

# HOD

## HIGH PRESSURE TRANSMITTER



### Description

The **HOD** (High Pressure) is a high-quality, all-stainless-steel pressure transmitter with wetted parts made from titanium. This makes it ideally suited for use in measuring gases and liquids with high pressures. The sensor is suitable for industrial hydraulics, off-road, construction, and agricultural applications.

With additional EMI/RFI protection, low static and thermal errors, and high resistance to shock and vibration as standard, the **HOD** ensures trouble-free operation at temperatures up to 125°C. The piezoresistive sensing element, coupled with the latest ASIC circuitry, ensures excellent accuracy, a choice of high-level outputs, and long stability, all protected within a rugged, stainless steel housing.

### Application

- Water jet cutting
- Test benches
- High-pressure pasteurization
- High-pressure cleaning
- High-pressure processing
- Automotive industry
- Industrial hydraulics
- Hydroforming
- Autofrettage



### Main Features

■ Piezoresistive Technology	■ Response Time: < 1 ms
■ Pressure Type: Gauge	■ High Strength, Rugged Titanium Design
■ Measuring Range: 0 ... 2000 bar to 0 ... 5000 bar	■ Output Signal: 4 ... 20 mA, 0 ... 10 VDC, 0 ... 5 VDC 1 ... 5 VDC, 0.5 ... 4.5 VDC Ratiometric, I <sup>2</sup> C
■ High Resistance to Shock and Vibration	■ Media Temperature: -40 ... +125 °C
■ Accuracy @ RT: ≤ ±1 %FS, acc. to IEC 61298-2	■ Ambient Temperature: -40 ... +105 °C
■ Process Connection: M18 x 1.5 Male, 9/16"-18 UNF Female	■ Electrical Connection: DIN EN 175301-803, Form A DIN EN 175301-803, Form C M12x1, 4-pin, Mat. Steel Packard Metri-Pack, 3-pin Cable Outlet

## Technical Specification

Input Pressure	
Pressure Type	Gauge
Pressure Range [bar]	0 ... 2000 bar to 0 ... 5000 bar
Overpressure [Max]	See Pressure Range table
Burst Pressure [Min]	See Pressure Range table
Vacuum Resistance	YES

Pressure Range			
Code	Pressure Range (bar)	Overpressure (bar)	Burst Pressure (bar)
2000	0 ... 2000	2400	3000
2500	0 ... 2500	3600	4500
4000	0 ... 4000	4800	6000
5000	0 ... 5000	6000	7000

Performance		
Accuracy @ RT	% of the range < 1.0 BFSL ≤ 0.5	(incl. non-linearity, hysteresis, repeatability, zero offset and final offset acc. to IEC 61298-2)
Non-linearity	% of the range ≤ 0.30	
Repeatability	% of the range ≤ 0.20	
Stability / Year	% of the range ≤ 0.20	
Response Time (10 ... 90 %)	1 ms	
Pressure Cycles	> 10 million	

Environment		
Media Temperature	-40 ... +125 °C	
Ambient Temperature	-40 ... +105 °C	
Storage Temperature	-40 ... +125 °C	
Compensated Temperature	-20 ... +85 °C	
Mean TC Offset	% of the range ≤ 0.15 / 10K	Temperature Coefficient within the Compensated Range
Mean TC Range	% of the range ≤ 0.15 / 10K	
Shock Resistance	1000 g, 11 ms, 1/2 Sin	
Vibration Resistance	25 g, peak, (20 ... 2000 Hz)	
Ingress Protection	IP65, IP67, IP69K (optional)	

## Electronic

Output Signal	Supply
4 ... 20 mA / 2-wire	10 ... 32 VDC
0 ... 10 VDC / 3-wire	12 ... 32 VDC
0 ... 5 VDC / 3-wire	10 ... 32 VDC
1 ... 5 VDC / 3-wire	10 ... 32 VDC
0.5 ... 4.5 VDC Ratiometric / 3-wire	5 VDC
I <sup>2</sup> C	5 VDC
Output Impedance	< 100 Ω
Current Consumption	< 10 mA
Reverse Voltage Protection	YES

## Electrical Definition

Code		Definition
+V	+	Supply Voltage +
-V	-	Supply Voltage -
I Out	-	Current Output
+V Out	V out	Voltage Output
N.C	nc	No Connection
⏚	⏚	Grounding

