

OEM Mobile Hydraulic Pressure Transmitter Model MH-2

WIKA Datasheet MH-2

Applications

- Mobile hydraulic systems
- Automotive industry
- Compressor systems

Special Features

- Pressure ranges from 1000 psi to 8000 psi
- 4-20 mA, 1-5V, 0-10V, 0.5-4.5V ratiometric outputs available
- Durable thin film sensor technology
- CDS system for protection from pressure spikes and cavitation
- IP 69K high pressure steam wash down protection available

Description

MH-2 pressure transmitters are precision engineered for off road and mobile hydraulic applications where performance and durability are critical. Extreme shock and vibration resistance, available high pressure steam wash down protection, and the WIKA CDS system (cavitation dampening system) provide one of the most rugged pressure transmitters available today. Pressure ranges from 1000 psi to 8000 psi meet all standard mobile hydraulic pressure 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 rugged glass reinforced PBT plastic case has been used in under hood automotive applications for many years.



MH-2 pressure transmitters

A metal sleeve inside the case provides excellent EMI protection to 100v/m. Several NEMA 4 / IP 67 electrical connections are available and the cable version provides environmental protection to IP 69K for resistance to high-pressure steam wash down cleaning procedures.

The MH-2 is specifically designed for OEM applications in the mobile hydraulics and automotive industry. It is manufactured on a fully automated production line to provide large quantities of transmitters with consistent quality and highly competitive pricing.

Custom modifications are available for large quantity requirements.

Specifications

Model MH-2

Pressure range	1000 psi	1500 psi	2000 psi	3000 psi	5000 psi	7500 psi	8000 psi
Maximum pressure*	1740 psi	2900 psi	4600 psi	7200 psi	11,600 psi	17,400 psi	17,400 psi
Burst pressure**	7970 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

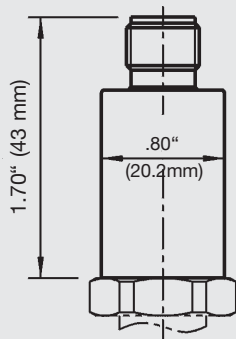
**Exceeding the burst pressure may result in destruction of the transmitter and possible loss of media

Materials:		Stainless steel		
■ Wetted parts		Fiberglass-reinforced polybutylene terephthalate (PBT)		
■ Case				
Power supply U _B		Signal output	Power supply U _B	Maximum load R _A
Signal output and		4 ... 20 mA, 2-wire	10 ... 36 DC V	R _A ≤ (U _B – 10 V) / 0.02 A with
Maximum load R _A				R _A in Ohm and U _B in Volt
		1 ... 5 V, 3-wire	8 ... 36 DC V	R _A > 2.5 kOhm
		0 ... 10 V, 3-wire	14 ... 36 DC V	R _A > 5 kOhm
		0.5 ... 4.5 V, ratiometric	5 ± 0.5 DC V	R _A > 4.5 kOhm
		Others on request		
Response time (10 ... 90 %)	ms	≤ 2		
Isolation voltage	DC V	500		
Accuracy	% of span	≤ 0.5 (B.F.S.L.)		
	% of span	≤ 1.0 (limit point calibration)		
		(Includes linearity, hysteresis and repeatability, zero point and span error)		
Non-repeatability	% of span	≤ 0.2		
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	
■ Storage *)		-40 ... +248 °F	-40 ... +120 °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		89/336/EWG interference emission and immunity see EN 61 326		
		interference emission limit class A and B		
		97/23/EG Pressure equipment directive		
Shock resistance	g	500 according to IEC 60068-2-27 (mechanical shock)		
Vibration resistance	g	20 according to IEC 60068-2-6 (vibration under resonance)		
Wiring protection		Protected against short circuiting signal+ to U _B - / 0V		
		Protected against reverse polarity except ratiometric output signals		
Weight	oz	Approximately 2.1		

