HU53
Industrial Pressure Transmitter

The HU53 series features a diffused silicon sensing element with a welded one-piece stainless steel pressure cavity – no O-rings, no organics exposed to media – eliminating leakage and ensuring ruggedness.

Built-in signal conditioning provides various analog voltage or 4-20mA outputs, with reverse polarity and short circuit protection.The sensor offers ±0.2% non-linearity accuracy, ±1.5% total error band, . Compact and robust, it delivers excellent long-term reliability and is ideal for OEM medium to high volume applications.

Fully custom designs are also available.



FEATURES

- Welded diffused silicon sensor module design, no O-rings
- Pressure range -1...70 bar (gauge, absolute, compound optiona
- Reverse Polarity Protection on Input
- Short Circuit Protection on Output
- Up to ±0.2% Accuracy
- Up to ±1% Total Error Band
- Compact Outline
- -40°C to +125°C Operating Temperature
- 0°C to +70°C Compensated Temperature

GREAT FOR

- Military / Aerospace test benches
- Automotive test benches
- High-end industrial machinery
- Pressure calibration equipment
- High-precision measurement applications
- Precision HVAC systems



Configurable Design

The HU53 is ideal for demanding industrial applications requiring high ruggedness and reliability. It offers flexible choices of thread sizes, pressure ranges (up to 1,000 psi), 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.

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SPECIFICATIONS

Performance

Accuracy	⩽±0.2%FS BSFL
Stability (1 year)	⩽0.1%FS
Pressure Cycles	1×10^7
Proof Pressure	2X
Burst Pressure	3X (1500PSI Max)

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

Thermal

Operating Temperature	-40···125℃
Media Temperature	-40···125℃
Storage Temperature	-40···125℃
Compensated Temperature	'-10···70℃
TC Zero	⩽1%FS, ±1.5%FS Max
TC Span	⩽1%FS, ±1.5%FS Max

Enviromantal

Isolation (Body to any Lead)	100 MΩ@100VDC
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

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

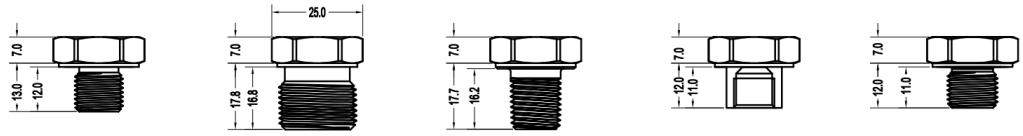
Outputs:	0.5-4.5V ratiometric
Excitation:	5V
Current Consumption:	< 10 mA
Output Load:	> 100kΩ
Frequency Response (min):	<2ms Without Snubber
Zero Offset (of FS):	⩽ ±0.5% typical
Span Tolerance (of FS):	⩽ ±0.5% typical

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

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Pressure Connection

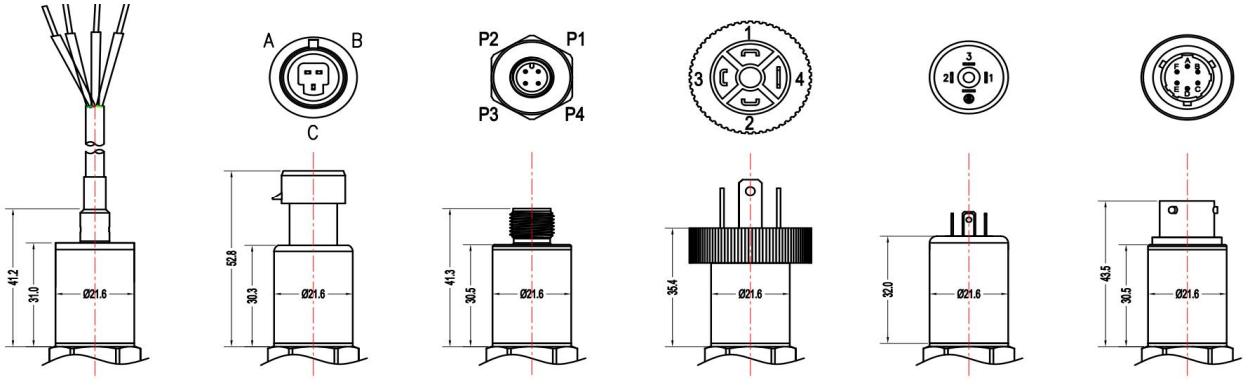


G1/4 JISB 2351 | M20×1.5 | 1/4-18NPT | 7/16-20UNF FEMALE

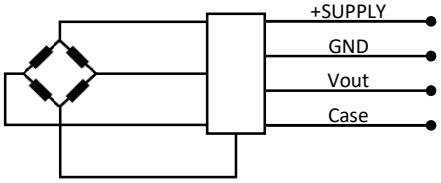
1/8-27NPT | M12×1.5 | M10×1.0 | G1/4 DIN3852

Electrical Connection

Cable	Packard	M12	FormA	FormC	Bendix
IP65	IP65	IP67	IP65	IP65	IP68

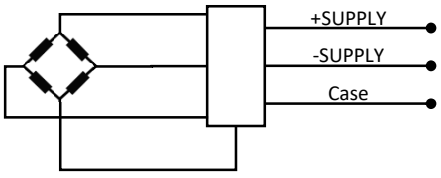


VOLTAGE AMPLIFIED OUTPUT



Cable	Packard A	Packard B	M12	Form A	Form C	Bindex 6P
RE	A	B	1	3	3	A
BK	B	A	2	2	2	B
WH	C	C	3	1	1	C
Shield	/	/	4	4	4	F

CURRENT AMPLIFIED OUTPUT



Cable	Packard A	Packard B	M12	Form A	Form C	Bindex 6P
RE	A	B	1	1	1	A
BK	B	A	2	2	2	B
Shield	/	/	4	4	4	F

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Ordering Information

HU53	-	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
2	Packard A
2	Packard B
4	M12
5	FORM A
6	FORM C
7	Bindex 6P
X	Customized

Material (Diaphragm+Screw)	
3	316L+316L

Snubber	
1	With Snubber
2	Without Snubber

Label	
0	No
1	Adhesive
2	Lazer

Options	
000	No Special Option

Pressure Type	
G	Gauge
S	Sealed
C	Compound
A	Absolute

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

Pressure Port	
G2J	G1/4 JIS B2351
G2D	G1/4 DIN 3852
M20	M20×1.5 mm ISO 6149-2
N2	1/4-18 NPT
R2	R1/4
X	Customized

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