

PRESSURE TRANSMITTERS

Pressure Measurement

RD/RT REMOTE DIAPHRAGM SEAL PRESSURE TRANSMITTER - AT3051

& Monitoring



DESCRIPTION

AT3051 RD/RT Smart Pressure Transmitter is a digital pressure level transmitter with remote diaphragm seal designed for high-viscosity, granular, high-temperature and high-corrosivity applications. The pressure transmitter can be combined with one or two capillary diaphragm seals.

TECHNICAL FEATURES

| | |
|----------------------------|--|
| Process fluid | Liquid, Gas or Vapor |
| Application | Liquid Level, Differential Pressure, Gauge Pressure, Absolute Pressure |
| Stability | +/-0.15% of URL for 2 years |
| Max. pressure | 1160psi |
| Max. temperature | -20 to 80°C (direct mount) -40 to 280°C (remote diaphragm) |
| Ambient temperature | +/-0.18% ~ +/-0.5% of span per 20°C |
| Fill fluid | Silicone (max. temperature 130 °C) HT silicone (max. temperature 280 °C) Fluorine (max. temperature 160 °C) Vegetable oil (max. temperature 130 °C) |
| Response time | Less than 1.12 seconds |
| Material | |
| - Flange / adapter | Carbon Steel / Stainless Steel 304 /Stainless Steel 316 |
| - Diaphragm | Stainless Steel 316L / Hastelloy B / Hastelloy C / Tantalum / PTFE-coated Tantalum |
| - Capillary | Stainless Steel with PVC coating |
| Process connection | Flange |
| Flange size | 40mm, 50mm, 80mm, 100mm 1 - 1/2", 2", 3", 4" |
| Extension length | 2" (50mm), 3" (80mm), 4" (100mm) |
| Capillary length | 1m to 10m |

FEATURES

- ✓ Maximum temperature 280°C
- ✓ Multiple connection mode - flange type/tri-clamp type
- ✓ Extremely hot and cold temperature
- ✓ Stainless steel with PPC coating capillary
- ✓ Food industry application:
Vegetable oil available for fill fluid
IDF tri-clamp / union screw connection
- ✓ Fast and dynamic response
- ✓ Improved performance, accuracy and stability
- ✓ Oil-free treatment and water-free treatment options

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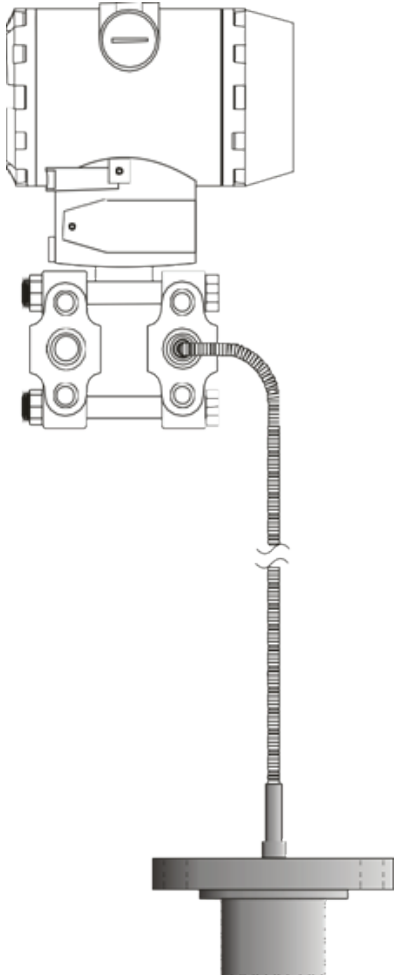
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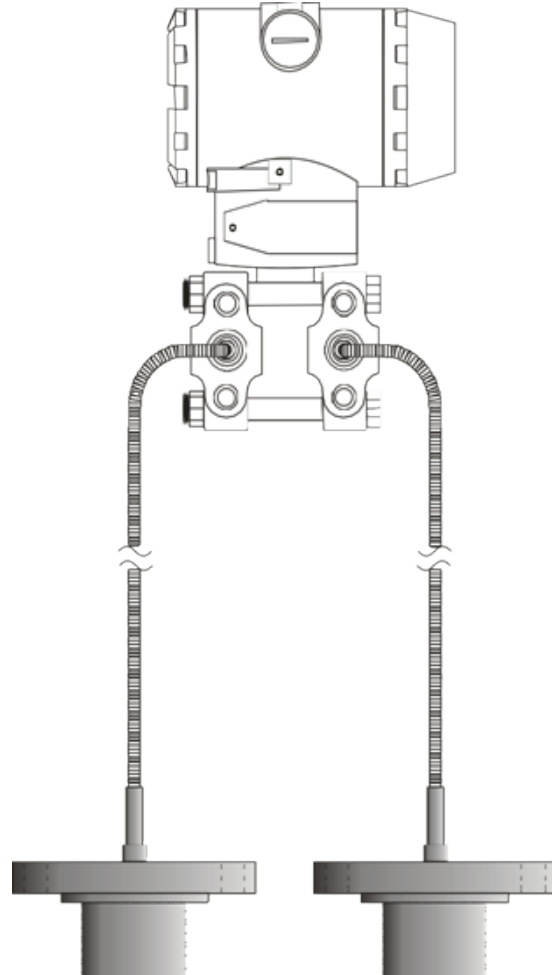
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DIMENSION/DRAWING