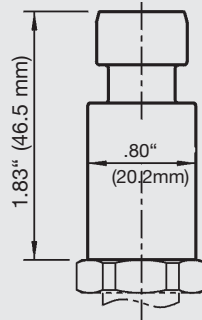
Dimensions in (mm)

Electrical connections

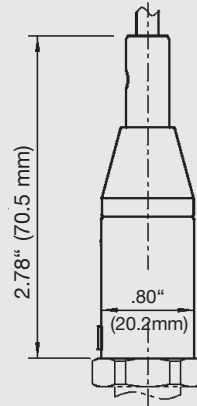
Circular connector
M12 x 1 4 pin
NEMA 4 / IP 67
Ordercode: M4



Metri Pack connector
Series 150
NEMA 4 / IP 67
Ordercode: R3

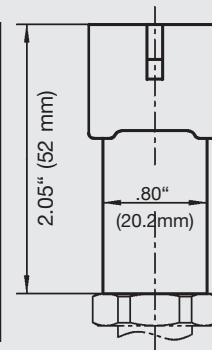


Cable with free ends
IP69K high pressure
steam washdown
Ordercode: FN

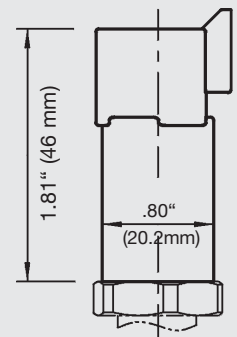


Ingress Protection IP per IEC 60 529

AMP Superseal 1.5
Connector
NEMA 4 / IP 67
Ordercode: S3

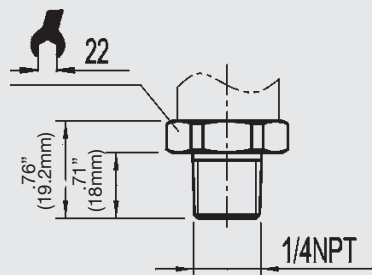


3-pin Deutsch connector
DT04-3P
NEMA 4 / IP 67
Ordercode: G3

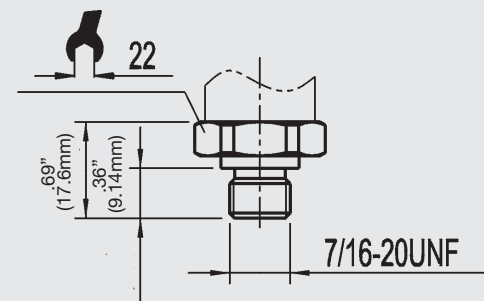


Pressure connections *)

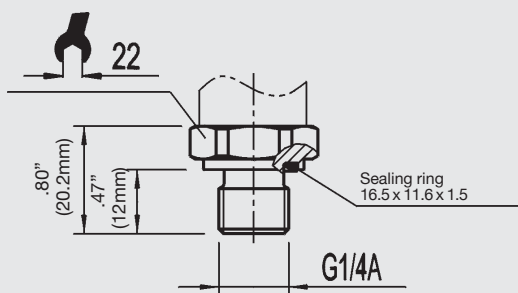
1/4 NPT male
Ordercode: NB



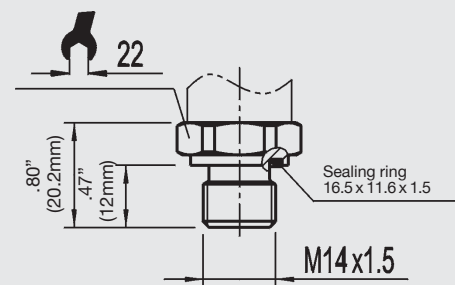
SAE #4 7/16-20 UNF-2A
male O-ring
Ordercode: UA



