HFP51
Flush Diaphragm Pressure Transmitter

The HFP51 series features a flush diaphragm and cavity-free design, eliminating clogging and residue caused by viscous, particulate, or crystallizing media. Its high-strength stainless steel sensing diaphragm ensures excellent impact, erosion, and corrosion resistance, making it ideal for slurry, crude oil, food, and pharmaceutical applications.

A dedicated ASIC amplifier provides low-noise, high-linearity signal conditioning and temperature compensation, significantly enhancing output stability over the full temperature range. Optimized attaching, bonding and packaging processes reduce creep and hysteresis, delivering nonlinearity accuracy of ±0.25% FS and long-term stability better than 0.25% FS/year.



FEATURES

- Sturdy flush diaphragm, impact resistance
- Pressure range up to 1000Bar
- Variety of Pressure Ports
- Non linearity upto ±0.5%
- Up to ±1.0% Total Error Band
- -10℃...+70℃ Compensated Temperature
- -40℃...+120℃ Operating Temperature

GREAT FOR

- Coatings & polyurethane equipment
- Food/Pharma equipment
- Paint inspection systems
- Mud, slurry pumps, coal slurry, pulp, crude oil, asphalt
- Oilfield drilling, logging, offshore platforms
- Oil well measurement instruments
- Other industrial sites needing anti-clogging, high vibration & impact resistance



Configurable Design

The HFP51 is ideal for demanding industrial applications requiring high ruggedness and reliability. It offers flexible choices of thread sizes, pressure ranges (up to 1,000 bar), electrical connections (cable or connector), wetted materials, and output signals.

Hansensol provides semi-custom and fully custom designs based on volume and application needs.

Other unlisted configurations can also be achieved. Please feel free to inquire.

Version | 01.2026

The information provided herein is, to the best of Hansensol's knowledge, true and accurate.
It is provided for guidance only, and all specifications are subject to change without prior notice.

SPECIFICATIONS

Performance

Accuracy*	**> 5.0MPa**	≤±0.25%FS BSFL
	< 5.0MPa	≤± 0.5%FS BSFL
Stability (1 year)		≤0.25%FS
Pressure Cycles		1×10^7
Proof Pressure		1.5X
Burst Pressure		2X （15k psi Max）

** Accuracy includes non-linearity, hysteresis and non-repeatability*

Thermal

Operating Temperature		-20···120℃
Media Temperature		-20···120℃
Storage Temperature		-40···120℃
Compensated Temperature		-10···70℃
TC Zero	**> 5.0MPa**	≤ ±0.5% typical,, ±1% Max
	< 5.0MPa	≤±1%FS typical,, ±1.5% Max
TC Span	**> 5.0MPa**	≤ ±0.5% typical,, ±1% Max
	< 5.0MPa	≤±1%FS typical,, ±1.5% Max

Enviromantal

Isolation (Body to any Lead)	1000 MΩ@500VDC
EMI/RFI Protection	Yes
IP Rating:	IP65minimum
Vibration:	±20g,1Hz to 200Hz
Shock	50g,11msec,1/2sine

** IP Rating is dependent on electrical termination selected. Contact factory for more information.*

** IP Rating applies when electrical connector is attached with the appropriate ingress protection.*

Electrical (Current)

Outputs:	4···20mA
Excitation:	9-36V
Current Consumption:	< 10 mA
Output Load:	0···1350Ω
Frequency Response (min):	<3ms Without Snubber
Zero Offset (of FS):	≤ ±0.5% typical,
Span Tolerance (of FS):	≤ ±0.5% typical,, ±1% Max

Electrical (Voltage)

Outputs:	0-5V, 1-5V, 1-6V, 0-10V
Excitation:	13-36V
Current Consumption:	< 10 mA
Output Load:	> 100kΩ
Frequency Response (min):	<2ms Without Snubber
Zero Offset (of FS):	≤ ±0.5% typical,
Span Tolerance (of FS):	≤ ±0.5% typical,, ±1% Max

