

# General Purpose OEM Pressure Transmitters Type OT-1

Datasheet 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

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.



Type OT-1 Pressure Transmitter

## Specifications

## Type OT-1

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

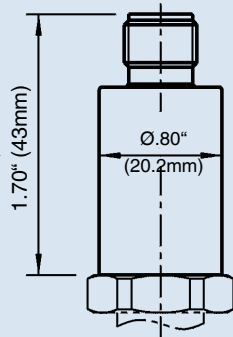
\*\*Exceeding the burst pressure may result in destruction of the transmitter and possible loss of media

<b>Materials:</b>		
■ 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)
<b>Permissible temperature of:</b>		
■ 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
<b>CE conformity</b>		
■ Pressure equipment directive		97/23/EC
■ EMC directive		2004/108/EC, EN 61 326 Emission (Group 1, Class B) and Immunity (industrial locations)
<b>Wiring protection</b>		
■ Short-circuit protection		Sig+ towards $U_B$ -
■ Reverse polarity protection		$U_B$ + towards $U_B$ - (not with ratiometric signal output)
Weight	oz	Approximately 2.1

## Dimensions in inches (mm)

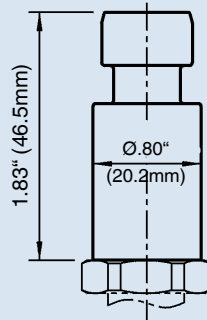
### Electrical connections

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

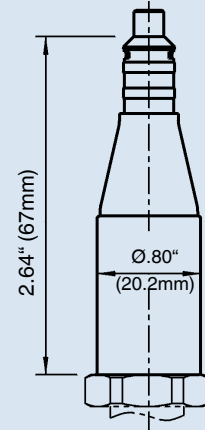


### Ingress Protection IP per IEC 60 529

Connector  
Metri Pack Series 150  
IP 67  
Order code: R3

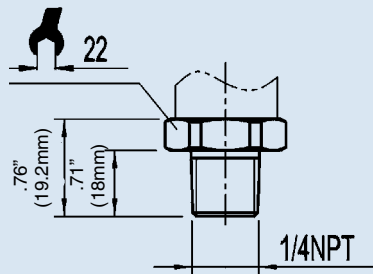


Cable with free ends  
IP 67  
Order code: DL

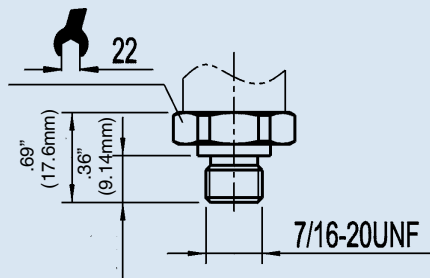


### Pressure connections

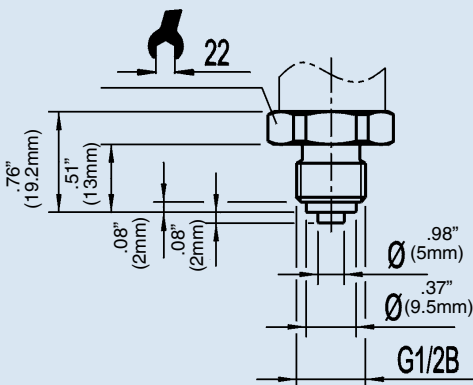
1/4 NPT male  
Order code: NB



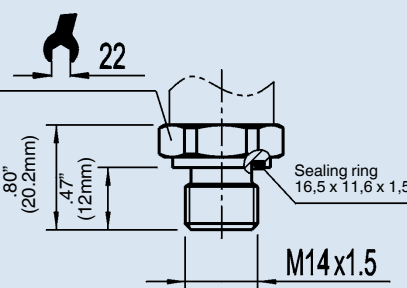
SAE #4 7/16-20 UNF-2A  
male o-ring boss  
Order code: MV



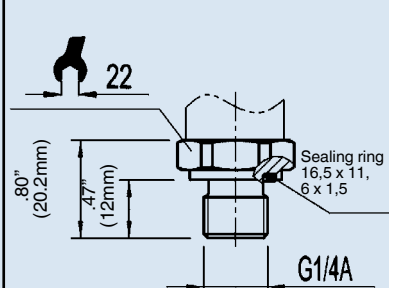
G 1/4  
EN 837  
Order code: GB



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



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

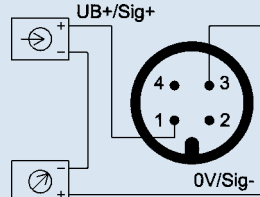


## Wiring details

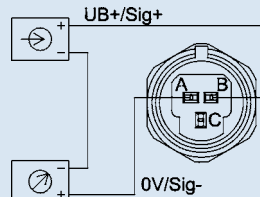
### 2-wire

### 3-wire

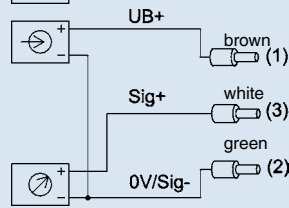
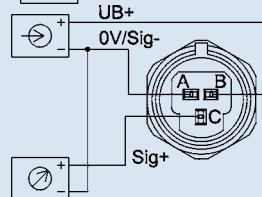
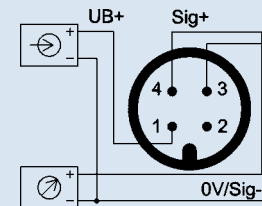
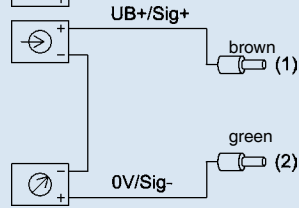
Circular connector  
M 12x1



Connector  
Metri Pack Serie 150



Cable with free ends



### Legend:

	power supply	Sig+ output signal positive
	load (e.g. display)	UB+ power supply positive
		0V power supply negative
		Sig- output signal negative

