15 / 10K		
CE conformity				
■ Pressure equipment directive		97/23/EC		
■ EMC directive		2004/108/EC, EN 61 326 Emission (Group 1, Class B) and Immunity (industrial locations)		
Wiring protection				
■ Short-circuit protection		Sig+ towards UB-		
■ Reverse polarity protection		UB+ towards UB- (not with ratiometric signal output)		
Weight	oz	Approximately 2.1		

Dimensions in inches (mm)

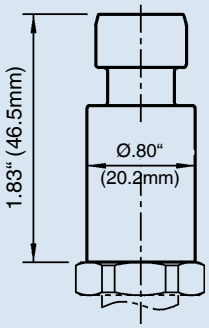
Electrical connections

Ingress Protection IP per IEC 60 529

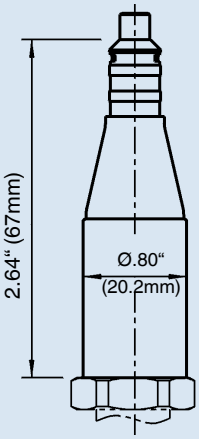
Circular connector
M 12x1, 4 pin
IP 67
Order code: M4



Connector
Metri Pack Series 150
IP 67
Order code: R3

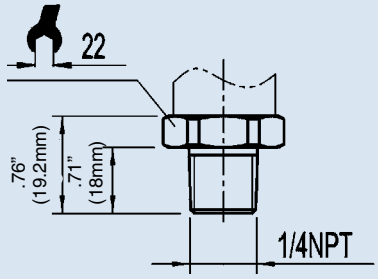


Cable with free ends
IP 67
Order code: DL

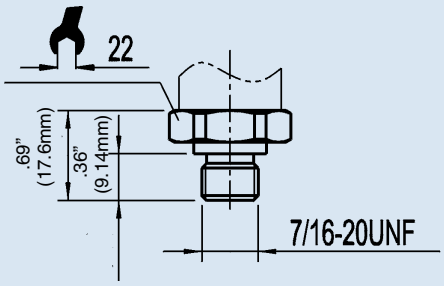


Pressure connections

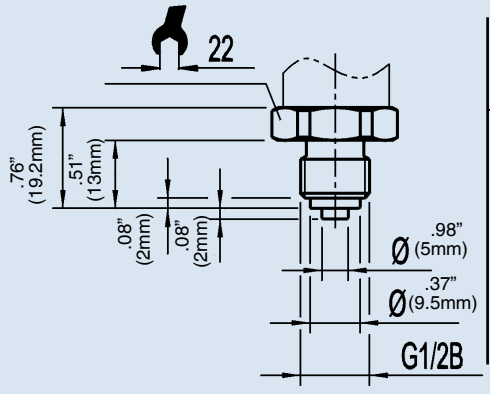
1/4 NPT male
Order code: NB



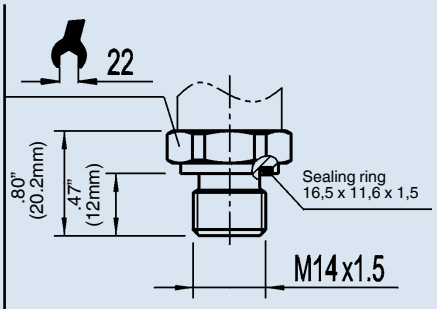
SAE #4 7/16-20 UNF-2A
male o-ring boss
Order code: MV



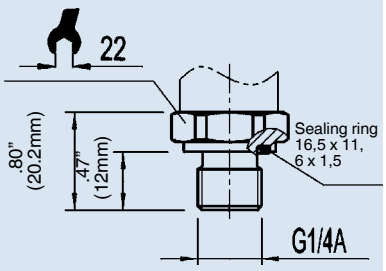
G 1/4
EN 837
Order code: GB



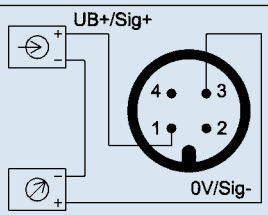
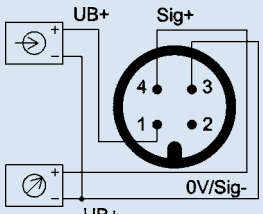
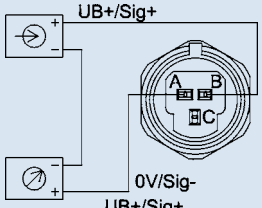
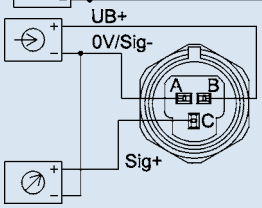
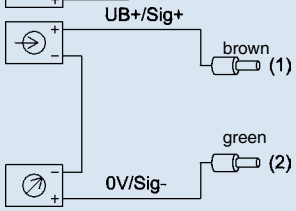
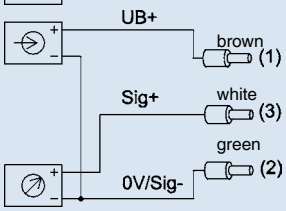
M 14x1,5
per DIN 3852-E
Order code: HN



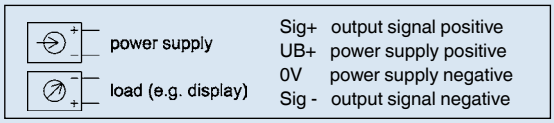
G 1/4
DIN 3852-E
Order code: HD



Wiring details

	2-wire	3-wire
Circular connector M 12x1		
Connector Metri Pack Serie 150		
Cable with free ends		

Legend:



WIKA Instrument Corporation
1000 Wiegand Boulevard
Lawrenceville, GA 30043
1-888-WIKA-USA /770-513-8200 (in GA)
Fax 770-338-5118
info@wika.com www.wika.com