G 1/4 per DIN 3852-E
Ordercode: HD

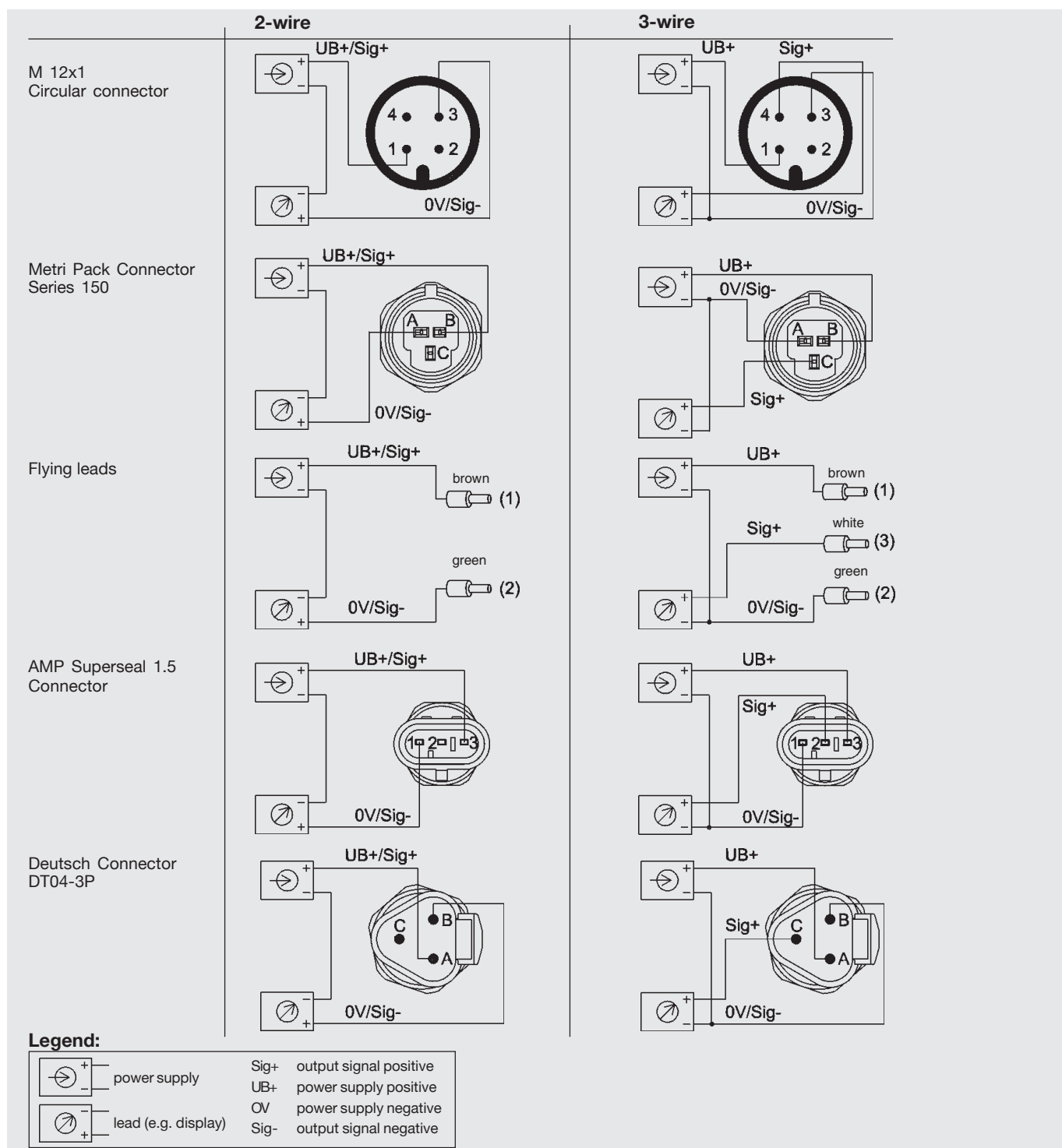


M 14 x 1.5 per DIN 3852-E
Ordercode: HN



*) pressure connections incorporate the WIKA CDS system. This includes a reduced diameter pressure port for protection against pressure spikes and cavitation.

Electrical connection



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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