HOF

FLUSH DIAPHRAGM
PRESSURE TRANSMITTER

Description

The **HOF** range of pressure sensors guarantees a wide application field with high accuracy, ruggedness, and a compact design. The stainless steel membrane is completely vacuum-sealed, extremely burst-resistant, and applicable for all standard media across hydraulics, pneumatics, environmental engineering, process technology, semiconductor technology, and automotive engineering.

As part of the stringent manufacturing process, all **HOF** pressure transmitters undergo individual pressure and temperature tests to conform to DIN EN ISO 9001:2008 standards. With compensation and adjustment performed electronically, these pressure transmitters are characterized by very low total error and excellent long-term stability. With the precision of modern electronics, the measured data is captured and processed very accurately.With permanent magnets, the zero point can be easily and securely adjusted at any time.

Application

- **Food and beverage industry**
- **Pharmaceutical industry**
- **Filling and packing machinery**
- **Water treatment**
- **Hydrostatic level measurement**
- **Automotive Engineering**

CE

Main Features

▪ **Piezoresistive Technology**	▪ **Flush Mount Stainless Steel design**
▪ **Pressure Type:** Gauge, Sealed Gauge	▪ **High Strength, Rugged Stainless Steel Design**
▪ **Measuring Range:** 0 … 100 mbar to 0 … 100 bar	▪ **Output Signal:** 4 … 20 mA, 0 … 10 VDC , 0 … 5 VDC 1 … 5 VDC , 0.5 … 4.5 VDC Ratiometric
▪ **High Precision ≤ ±0.35 %FS (BFSL)**	▪ **Zero Adjustment by Using a Magnet**
▪ **Ambient Temperature:** -20 … +80 °C	▪ **Media Temperature:** -20 … +100 °C
▪ **Process Connection:** G 1/2" A, Male, DIN 1179-2 Form E (≤ 60 bar) G 1" A, Male, DIN 1179-2 Form E (> 60 bar)	▪ **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, Sealed Gauge
Pressure Range [bar]	0 … 100 mbar to 0 … 100 bar
Overpressure [Max]	1.5 times / 1.2 times depending on pressure range
Burst Pressure [Min]	2 times / 1.5 times depending on pressure range
Vacuum Resistance	YES

Pressure Range			
Code	**Pressure Range (bar)**	**Code**	**Pressure Range (bar)**
00.25	**0 … 0.25**	**0006**	**0 …6**
000.4	**0 … 0.4**	**0010**	**0 …10**
000.6	**0 … 0.6**	**0016**	**0 …16**
0001	**0 … 1**	**0025**	**0 …25**
001.6	**0 … 1.6**	**0040**	**0 …40**
002.5	**0 … 2.5**	**0060**	**0 …60**
0004	**0 … 4**	**0100**	**0 …100**

Performance		
Accuracy @ RT	0.45 %FS (limit point) 0.35 %FS (BFSL)	Including non-linearity, zero point and full scale error, hysteresis, non-linearity and repeatability. Compensation measurement and adjustment for vertical mounting position.
Non-linearity	% of the range ≤ 0.1 (BFSL)	Integral linearity error (FS = Full Scale, BFSL = Best Fit Straight Line)
Repeatability	% of the range ≤ 0.1	–
Long-term Stability	% of the range ≤ 0.1	1-year stability at reference conditions
Response Time (10 ... 90 %)	1 ms	–
Adjustability of Zero	Straightforward zero correction by using a magnet	–

Environment			
Media Temperature	-20 … +100 °C		
Ambient Temperature	-20 … +80 °C		
Storage Temperature	-20 … +100 °C		
Compensated Temperature	-20 … +80 °C		
Mean TC Offset	% of the range ≤ 0.15 / 10K		
Mean TC Range	% of the range ≤ 0.15 / 10K		
Shock Resistance	1000 g	acc. to IEC 60068-2-27	mechanical
Vibration Resistance	20 g	acc. to IEC 60068-2-6	resonance
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	
Wiring Protection	Overvoltage	32 VDC
	Short-circuit strength	Out+ / UB- (for 1s)
	Reverse polarity	UB+/ UB-

Mechanic

Feature	Type
Housing Material	Stainless Steel 304
Wetted Parts Material	Stainless Steel 304 Stainless Steel 316L (optional) FKM Seal
Process Connection	G 1/2" A, Male, DIN 1179-2 Form E (for pressure range ≤ 60 bar) G 1" A, Male, DIN 1179-2 Form E (for pressure range > 60 bar)
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

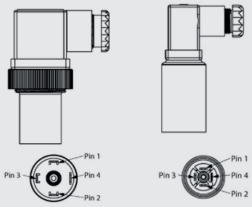
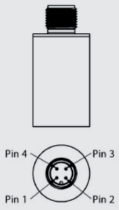
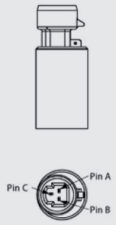
Miscellaneous

Feature	Description
Weight	Approx. 200 g
Mounting Force	Max. 45 Nm
Calibration	Output is calibrated at zero & full scale