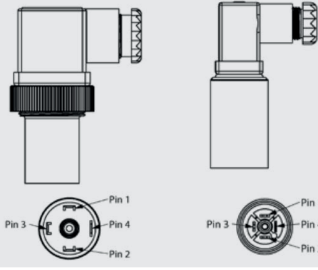
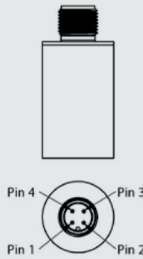
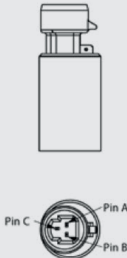

## Mechanic

Feature	Type
Housing Material	Stainless Steel 304
Wetted Parts Material	Titanium
Process Connection	M18 x 1.5 Male 9/16"-18 UNF Female
Electrical Connection	DIN EN 175301-803, Form A DIN EN 175301-803, Form C M12x1, 4-pin, Mat. Steel Packard Metri-Pack, 3-pin Cable Outlet

## Miscellaneous

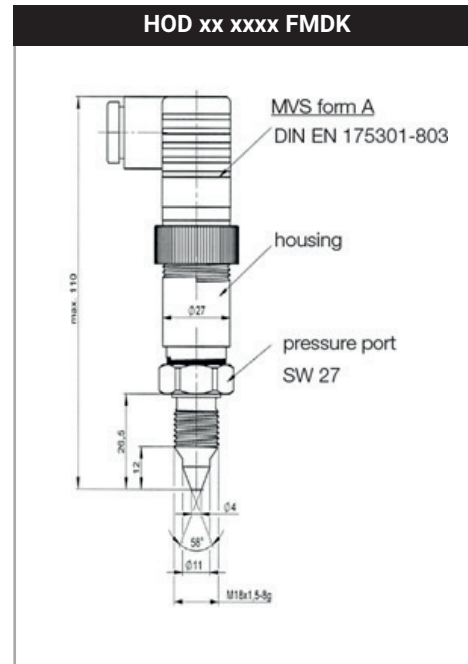
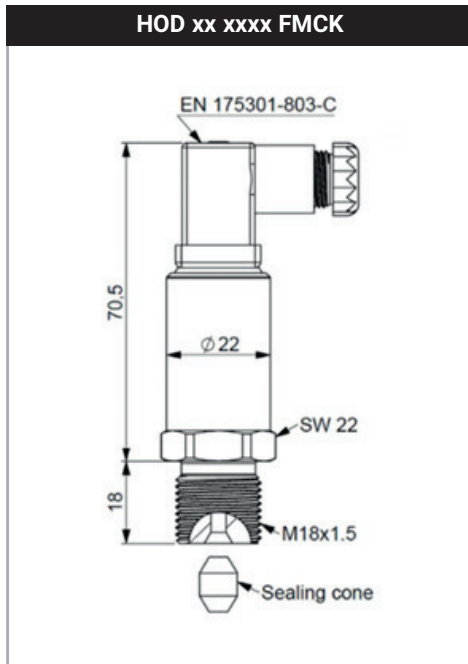
Feature	Description
Weight	Approx. 140 g
Mounting Force	Max. 25 Nm
Calibration	Output is calibrated at zero & full scale

