

CATALOG

Differential Pressure Transmitter AT5010



- SIL2/3 certification
- Accuracy up to $\pm 0.05\%$ FS
- 10-year stability of $\pm 0.1\%$ of URL
- -500 kPa to 10 MPa (minimum range 0 to 100 Pa)
- Static pressure up to 40 MPa
- Intuitive interface and built-in buttons for quick commissioning of the device
- SS316L/HC/Tantalum/SS316L coated with PTFE/SS316L gold plated/Inconel 625, etc.
- HART 7.0/Modbus-RTU and others
- Multiple standard process connections, as well as filler fluids, enabling connection to various forms of piping, connection standards are according to EN, ASME/ANSI, GB, GOST, JIS etc.
- Combination of more complex level and volume flow measurements possible
- Convenient and user-friendly, wide options in forms and material
- Precision in measurement
- Exploration in our range of state-of-the-art differential pressure transmitters
- Unrivalled precision for accurate industrial measurements
- Features, specifications and applications covered in detail
- **SIL, NACE, NEPSI, ATEX, CE, PMI, EN10204**

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Product Overview

Differential Pressure Transmitter
AT5010

AT5010 differential pressure transmitter is a high-performance pressure transmitter with international leading technology carefully developed by using the world's advanced monocrystalline silicon sensor technology and patented packaging process. The monocrystalline silicon sensor is located at the top of the metal body, away from the contact surface of the medium, to achieve mechanical isolation and thermal isolation. The sintered glass integrated sensor leads achieve high-strength electrical insulation with a metal matrix, improving the electronic circuit's flexible performance and ability to withstand transient voltage protection. These monocrystalline silicon sensor packaging technologies ensure that AT5010 differential pressure transmitter can handle complex chemical and mechanical loads, while providing strong electromagnetic interference resistance for demanding industrial environment applications.



Main Parameters

- Range: -500 kPa to 10 MPa (minimum range 0 to 100 Pa).
- Output signal: 4 to 20 mA and HART 7, Modbus-RTU/RS485 and others.
- Reference accuracy: $\pm 0.075\%$ FS, optional $\pm 0.05\%$ FS. See datasheet for details.

Measuring Medium

Liquid, gas, steam and other medium which is suitable for wetted parts.

Applications

Pressure, differential pressure, level, density, interface and flow rate.

Model Code

Differential Pressure Transmitter

Model Type	Code	Description
AT5010-		Differential pressure transmitter ($\pm 0.075\%$ FS accuracy)
Type	DP	Differential pressure (-500 kPa to 10 MPa with the minimum range of 0 to 100 Pa)
Range	2	0 to 6 kPa with the minimum range of 0 to 0.1 kPa (static pressure 25 MPa) ($\pm 0.1\%$ FS accuracy, $\pm 0.2\%$ FS accuracy for 1 kPa and below)
	3	0 to 40 kPa (static pressure 40 MPa)
	4	0 to 250 kPa (static pressure 40 MPa)
	5	0 to 1 MPa (static pressure 40 MPa)
	6	0 to 3 MPa (static pressure 40 MPa)
	7	0 to 10 MPa (static pressure 40 MPa)
Isolation diaphragms	SS	SS316L, silicone oil
	SF	SS316L, fluorocarbon oil
	HS	Hastelloy C, silicon oil
	HF	Hastelloy C, fluorocarbon oil
	GS	SS316L, gold plated, silicone oil
	X	More optional materials
Sealing method	P	PTFE O- ring, temperature range -45 to 205°C
Electrical connection & housing	-E1	Aluminum housing, polyurethane coating, 1/2 NPT F cable entry
	-E2	Aluminum housing, polyurethane coating, M20 × 1.5 F cable entry
	-E3	SS316 housing, 1/2 NPT F cable entry
	-E4	SS316 housing, M20 × 1.5 F cable entry
Output signal	S7	24 V DC loop power supply, 4 to 20 mA, HART 7, two-wire
	R	Modbus RTU, four-wire, 24 V DC loop power supply
Display mode	M0	Without display
	M5	LCD with backlight display module, physical buttons and magnetic bar
Process connection	-D1	1/4-18 NPT F, with drain and vent in back of freedom flange, SS316
	-D2	1/4-18 NPT F, with drain and vent in above the side of freedom flange, SS316
	-D3	1/4-18 NPT F, with drain and vent in lower side of freedom flange, SS316
Process connectors	C1	Freedom flange, M20 × 1.5 M with impulse pipe $\Phi 14 \times 2 \times 30$ mm, SS304
	C2	Freedom flange, 1/2-14 NPT F, SS304
	NA	Unavailable (unavailable if assembled manifold)

