

OEM pressure transmitter with thin film technology for mobile hydraulic applications Model MH-2

WIKA Data Sheet PE 81.37

Applications

- Mobile hydraulics
- Machine building
- Automotive industry

Special Features

- Pressure ranges from 0 ... 60 bar up to 0 ... 600 bar
- Signal outputs 4 ... 20 mA, 1 ... 5 V, 0 ... 10 V, 0.5 ... 4.5 V ratiometric @ 5 V
- Shock and vibration resistance in accordance with IEC 60068-2
- Ingress Protection IP 67 to IP 69K (steam jet protection)
- Stainless steel wetted parts

Description

Excellent performance

Due to its resistance to shock, vibration and pressure peaks (CDS system), combined with ingress protection up to IP 69K, the pressure transmitter model MH-2 is particularly suitable for the rough operating conditions of mobile hydraulic applications.

Even extreme temperature shocks do not affect the operational reliability of this transmitter.

Pressure ranges from 0 ... 60 bar up to 0 ... 600 bar are available to meet all standard mobile hydraulic 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.

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



Fig. Pressure Transmitter Model MH-2

The thin film measuring cell is made of high quality stainless steel using sputtering technology to offer long-term stability especially in applications that are subject to frequent load changes.

Due to excellent EMI properties in accordance with EN 61 326, the MH-2 offers high reliability even under critical EMI conditions (up to 100 V/m).

Interesting price/performance ratio

The pressure transmitter MH-2 has been specially developed for OEM applications in the mobile hydraulic as well as automotive applications. The transmitter is manufactured on a fully automated production line, certified according to ISO/TS 16 949.

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 MH-2

Pressure ranges	bar	60	100	160	250	400	600
Over pressure safety	bar	120	200	320	500	800	1200
Burst pressure	bar	550	800	1000	1200	1700	2400
Materials							
■ Wetted parts		Stainless steel					
■ Case		Highly resistive, fiberglass-enforced plastic (PBT)					
		Signal output		Power supply UB		Maximum load RA	
		4 ... 20 mA, 2-wire		10 ... 36 VDC		RA ≤ (UB – 10 V) / 0.02 A	
		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	
		Others on request					
Response time (10 ... 90 %)	ms	≤ 2					
Dielectric strength	VDC	500					
Accuracy	% of span	≤ 0.5 (BFSL)					
	% of span	≤ 1.0 *)					
	*) Including non-linearity, hysteresis, 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 **)		-40 ... +125 °C		-40 ... +257 °F			
■ Ambience **)		-40 ... +100 °C		-40 ... +212 °F			
■ Storage **)		-40 ... +120 °C		-40 ... +248 °F			
	**) Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3						
Compensated temp range		0 ... +80 °C		+32 ... +176 °F			
Temperature coefficients with compensated temp range							
■ Mean TC of zero	% of span	≤ 0.15 / 10 K for special pressure ranges increased TC of zero					
■ Mean TC of range	% of span	≤ 0.15 / 10 K					
CE-conformity							
■ Pressure equipment directive		97/23/EC					
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61326					
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							
■ Short-circuit proofness		Sig+ towards UB-					
■ Reverse polarity protection		UB+ towards UB-		(not with ratiometric signal output)			
Weight	g	Approx. 70					

Dimensions in mm

Ingress Protection IP per IEC 60 529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

