

Miniature Pressure Transducer

RP202S



Reference Accuracy up to 0.1%



Good anti-interference performance



Fast Response Time



IP65 Grade Protection

**Product
Datasheet**

ROCKSENSOR AT A GLANCE (ABOUT US)

Rocksensor is one of the global leaders specializing in Process Instrumentation, Research and Development, and Designing of Industrial Automation Equipment. We provide highly precise pressure sensors and transmitters, flow metres, level transmitters, and temperature transmitters with a prime focus to help our clients efficiently, safely, and economically run complex industrial processes.

Rocksensor, headquartered in Switzerland has its footprint in various geographical regions such as the US, Russia, South Korea, Italy, Germany, Singapore, Malaysia, Morocco, China, Taiwan, Australia, UAE, Brazil, and India. Our clients come from some of the major industries such as Oil and Gas, Petrochemicals, Pharmaceuticals, FMCG, Automobiles, Water, Cement, Metal & Mining, and mainly from the Power Industry like Nuclear, Thermal, Hydro, and Solar.

Rocksensor deals in a wide range of highly accurate industrial automation instruments ensuring that even the complex industrial processes happen efficiently.

To fulfill the needs of our clients we make sure that our instruments work in even the harsh environmental conditions offering accurate recordings and communication.

We, at Rocksensor, believe in creating bonds that last a lifetime and create a success story for each and every client. Rocksensor aims to achieve a perfect fit in the global market landscape and establish our footprints across the globe.



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1. Introduction

Compact structure suitable for applications with narrow installation space and designed for embedded applications of equipment and devices.

2. Key Applications

- Digital circuit compensation
- Reference Accuracy up to 0.1%
- Smaller diameter and easy installation
- Good anti-interference performance
- Suitable for negative pressure applications
- Fast Response Time
- IP65 Grade Protection
- Long Service Life ($> 10^7$ Pressure Cycles)
- Range up to 600 bar
- Optional with HART, RS485 Communication
- Variety of Process Connections available along with Flat Diaphragm

3. Technical Parameters

Parameter	Description		
Range	(-)100kPa ~ 0 - 6kPa ~ 60MPa		
Output options	4-20 mADC/ HART/ RS485/ 0-10 V/ 1-5 V/ 0-5 V/ 0.5 - 4.5 V		
Accuracy	0.1%	0.25%	0.5%
Temperature Coefficient	0.1%FS/10°C	0.25%FS/10°C	0.25%FS/10°C
Temperature Influence	0.2%FS((-)20 ~ 65°C)	0.5%FS((-)20 ~ 65°C)	1%FS((-)20 ~ 65°C)
Response Time	< 4 ms		
Electrical connections	Direct lead/ M12 navigation Plug/ Hirschman/ Parker/ Customized		
T _{Ambient}	(-)20°C ~ +80°C		
T _{storage}	(-)40°C ~ +80°C		
T _{medium}	(-)30°C ~ +120°C		
Diaphragm Material	SS316L, Hastelloy C, Customized		
Insulation Resistance	≥100 MΩ at 500 VDC		
Service Life	>10 ⁷ Pressure Cycle		
Degrees Of Protection	IP65		
Pressure Diaphragm Type	Gauge, Absolute & Sealing		
Power Supply	12 ~ 30VDC/ 5 VDC		

4. Model Selection Table

RP202S	Miniature Press. Transducer									
Code	1	2	3	4	5	6	7	8	9	10

Pressure Type	Span	Overload Pressure (0.1 %)	Overload Pressure (0.25% & 0.5%)	Range
G	0~6kPa	300kPa	300kPa	K006
G, A	0~40kPa	1MPa	150kPa	K040
G	0~100kPa	N. A.	400kPa	K100
G, A	0~250kPa	2MPa	1MPa	K250
G, A	0~1MPa	10MPa	2MPa	M001
G, A, S	0~3MPa	10MPa	6MPa	M003
G, S	0~10MPa	20MPa	20MPa	M010
G	0~40MPa	60MPa	60MPa	M040
G	0~60MPa	90MPa	90MPa	M060