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

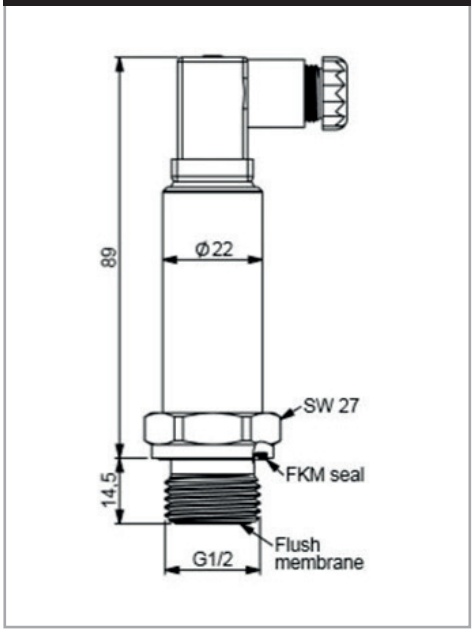
Wiring

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 1 … 5 VDC 0.5 … 4.5 VDC	+V	-V	+V Out	–
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 1 … 5 VDC 0.5 … 4.5 VDC	+V	N.C	-V	+V Out
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 1 … 5 VDC 0.5 … 4.5 VDC	+V	-V	+V Out	_
Cable Outlet	**Output**	**Red**	**Black**	**White**	**Green**
	4 … 20 mA	+V	I Out	N.C	_
	0 … 10 VDC 0 … 5 VDC 1 … 5 VDC 0.5 … 4.5 VDC	+V	-V	+V Out	_

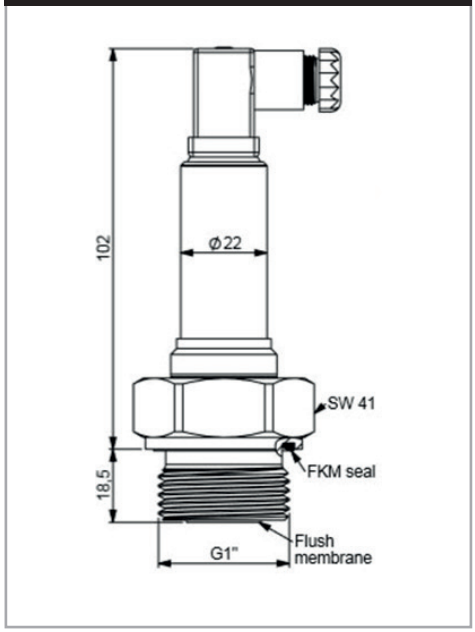
Dimension

(unit:mm)

HOF xx xxxx FWCK



HOF xx xxxx FNCK



How to Order

HOF X X X X X X

Series	
Industrial Pressure Transmitter	HOT
Flush Diaphragm Pressure Transmitter	HOF
Low Pressure Transmitter	HOM
High Pressure Transmitter	HOD
Compact Pressure Transmitter	EOT

[1] Output Signal	
4 … 20 mA / 2-wire	H
0 … 10 VDC / 3-wire	J
0 … 5 VDC / 3-wire	F
1 … 5 VDC / 3-wire	A
0.5 … 4.5 VDC Ratiometric / 3-wire	R
Customized	X

Pressure Range
Please use the **Code** from the **Pressure Range** table

Unit	
bar	F
KPa	R
psi	P

Pressure Type	
K	Gauge

Electrical Connection	
C	DIN EN 175301-803, Form C
D	DIN EN 175301-803, Form A
M	M12x1, 4-pin, Mat. Steel
P	Packard Metri-Pack, 3-pin
Z	Cable Outlet
X	Customized

Process Connection	
N	G 1" Male
W	G 1/2" Male
X	Customized

Example

HOFH0010FWCK

HOF →Hogller Flush Diaphragm Pressure Transmitter: HOF Series

H→ Output Signal: 4 … 20 mA

0010F→ Pressure Range: 0 … 10 bar

W→ Process Connection: G 1/2" Male

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

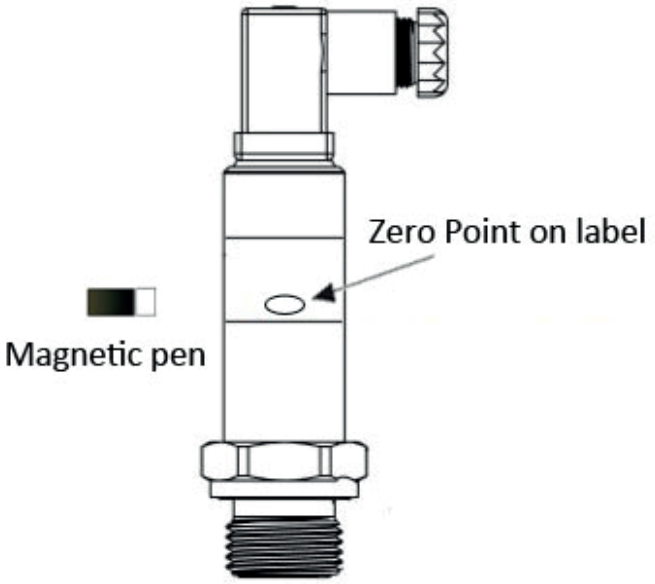
K → Pressure Type: Gauge

Note:

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

Installation

The zero can be easily set with a magnet within ±10% of the nominal range.
For zero-point correction, a permanent magnet is placed at the marked position on the pressure transmitter for **30 seconds to 2 minutes and 30 seconds** after the power is turned on. The pressure applied during this time must be less than 12% of the nominal pressure range. This pressure value is saved as the new zero point. Any magnetic field applied outside the time window does not affect the setting. This process can only be repeated after switching off and restarting the supply voltage.



Safety information
During installation, putting into service, and operation of these pressure sensors, it is necessary to observe the relevant safety regulations enforced in the user's country (e.g., DIN VDE 0100).

Caution

The Hogller Flush Diaphragm is a piezoresistive pressure sensor susceptible to damage. The sensor's diaphragm can be harmed in various ways, from scratching the surface to denting and puncturing. The key to avoiding damage to the pressure sensor is to protect the diaphragm. Please refrain from dropping, touching, or bumping the sensor.

Important Note

DAMAGED FLUSH DIAPHRAGM DUE TO MISHANDLING WILL NOT BE COVERED BY THE WARRANTY!