

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

WIKA data sheet PE 81.37

ISO/TS 16949

ISO 14001

## Applications

Mobile hydraulics

- Load monitoring
- Load moment limitation
- Hydraulic drive control

## Special features

- Excellent reliability of supply and quality to ISO/TS 16 949
- Tested for extreme operating conditions
- Compact and robust design
- MTTFd-values > 100 years



Pressure transmitter model MH-2

## 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 ... 6 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 thin film measuring cell guarantees long-term leak tightness. There are no additional sealing materials required.

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. 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

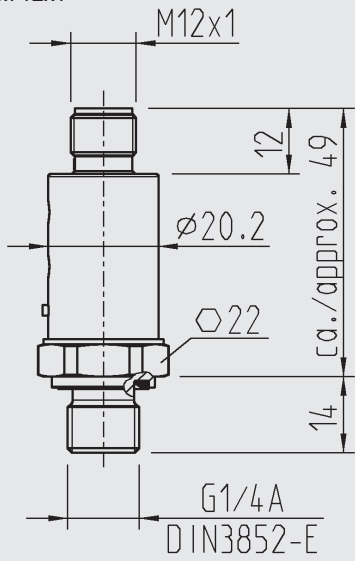
## Model MH-2

Pressure ranges	bar	6	10	16	25	40	60	100	160	250	400	600
Over pressure safety	bar	20	20	32	50	80	120	200	320	500	800	1200
Burst pressure	bar	100	100	160	250	400	550	800	1000	1200	1700	2400
Materials												
■ Wetted parts		Stainless steel										
■ Case		Highly resistive, fiberglass-enforced plastic (PBT)										
Electronics		Signal output					Power supply U+			Maximum load RA		
		4 ... 20 mA, 2-wire					DC 10 ... 36 V			RA ≤ (UB - 10 V) / 0.02 A		
		1 ... 5 V, 3-wire					DC 8 ... 36 V			RA > 2.5 kOhm		
		0 ... 10 V, 3-wire					DC 14 ... 36 V			RA > 5 kOhm		
		0.5 ... 4.5 V, ratiometric					DC 5 ± 0.5 V			RA > 4.5 kOhm		
		Others on request										
Response time (10 ... 90 %)	ms	≤ 2										
Insulation voltage		DC 500 V										
Accuracy *)	% of span	≤ 1.0										
	% of span	≤ 2.0 for pressure ranges ≤ 16 bar										
		*) 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					
Rated temperature range		0 ... +80 °C					+32 ... +176 °F					
Temperature error within rated temperature range	% of span	≤ 1 typ. ≤ 1.5 max.										
CE-conformity												
■ Pressure equipment directive		97/23/EC										
■ EMC directive		2004/108/EC, EN 61 326 Emission (Group 1, Class B) and Immunity (table 2)										
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		S+ towards U-										
■ Reverse polarity protection		U+ towards U-					(not with ratiometric signal output)					
Weight	g	Approx. 70										