Accuracy	
0.1%	C
0.25%	D
0.5%	E

Pressure Type	
Gauge	G
Absolute	A
Sealing	S

Power Supply	
24VDC	1
5 VDC	2

Output	
Analog 4-20 mA	S1
485RTU	S2
0-10V	S3
1-5V	S4
0-5V	S5
0.5-4.5V	S6
4-20mA/HART	SH

Diaphragm Material	
SS316L	1
Hastelloy C - 276	2

Input Pressure	
P	Positive Pressure Only
N	Negative Pressure
C	Compound Pressure (Negative to Positive)

Explosion Proof Protection	
N	None
D	Anti-explosion Exd II BT4

Electrical Connection	
J01	Direct Lead Connection
J02	M12 Navigation Plug
J03	Hirschman Connector
J04	Parker Connector
J00	Customization

Process Connection	
C01	G1/8(M)
C02	G1/4(M)
C03	G1/2(M)
C04	NPT1/8(M)
C05	NPT1/4(M)
C06	NPT1/2(M)
C07	M20x1.5(M) Flat Diaphragm
C08	Customizable

5. Pressure Conversion Table

	psi	atms	"H ₂ O	mm H ₂ O	cm H ₂ O	oz/in ²	Kg/cm ²	"Hg	mmHg (Torr)	cmHg	mbar	bar	Pa (N/m ²)	kPa	MPa
psi	1	0.0681	27.71	703.8	70.38	16	0.0704	2.036	51.715	5.17	68.95	0.0689	6,895	6.895	0.0069
atms	14.7	1	407.2	10,343	1,034.3	235.1	1.033	29.92	760	76	1013	1.013	101,325	101.3	0.1013
"H₂O	0.0361	0.00246	1	25.4	2.54	0.5775	0.00254	0.0735	1.866	0.187	2.488	0.00249	248.8	0.249	0.00025
mm H₂O	0.001421	0.000097	0.0394	1	0.1	0.0227	0.0001	0.00289	0.0735	0.00735	0.098	0.000098	9.8	0.0098	0.00001
cm H₂O	0.01421	0.000967	0.3937	10	1	0.227	0.001	0.0289	0.735	0.0735	0.98	0.00098	98	0.098	0.0001
oz/in²	0.0625	0.00425	1.732	43.986	4.40	1	0.0044	0.1273	3.232	0.3232	4.31	0.00431	431	0.431	0.00043
Kg/cm²	14.22	0.968	394.1	100,010	1,001	227.6	1	28.96	735.6	73.56	980.7	0.981	98,067	98.07	0.0981
"Hg	0.4912	0.03342	13.61	345.7	34.57	7.858	0.0345	1	25.4	2.54	33.86	0.0339	3,386	3.386	0.00339
mmHg	0.01934	0.001316	0.536	13.61	1.361	0.310	0.00136	0.0394	1	0.1	1.333	0.001333	133.3	0.1333	0.000133
cmHg	0.1934	0.01316	5.358	136.1	13.61	3.10	0.0136	0.394	10	1	13.33	0.01333	1,333	1.333	0.00133
mbar	0.0145	0.000987	0.4012	10.21	1.021	0.2321	0.00102	0.0295	0.75	0.075	1	0.001	100	0.1	0.0001
bar	14.504	0.987	401.9	10,210	1021	232.1	1.02	29.53	750	75	1,000	1	100,000	100	0.1
Pa	0.000145	0.00001	0.00402	0.102	0.0102	0.00232	0.00001	0.000295	0.0075	0.00075	0.01	0.00001	1	0.001	0.000001
kPa	0.14504	0.00987	4.019	102.07	10.207	2.321	0.0102	0.295	7.5	0.75	10	0.01	1,000	1	0.001
MPa	145.04	9.869	4019	102,074	10,207	2321	10.2	295.3	7500	750	10,000	10	1,000,000	1,000	1