

# Sanitary Gauge / Absolute Pressure Transmitter RP1002/3 DSH



High Accuracy & Stability :  $\pm 0.1\%$  to  $\pm 0.2\%$ ,



Process Connection : 2", 2.5" Tri-cover flush



Range : upto 100Mpa



IP Protection: IP65

**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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### KEY APPLICATION INDUSTRIES

- Oil and Gas sector
- Cement
- Metal
- Pulp and Paper
- Agriculture
- Textiles
- Chemicals
- Power
- Water
- Pharmaceutical
- Fertilizer
- Plastics and HVAC

## 1. Introduction

RP1002-DSH pressure transmitter is sanitary industrial application for gauge, absolute measured with ideal solution for different range measurement, adopts advanced flush diffusion silicon sensor as sensitive components, digital and stable circuit, precise temperature compensation, excellent sealing and assembly to guarantee the high quality and stability, widely used in sanitary food, medical pressure measurement industry.

### Used For:

- Food
- Milk
- Medical
- Pasteurization Sanitary Industry
- Fluid easy to scale information sanitary industry

## 2. Key Features

- High accuracy & stability :  $\pm 0.1\%$  to  $\pm 0.2\%$
- Gauge, Absolute Pressure measured
- Range : 0Kpa ~ 100Mpa
- 4-20mA, 2 wire, 0-10VDC, 3 wire output
- Process Connection : 2", 2.5" Tri-cover flush
- With anti-lightning, anti-RF interference
- Digital electrical board : Water-proof, Dust-proof, Anti-interference with reversed polarity protection & instantaneous over current 7 over cross-voltage protection
- 316L stainless steel diaphragm, stainless steel material suitable for various complicated environment



Sanitary Gauge / Absolute Pressure Transmitter



### 3. Technical Specifications

Characterstics	Parameters
Measured pressure	Gauge, Absolute
Process fluid	Liquid, Gas, Vapor, Oil
Range	(-)100Kpa...0...(-)10kpa...100Mpa
Accuracy	±0.1%FS, ±0.2%FS
Stability	0.1% %FS/year (standard), 0.2%FS/year (Max.)
Working temperature	-20 ~ 80°C, -20°C ~ 120°C
Compensation temperature	-10°C ~ 70°C
Zero temperature Shift	±0.03%FS/°C (≤100Kpa)
	±0.02%FS/°C (>100Kpa)
Full range temperature Shift	±0.03%FS/°C (≤100Kpa)
	±0.02%FS/°C (>100Kpa)
Overload pressure	200%FS, 150%FS
Insulation resistance	≥2000Ω (1000VDC)
Load resistance	4-20mA : ≥800Ω, 0-10VDC : ≥50KΩ
Process Connector	2", 2.5" Tri-cover flush, 1/2"G, M20X1.5 thread, flush
Diaphragm material	SS316L
Connection material	SS316 stainless steel
Body material	SS316 stainless steel
Output	4-20mA, 0-10VDC
Electrical connector	Hirschman plug, Air plug
EMC surge	(IEC61000-4-5) 2KV
EMC static	(IEC61000-4-2) contact at : 8KV, air arc:15KV
IP protection	IP65
Storage temperature	-10°C ~ 60°C
Storage humidity	10% ~ 90%
Power supply	12 - 40VDC
Standard power supply	24VDC ±5%, ripple< 1%