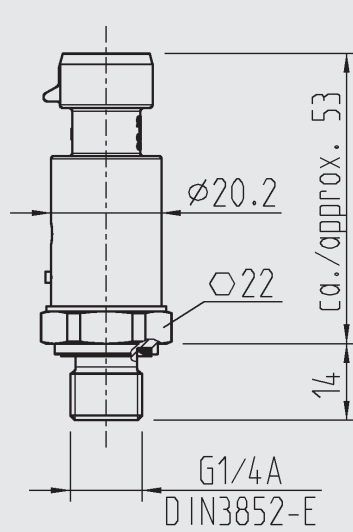
Dimensions in mm

Electrical connections

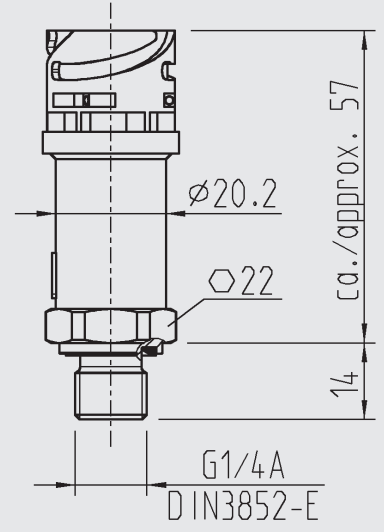
Circular connector  
M 12x1



Connector  
Metri Pack Serie 150

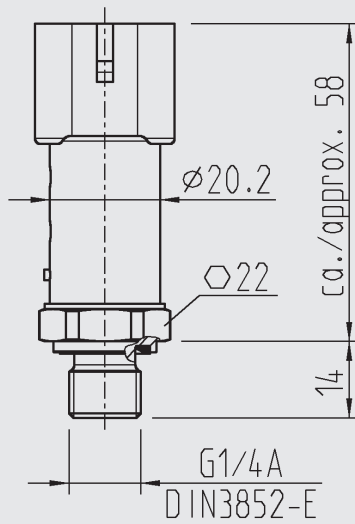


Bayonet connector  
DIN 72 585

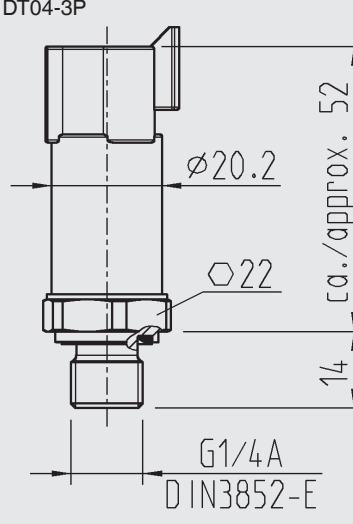


Other on request

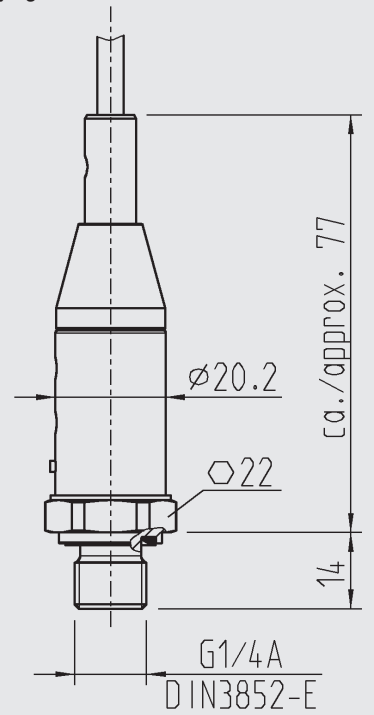
Connector  
AMP Superseal 1.5



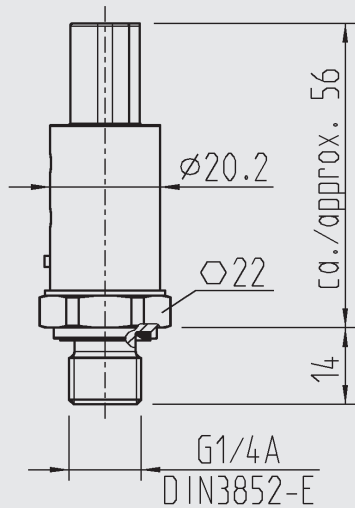
Connector  
Deutsch  
DT04-3P



Flying leads

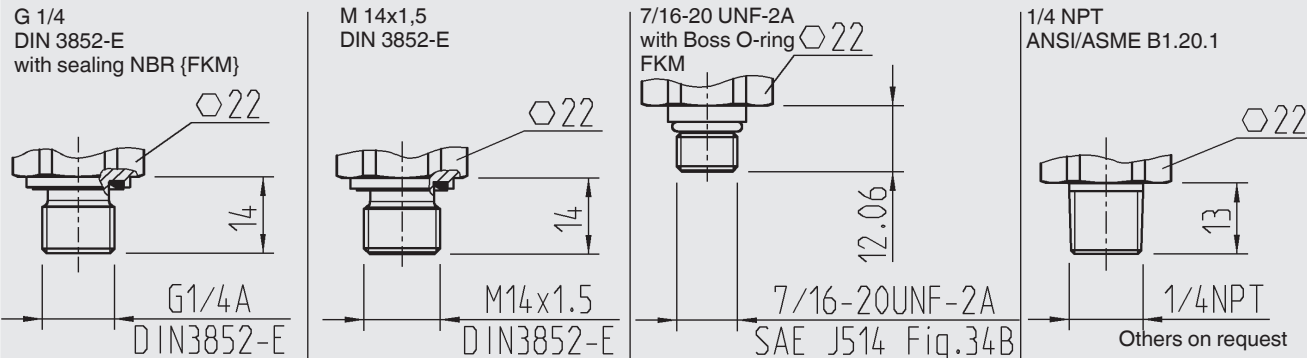


AMP Micro Quadlock



Other on request

**Pressure connection \*)**



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](http://www.wika.de)

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

**Electrical connections**

	M 12x1, 4-pin Circular connector	Connector Metri Pack Series 150 3-pin	Bayonet connector per DIN 72 585, 4-pin	Connector AMP Superseal 1.5, 3-pin
2-wire	U+ = 1   U- = 3	U+ = B   U- = A	U+ = 1   U- = 2	U+ = 3   U- = 1
3-wire	U+ = 1   U- = 3   S+ = 4	U+ = B   U- = A   S+ = C	U+ = 1   U- = 2   S+ = 3	U+ = 3   U- = 1   S+ = 2
Ingress protection per IEC 60 529	IP 67	IP 67	IP 69K	IP 67

The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

**Electrical connections**

	Connector Deutsch DT04-3P, 3-pin	Flying leads	AMP Micro Quadlock, 3-pin
2-wire	U+ = A   U- = B	U+ = brown   U- = green	U+ = 3   U- = 1
3-wire	U+ = A   U- = B   S+ = C	U+ = brown   U- = green   S+ = white	U+ = 3   U- = 1   S+ = 2
Wire gauge	-	0.75 mm <sup>2</sup> (with end splices)	-
Diameter of cable	-	6.....6 mm	-
Ingress protection per IEC 60 529	IP 67	IP 69K	IP 67

The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

additional PIN assignments on request

**Legend:**

- 2-wire The two connection lines are used for the power supply. The measurement signal also provides the supply current.
- 3-wire Two of the connection lines are used for the power supply. One connection line is used for the measurement signal.
- U+ Positive power terminal
- U- Negative power terminal
- S+ Positive measurement terminal
- S- Negative measurement terminal

The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.



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