RT Series Pressure Transmitter



RD Series Differential Pressure Transmitter



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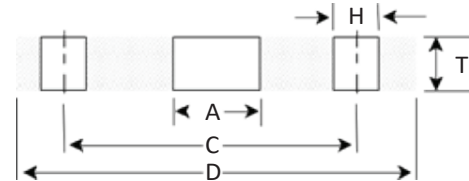
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FLANGE TABLE

| Flange Style | Dimension of Flange | | | Bolt | |
|------------------|---------------------|-------|------|------|----|
| | C | D | T | H | NO |
| 1-1/2" JIS 10K | 105 | 140 | 16 | 19 | 4 |
| 2" JIS 10K | 120 | 155 | 16 | 19 | 4 |
| 3" JIS 10K | 150 | 185 | 18 | 19 | 8 |
| 4" JIS 10K | 175 | 210 | 18 | 19 | 8 |
| 1-1/2" JIS 20K | 105 | 140 | 16 | 19 | 4 |
| 2" JIS 20K | 120 | 155 | 16 | 19 | 4 |
| 3" JIS 20K | 160 | 200 | 20 | 23 | 8 |
| 4" JIS 20K | 185 | 225 | 22 | 23 | 8 |
| 1-1/2" JIS 40K | 120 | 160 | 24 | 23 | 4 |
| 2" JIS 40K | 130 | 165 | 26 | 19 | 8 |
| 3" JIS 40K | 170 | 210 | 32 | 23 | 8 |
| 4" JIS 40K | 205 | 250 | 36 | 25 | 8 |
| 1-1/2" ANSI 150# | 98.6 | 127 | 18 | 15.7 | 4 |
| 2" ANSI 150# | 120.7 | 152.4 | 19 | 19.1 | 8 |
| 3" ANSI 150# | 152.4 | 190.5 | 24 | 19.1 | 8 |
| 4" ANSI 150# | 190.5 | 228.6 | 24 | 19.1 | 8 |
| 1-1/2" ANSI 300# | 114.3 | 155.4 | 24.6 | 22.4 | 4 |
| 2" ANSI 300# | 127 | 165.1 | 26.4 | 19.1 | 8 |
| 3" ANSI 300# | 168.1 | 209.6 | 32.4 | 22.4 | 8 |
| 4" ANSI 300# | 200.2 | 254 | 35.8 | 22.4 | 8 |

| Flange Style | Dimension of Flange | | | Bolt | |
|--------------|---------------------|-----|----|------|----|
| | C | D | T | H | NO |
| DN40 PN10 | 110 | 150 | 18 | 18 | 4 |
| DN50 PN10 | 125 | 165 | 20 | 18 | 4 |
| DN80 PN10 | 160 | 200 | 24 | 18 | 8 |
| DN100 PN 10 | 180 | 220 | 20 | 18 | 8 |
| DN40 PN16 | 110 | 150 | 18 | 18 | 4 |
| DN50 PN16 | 125 | 165 | 20 | 18 | 4 |
| DN80 PN16 | 160 | 200 | 24 | 18 | 8 |
| DN100 PN16 | 180 | 220 | 24 | 18 | 8 |
| DN40 PN25 | 110 | 150 | 18 | 18 | 4 |
| DN50 PN25 | 125 | 165 | 20 | 18 | 4 |
| DN80 PN25 | 160 | 200 | 24 | 18 | 8 |
| DN100 PN25 | 190 | 235 | 24 | 22 | 8 |
| DN40 PN40 | 110 | 150 | 22 | 18 | 4 |
| DN50 PN40 | 125 | 165 | 24 | 18 | 4 |
| DN80 PN40 | 160 | 200 | 24 | 18 | 8 |
| DN100 PN40 | 190 | 235 | 24 | 22 | 8 |