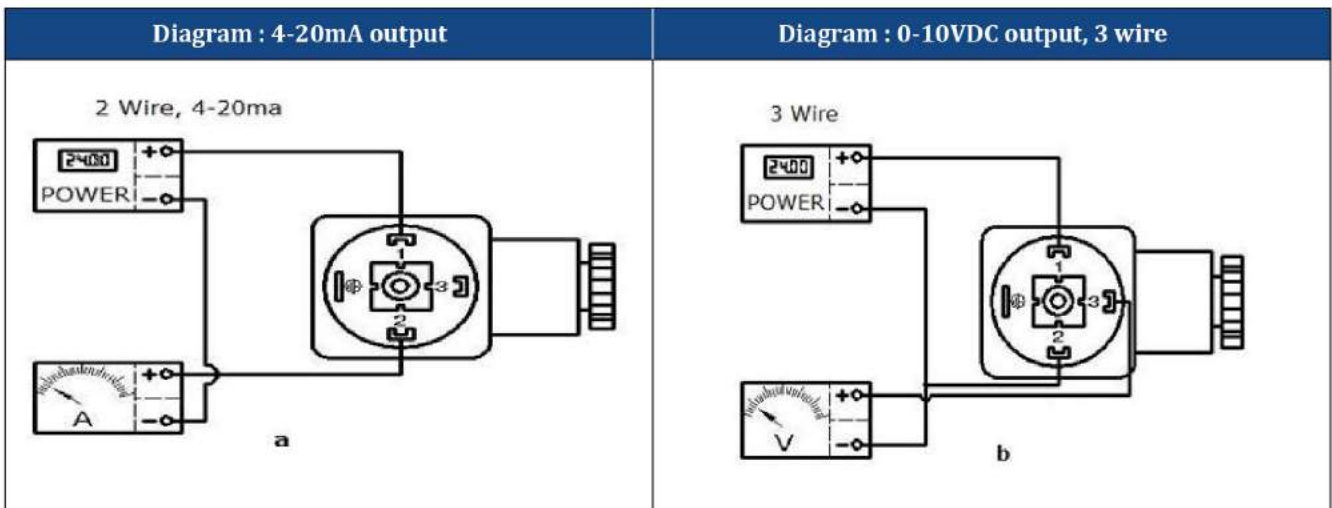
4. Size (mm)

Hirschman Plug, Tri-cover (Fluid: -20°C ~ 80°C)	Hirschman Plug, Tri-Cover (Fluid: 0 ~ 120°C)
<b>2" Tri-Cover</b>	<b>2.5" Tri-Cover</b>
<b>Accessory : Tri-Ferrule, option</b>	<b>Accessory : Tri-Clamp, option</b>

### 5. Measuring Range

Code	Range	Code	Range
01	0-10Kpa/ 0-0.1bar/0-100mbar	11	0-1.6Mpa / 0-16bar
02	0-20Kpa / 0-0.2bar/0-200mbar	12	0-2.5Mpa / 0-25bar
03	0-35Kpa/ 0-0.35bar/0-350mbar	13	0-4Mpa / 0-40bar
04	0-70Kpa/ 0-0.7bar/0-700mbar	14	0-6Mpa / 0-60bar
05	0-100Kpa/0-0.1Mpa/ 0-1bar	15	0-10Mpa / 0-100bar
06	0-160Kpa/0-0.16Mpa / 0-1.6bar	16	0-16Mpa / 0-160bar
07	0-250Kpa/0-0.25Mpa/0-2.5bar	17	0-25Mpa / 0-250bar
08	0-400kpa/0-0.4Mpa/0-4.0bar	18	0-40Mpa / 0-400bar
09	0-600kpa/0-0.6Mpa/0-6.0bar	19	0-60Mpa / 0-600bar
10	0-1Mpa/0-10bar	20	0-100Mpa / 0-1000bar

### 6. Diagram



## 7. Model Selection Table

RP1002/ 3DSH		Sanitary Gauge/ Absolute Pressure Transmitter						
Code		1	2	3	4	5	6	7
<b>Type</b>								
Gauge pressure	G							
Absolute pressure	A							
<b>Process Temperature</b>								
-20°C ~ 80°C	T1							
0 ~ 120°C	T2							
0 ~ 150°C	T3*							
<b>Measured Range (Absolute pressure range only for code 03, 05 to 12)</b>								
0-10Kpa/ 0-0.1bar/0-100mbar	01							
0-20Kpa / 0-0.2bar/0-200mbar	02							
0-35Kpa/ 0-0.35bar/0-350mbar	03							
0-70Kpa/ 0-0.7bar/0-700mbar	04							
0-100Kpa/0-0.1Mpa/ 0-1bar	05							
0-160Kpa/0-0.16Mpa / 0-1.6bar	06							
0-250Kpa/0-0.25Mpa/0-2.5bar	07							
0-400kpa/0-0.4Mpa/0-4.0bar	08							
0-600kpa/0-0.6Mpa/0-6.0bar	09							
0-1Mpa/0-10bar	10							
0-1.6Mpa / 0-16bar	11							
0-2.5Mpa / 0-25bar	12							
0-4Mpa / 0-40bar	13							
0-6Mpa / 0-60bar	14							
0-10Mpa / 0-100bar	15							
0-16Mpa /0-160bar	16							
0-25Mpa /0-250bar	17							
0-40Mpa /0-400bar	18							
0-60Mpa /0-600bar	19							
0-100Mpa /0-1000bar	20							
<b>Special Function</b>								
N	None							
A1	0.1% High Accuracy for range higher than 100Kpa							
A2	0.2% High accuracy for range between 100Kpa & 10Kpa							
S	Lighten surge protection							
T	Customized wide temperature compensation, such as -20 to 60 °C. please advise the compensation range. (Specially used for site with much temperature difference)							
-X	Customized							
<b>Electrical Connector</b>								
S	Hirschman plug							
C	Direct cable with 1m cable							
<b>Process Connection</b>								
P1	2" Tri-Cover, flush							
P2	2.5" Tri-Cover, flush							
PX	Customized							
<b>Output</b>								
A	4-20ma, 2 wire							
V2	0-10VDC, 3 wire							