Mounting bracket	B01	Bend bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	B02	Bend bracket mounted in backboard with install components and fasteners,, carbon steel
	B03	Flat bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	B14	Bend bracket mounted in 2" fixed pipe with install components and fasteners, SS304
	B34	Flat bracket mounted in 2" fixed pipe with install components and fasteners, SS304
Anti-explosion	d	ExdbIICT6 Gb, NEPSI
	i	ExialIICT4 Ga, NEPSI
	NA	Unavailable
Special treatment	T	Degreasing (removing oil and grease from product surface)
	NA	Unavailable
Extended warranty	2W	2-year warranty
	3W	3-year warranty
Valve manifolds	3M	Three-way manifold
	5M	Five-way manifold
Subsidiary requirements	E	English stainless steel nameplate
	R	Russian stainless steel nameplate
	E5	Anti-explosion cable gland, SS316, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E6	Anti-explosion cable gland, SS316, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E7	Nickel plated brass cable gland, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E8	Nickel plated brass cable gland, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
Report	R	Calibration certificate
Special certifications	SIL	SIL
	Ad	ATEX Exd
	Ai	ATEX Exia
	CE	Certificate of Compliance
	Id	IEC Exd
	Ii	IEC Exia
	N	NACE
	P	PMI certificate
	E	EN10204
Alarm output	HH	NAMUR NE43 analog output, high alarm, 20.8 mA
	LL	NAMUR NE43 analog output, low alarm, 3.8 mA
	NA	Unavailable

Product Overview

Single Flange Level Transmitter
AT5010

AT5010 differential pressure level transmitter is a high-performance pressure transmitter with international leading technology carefully developed by using the world's advanced monocrystalline silicon sensor technology and patented packaging process. The monocrystalline silicon sensor is located at the top of the metal body, away from the contact surface of the medium, to achieve mechanical isolation and thermal isolation. The sintered glass integrated sensor leads achieve high-strength electrical insulation with a metal matrix, improving the electronic circuit's flexible performance and ability to withstand transient voltage protection. These monocrystalline silicon sensor packaging technologies ensure that AT5010 differential pressure level transmitter can handle complex chemical and mechanical loads, while providing strong electromagnetic interference resistance for demanding industrial environment applications.



Main Parameters

- Range: -100 kPa to 1 MPa (minimum range 0 to 4 kPa). See model code for details.
- Output signal: 4 to 20 mA and HART7, Modbus-RTU/RS485 and others.
- Reference accuracy: $\pm 0.2\%$ FS, $\pm 0.1\%$ FS (optional). See datasheet for details.

Measuring Medium

Liquid, gas, steam and other medium which is suitable for wetted parts.

Applications

Pressure, differential pressure, level, density, interface and flow rate.

Model Code

DN50 Single Flange

Model Type	Code	Description
AT5010-		DN50 single flange level transmitter ($\pm 0.2\%$ FS accuracy)
Type	LT	Monocrystalline silicon sensor (gauge pressure -100 kPa to 1 MPa, minimum range 0 to 4 kPa)
Range	2	0 to 6 kPa (minimum range 0 to 4 kPa)
	3	0 to 40 kPa
	4	0 to 250 kPa
	5	0 to 1 MPa
Sealing method	W	Stainless steel welded seals
Electrical connection & housing	-E1	Aluminum housing, polyurethane coating, 1/2 NPT F cable entry
	-E2	Aluminum housing, polyurethane coating, M20 \times 1.5 F cable entry
	-E3	SS316 housing, 1/2 NPT F cable entry
	-E4	SS316 housing, M20 \times 1.5 F cable entry
Output signal	S7	24 V DC loop power supply, 4 to 20 mA, HART 7, two-wire
	R	Modbus RTU, four-wire, 24 V DC loop power supply
Display mode	M0	Without display
	M5	LCD with backlight display module, physical buttons and magnetic bar
Connection type	-H	The high pressure end is a movable flange mounting connection and the low pressure end is 1/4 NPT F
Isolation fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Flange material	S4	SS304
	S6	SS316
	X	More optional materials
Isolation diaphragms	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H20	HG/T 20592-2009 DN50 RF, PN10 to PN40
	H21	HG/T 20592-2009 DN50 RF, PN64
	H22	HG/T 20592-2009 DN50 RF, PN100
	X	Optional flange