MEASURING RANGE

| Model | Min. Range | Max. Range | Min. Range | Max. Range | Max. Static Pressure |
|--|--------------|--------------|------------------|-------------------------------|----------------------|
| RT Series Pressure Transmitter | 0 - 6.0 kPa | 0 - 8.0 MPa | 0 - 611.82 mmH2O | 0 - 815.76 MH2O | 1160 psi |
| | 0 - 60 mbar | 0 - 80 bar | 0 - 24.088 InH2O | 0 - 32117 InH2O | |
| | 0 - 0.87 psi | 0 - 1160 psi | 0 - 0.061 Kg/cm2 | 0 - 81.578 Kg/cm2 | |
| RD Series Differential Pressure Transmitter | 0 - 6.0 kPa | 0 - 8.0 MPa | 0 - 611.82 mmH2O | 0 - 815.76 MH2O | 1160 psi |
| | 0 - 60 mbar | 0 - 80 bar | 0 - 24.088 InH2O | 0 - 2.7*10 ⁴ InH2O | |
| | 0 - 0.87 psi | 0 - 1160 psi | 0 - 0.061 Kg/cm2 | 0 - 81.578 Kg/cm2 | |

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MODEL SELECTION

| | | | | | | | | | | | | | |
|--|---|-------------|---|---|---|---|---|---|---|---|-----|-----|-----|
| Model | Pressure Transmitter | AT3051RT/RD | X | X | X | X | X | X | X | X | X | X | |
| Measurement Range | 0~7.5 kpa | | 3 | | | | | | | | | | |
| | 0~37.4 kpa | | 4 | | | | | | | | | | |
| | 0~186.8 kpa | | 5 | | | | | | | | | | |
| | 0~690 kpa | | 6 | | | | | | | | | | |
| | 0~2068 kpa | | 7 | | | | | | | | | | |
| Output | 4-20mA, HART Protocol, Linear Output | | | S | | | | | | | | | |
| Cable Entry | M20*1.5 | | | | 2 | | | | | | | | |
| | 1/2" NPT | | | | 3 | | | | | | | | |
| Diaphragm Material / Fill Fluid | Stainless steel 316L | | | | | A | | | | | | | |
| | Hastelloy C | | | | | B | | | | | | | |
| | Tantalum | | | | | C | | | | | | | |
| | PFA coating | | | | | E | | | | | | | |
| | F46 coating | | | | | F | | | | | | | |
| Process Connection | 2" ANSI 150# | | | | | | C | | | | | | |
| | 2" ANSI 300# | | | | | | D | | | | | | |
| | 3" ANSI 150# | | | | | | E | | | | | | |
| | 3" ANSI 300# | | | | | | F | | | | | | |
| | DN50 PN1.6MPa | | | | | | Q | | | | | | |
| | DN50 PN6.4Mpa | | | | | | R | | | | | | |
| | DN50 PN10Mpa | | | | | | M | | | | | | |
| | DN80 PN1.6MPa | | | | | | S | | | | | | |
| | Tri-clamp 2" | | | | | | W | | | | | | |
| Customize | | | | | | L | | | | | | | |
| Fill Fluid | Silicone Oil | | | | | | | A | | | | | |
| | High Temperature Silicone Oil | | | | | | | B | | | | | |
| | Fluorine Oil | | | | | | | | C | | | | |
| Capillary Length | 1m | | | | | | | | | 1 | | | |
| | 2m | | | | | | | | | 2 | | | |
| | 3m | | | | | | | | | 3 | | | |
| | 4m | | | | | | | | | 4 | | | |
| | 6m | | | | | | | | | 5 | | | |
| | 8m | | | | | | | | | 6 | | | |
| | Customize | | | | | | | | | 7 | | | |
| Mounting Bracket | None | | | | | | | | | | B00 | | |
| | Tube-type Curved Bracket (carbon steel) | | | | | | | | | | | B01 | |
| | Wall mounting bracket (carbon steel) | | | | | | | | | | | | B02 |
| | Tube-type Flat Bracket (carbon steel) | | | | | | | | | | | | B03 |
| | Tube-type Curved Bracket (stainless steel) | | | | | | | | | | | | B04 |
| | Wall mounting bracket (stainless steel) | | | | | | | | | | | | B05 |
| Tube-type Flat Bracket (stainless steel) | | | | | | | | | | | | B06 | |
| Optional | Intrinsically safe type, Flameproof (Exd IIC T4~T6) | | | | | | | | | | | d | |
| | Intrinsically safe (Exia IIC T4~T6) | | | | | | | | | | | i | |
| | LCD display | | | | | | | | | | | M3 | |
| | Degreasing treatment | | | | | | | | | | | K1 | |

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