### Example: RP1002/ 3DSH-GT101AP1SA1

RP1002/ 3DSH - Sanitary Gauge / Absolute Pressure Transmitter

G - Type : Gauge pressure measured

T1 - Process Temperature : -20°C ~ 80°C

01 - Measured Range (Absolute pressure range only for code 03, 05 to 12) : 0-10Kpa/ 0-0.1bar/0-100mbar

A - Output : 4-20ma, 2 wire

P1 - Process Connection : 2" Tri-Cover, flush

S - Electrical Connector : Hirschman plug

A1 - Special Function : 0.1% High Accuracy for range higher than 100Kpa

#### Note:

\*Please advise the cable length you required if the electrical connection is direct cable type

\*Overpressure limit: code 01 to 04: 300%FS, code: 05 to 16:200%FS, code: 17 to 20:2005FS:150%FS

\*Accuracy: code: 01 range: 0-10kpa, accuracy: 0.5%FS only. Higher 10Kpa, accuracy can be 0.2%FS, 0.1%FS

\*Negative pressure: standard accuracy:0.5%, higher accuracy: 0.2%FS

T3\* - Need to consult factory before offering



## Field Instrumentation Range



### Pressure Measurement

- Smart Differential Pressure Transmitter
- Smart Gauge Pressure Transmitter
- Smart Absolute Pressure Transmitter
- Miniature Pressure Transducer without display
- Sanitary Gauge/ Absolute Pressure Transmitter



### Flow Measurement

- Coriolis Mass Flowmeter
- Thermal Gas Mass Flowmeter
- Positive Displacement Flowmeter
- Electromagnetic Flowmeter
- Vortex Flowmeter



### Level Measurement

- RADAR Level Transmitter Horn Antenna
- Compact RADAR Level Transmitter
- RADAR Level Transmitter Sanitary
- RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- Guided Wave RADAR Level Transmitter
- RADAR Level Transmitter Lens Antenna



### Temperature Measurement

- Head Mount Temperature Transmitter
- Temperature Transmitter for Sanitary Applications

- Submersible Pressure Transmitter
- Remote Seal Differential P.T. with capillary
- Remote Seal Differential P.T. Direct Mount
- Remote Seal Gauge/Absolute P.T. with capillary
- Remote Seal Gauge/Absolute P.T. Direct Mount

- Turbine Flowmeter
- Variable Area Flowmeter
- Clamp On Ultrasonic Flowmeter
- Inline Ultrasonic Flowmeter
- Portable Ultrasonic Flowmeter

- RADAR Level Transmitter Rod Antenna
- Ultrasonic Level Transmitter
- Microwave Barrier Level Switch
- Admittance Level Switch Series
- Vibrating Rod Level Switch Series
- Tuning Fork Level Switch Series

- DIN Rail Temperature Transmitter
- Field Mount Temperature Transmitter

## Rocksensor India Pvt. Ltd.

📍: B -36, Sector 67, Noida, Uttar Pradesh - 201301

**For more details, contact us on:**

☎ +91 928 948 8117 | +91 1204121469

✉: [info@rocksensor.in](mailto:info@rocksensor.in)

🌐: [www.rocksensor.in](http://www.rocksensor.in)

## Global Offices

Global HQ & R&D Centre:  
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