## Wiring

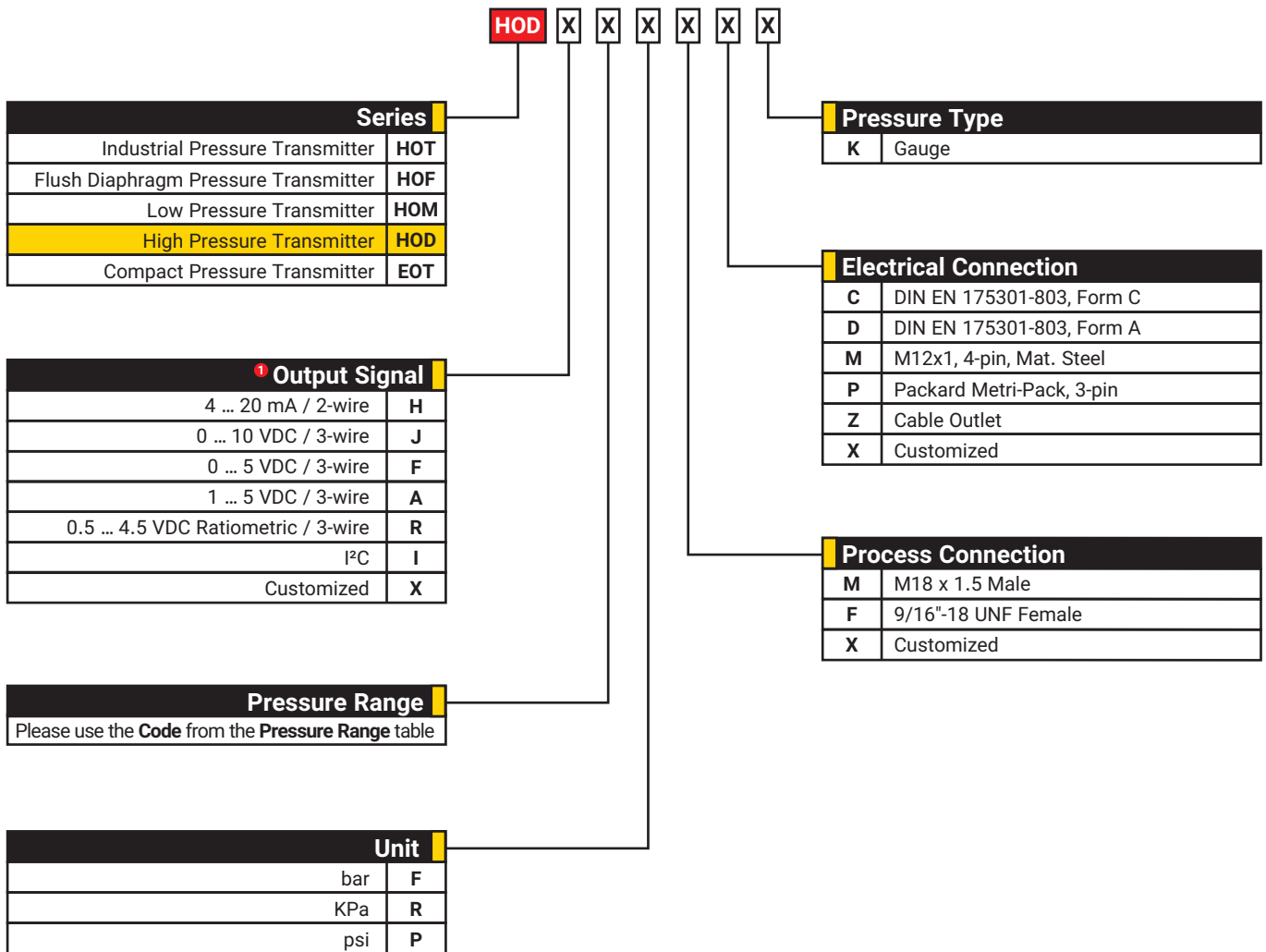
DIN EN 175301-803, Form A and C	Output	PIN 1	PIN 2	PIN 3	PIN 4
	4 ... 20 mA	+V	I Out	N.C	-
	0 ... 10 VDC				
	0 ... 5 VDC	+V	-V	+V Out	-
	1 ... 5 VDC				
	0.5 ... 4.5 VDC				
	I <sup>2</sup> C	-	-	-	-
M12x1, 4-pin	Output	PIN 1	PIN 2	PIN 3	PIN 4
	4 ... 20 mA	+V	N.C	I Out	N.C
	0 ... 10 VDC				
	0 ... 5 VDC	+V	N.C	-V	+V Out
	1 ... 5 VDC				
	0.5 ... 4.5 VDC				
	I <sup>2</sup> C	+V	-V	SCL	SDA
Packard Metri-Pack, 3-pin	Output	PIN A	PIN B	PIN C	-
	4 ... 20 mA	+V	I Out	N.C	-
	0 ... 10 VDC				
	0 ... 5 VDC	+V	-V	+V Out	-
	1 ... 5 VDC				
	0.5 ... 4.5 VDC				
	I <sup>2</sup> C	-	-	-	-
Cable Outlet	Output	Red	Black	White	Green
	4 ... 20 mA	+V	I Out	N.C	-
	0 ... 10 VDC				
	0 ... 5 VDC	+V	-V	+V Out	-
	1 ... 5 VDC				
	0.5 ... 4.5 VDC				
	I <sup>2</sup> C	+V	-V	SCL	SDA

## Dimension

(unit:mm)



## How to Order



## Example

### HODH4000FMCK

HOF → Hogller High Range Pressure Transmitter: HOD Series

H → Output Signal: 4 ... 20 mA

4000F → Pressure Range: 0 ... 4000 bar

M → Process Connection: M18 x 1.5 Male

C → Electrical Connection: DIN EN 175301-803, Form C

K → Pressure Type: Gauge

#### ■ Note:

1. **1** The **power supply** depends on the selected **output signal** (please refer to the Electronics table on page 3).