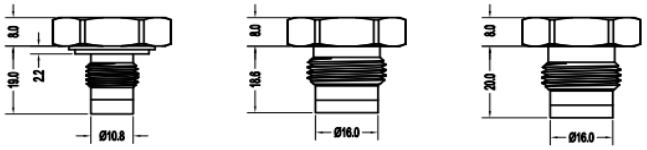
Outputs:	0.5-4.5V ratiometric
Excitation:	5V
Current Consumption:	< 10 mA
Output Load:	> 100kΩ
Frequency Response (min):	<2ms Without Snubber
Zero Offset (of FS):	≤ ±0.5% typical,
Span Tolerance (of FS):	≤ ±0.5% typical,, ±1% Max

Outputs:	0.5-2.5V ratiometric
Excitation:	3-5VDC
Current Consumption:	< 3 mA
Output Load:	> 100kΩ
Frequency Response (min):	<2ms Without Snubber
Zero Offset (of FS):	≤ ±0.5% typical,
Span Tolerance (of FS):	≤ ±0.5% typical,, ±1% Max

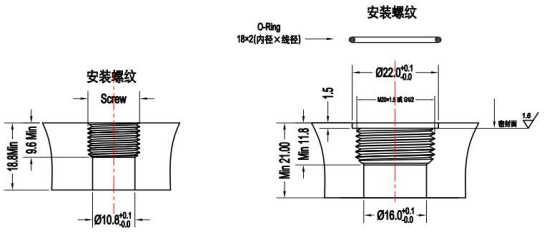
Version | 01.2026

The information provided herein is, to the best of Hansensol's knowledge, true and accurate.
It is provided for guidance only, and all specifications are subject to change without prior notice.

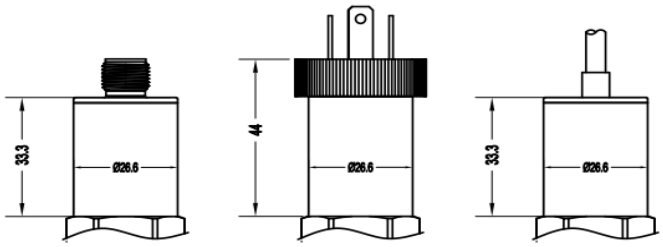
Pressure Connection



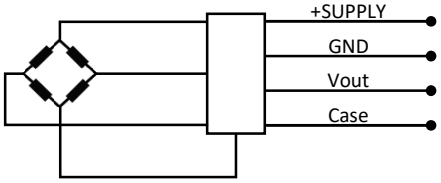
Thread Mounting



Electrical Connection

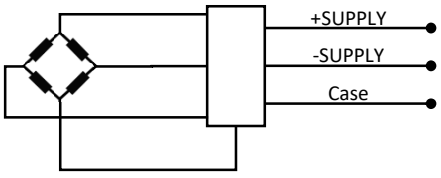


VOLTAGE AMPLIFIED OUTPUT



Cable	M12	Form A
RE	1	3
BK	2	2
WH	3	1
Shield	4	4

CURRENT AMPLIFIED OUTPUT



Cable	M12	Form A
RE	1	1
BK	2	2
Shield	4	4

Version | 01.2026

The information provided herein is, to the best of Hansensol's knowledge, true and accurate.
It is provided for guidance only, and all specifications are subject to change without prior notice.

Ordering Information

HFP51	-	3	4	1	1	1	G2J	-	010B	G	-	000

Output

1	0.5-4.5V RATIOMETRIC
2	1-5V
3	4-20mA
4	0-5V
5	0-10V
6	1-6V
7	0.5-4.5V
X	Customer Special

Connection

1	Cable
4	M12
5	FORM A
X	Customized

Material (Diaphragm+Screw)

1	17-4PH+304

Snubber

2	Without Snubber

Label

0	No
1	Adhesive
2	Lazer

Options

000	No Special Option

Pressure Type

G	Gauge

Pressure Range+Unit

Code	PSI	Code	Bar
100P	0-100	007B	0-7
150P	0-150	010B	0-10
250P	0-250	016B	0-16
500P	0-500	035B	0-35
1000P	0-1000	070B	0-70
1500P	0-1500	100B	0-100
2250P	0-2250	150B	0-150
3000P	0-3000	200B	0-200
5000P	0-5000	350B	0-350
7500P	0-7500	500B	0-500
010KP	0-10000	700B	0-700
015KP	0-15000	1000B	0-1000

Pressure Port

G4D	G1/2 DIN
M20	M20×1.5 mm ISO 6149-2
X	Customized

Version | 01.2026