Electrical connections

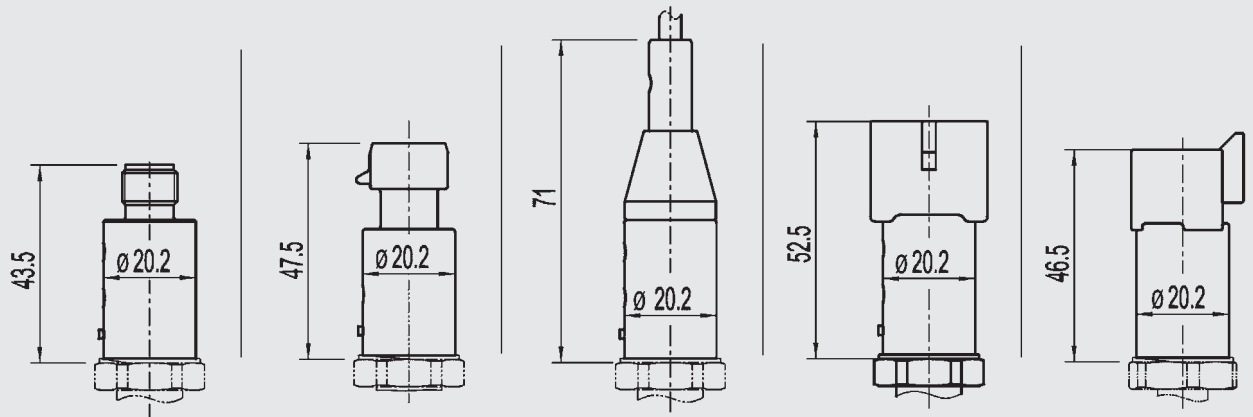
Circular connector
M 12x1, 4-pin
IP 67
Order code: M4

Connector
Metri Pack Serie 150
IP 67
Order code: R3

Flying leads
conductor cross section
0.34 mm² with end
splices, conductor outer
diameter 5.2 mm,
IP 69K
Order code: FN

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

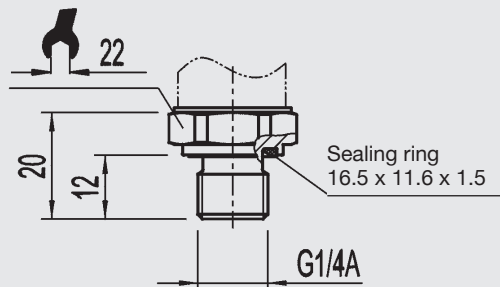
Connector
Deutsch
DT04-3P, 3-pin
Order code: G3



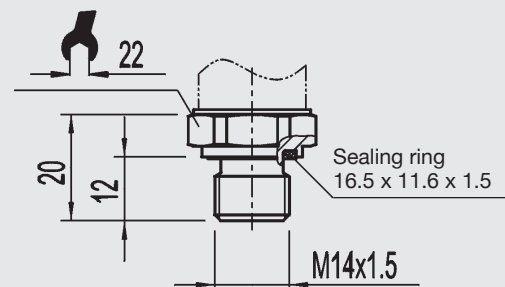
Other on request

Pressure connection *)

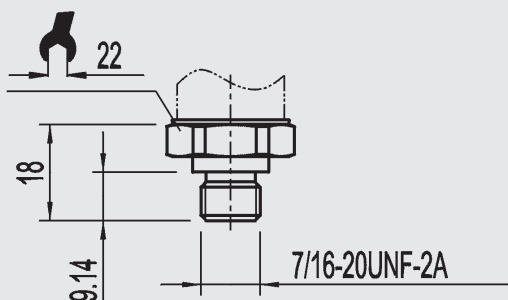
G 1/4
DIN 3852-E
Order code: HD
(over pressure safety
max. 600 bar)



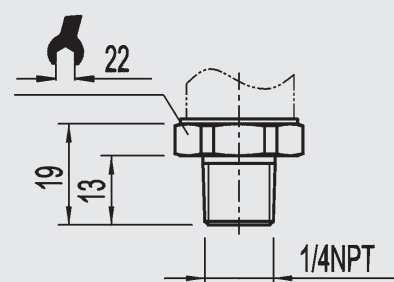
M 14x1,5
DIN 3852-E
Order code: HN
(over pressure safety max. 600 bar)



7/16-20 UNF-2A
male O-Ring
Order code: UA



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



Other on request

For installation and safety instructions see operating instructions for this product.

For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de

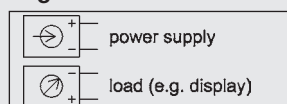
*) CDS system: reduced pressure channel diameter for damping of pressure peaks and against cavitation.

Electrical connection

	2-wire	3-wire
M 12x1, 4-pin Circular connector		
Connector Metri Pack Series 150		
Flying leads		
Connector AMP Superseal 1.5		
Connector Deutsch DT04-3P		

additional PIN assignments on request

Legend:



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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