Diaphragm extension	D0	No diaphragm extension
	D505	OD 46 mm, length 50 mm
	D510	OD 46 mm, length 100 mm
	D515	OD 46 mm, length 150 mm
Process connectors	C1	Freedom flange, M20 × 1.5 M with impulse pipe $\Phi 14 \times 2 \times 30$ mm, SS304
	C2	Freedom flange, 1/2-14 NPT F, SS304
	NA	Unavailable
Anti-explosion	d	ExdbIICT6 Gb, NEPSI
	i	ExialICT4 Ga, NEPSI
	NA	Unavailable
Contact medium treatment	T	Degreasing (removing oil and grease from product surface)
	NA	Unavailable
Extended warranty	2W	2-year warranty
	3W	3-year warranty
Flushing ring	R50	DN50, SS316, clamping type
Subsidiary requirements	E	English stainless steel nameplate
	R	Russian stainless steel nameplate
	E5	Anti-explosion cable gland, SS316, 1/2" NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E6	Anti-explosion cable gland, SS316, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E7	Nickel plated brass cable gland, 1/2" NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E8	Nickel plated brass cable gland, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
Report	R	Calibration certificate
Special certifications	SIL	SIL
	Ad	ATEX Exd
	Ai	ATEX Exia
	CE	Certificate of Compliance
	Id	IEC Exd
	Ii	IEC Exia
	N	NACE
	P	PMI certificate
	E	EN10204
Alarm output	HH	NAMUR NE43 analog output, high alarm, 20.8 mA
	LL	NAMUR NE43 analog output, low alarm, 3.8 mA
	NA	Unavailable

Model Code

DN80 Single Flange

Model Type	Code	Description
AT5010-		DN80 single flange level transmitter ($\pm 0.2\%$ FS accuracy)
Sensor type	LT	Monocrystalline silicon sensor (gauge pressure -100 kPa to 1 MPa, minimum range 0 to 4 kPa)
Measurement range	2	0 to 6 kPa (minimum range 0 to 4 kPa)
	3	0 to 40 kPa
	4	0 to 250 kPa
	5	0 to 1 MPa
Sealing method	W	Stainless steel welded seals
Electrical connection & housing	-E1	Aluminum housing, polyurethane coating, 1/2 NPT F cable entry
	-E2	Aluminum housing, polyurethane coating, M20 \times 1.5 F cable entry
	-E3	SS316 housing, 1/2 NPT F cable entry
	-E4	SS316 housing, M20 \times 1.5 F cable entry
Output signal	S7	24 V DC loop power supply, 4 to 20 mA, HART 7, two-wire
	R	Modbus RTU, four-wire, 24 V DC loop power supply
Display mode	M0	Without display
	M5	LCD with backlight display module, physical buttons and magnetic bar
Connection type	-H	The high pressure end is a movable flange mounting connection and the low pressure end is 1/4 NPT F
Isolation fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Process flange	S4	SS304
	S6	SS316
	X	More optional materials
Isolation diaphragm	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H30	HG/T 20592-2009 DN80 RF, PN10
	H31	HG/T 20592-2009 DN80 RF, PN16
	H32	HG/T 20592-2009 DN80 RF, PN40
	H33	HG/T 20592-2009 DN80 RF, PN64
	X	Optional flange

Diaphragm extension	D0	No diaphragm extension
	D805	OD 66 mm, length 50 mm
	D810	OD 66 mm, length 100 mm
	D815	OD 66 mm, length 150 mm
Process connectors	C1	Freedom flange, M20 × 1.5 M with impulse pipe $\Phi 14 \times 2 \times 30$ mm, SS304
	C2	Freedom flange, 1/2-14 NPT F, SS304
	NA	Unavailable
Anti-explosion	d	ExdbIICT6 Gb, NEPSI
	i	ExialIICT4 Ga, NEPSI
	NA	Unavailable
Special treatment	T	Degreasing (removing oil and grease from product surface)
	NA	Unavailable
Extended warranty	2W	2-year warranty
	3W	3-year warranty
Flushing ring	R80	DN80, SS316, clamping type
Subsidiary requirements	E	English stainless steel nameplate
	R	Russian stainless steel nameplate
	E5	Anti-explosion cable gland, SS316, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E6	Anti-explosion cable gland, SS316, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E7	Nickel plated brass cable gland, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E8	Nickel plated brass cable gland, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
Report	R	Calibration certificate
Special certifications	SIL	SIL
	Ad	ATEX Exd
	Ai	ATEX Exia
	CE	Certificate of Compliance
	Id	IEC Exd
	Ii	IEC Exia
	N	NACE
	P	PMI certificate
	E	EN10204
Alarm output	HH	NAMUR NE43 analog output, high alarm, 20.8 mA
	LL	NAMUR NE43 analog output, low alarm, 3.8 mA
	NA	Unavailable

Product Overview

Dual Flange Level Transmitter
AT5010

With internationally leading monocrystalline silicon sensor technology and patented packaging process, AT5010 differential pressure remote transmitter is a high-performance pressure transmitter. The monocrystalline silicon sensor is located at the top of the metal body, away from the contact surface of the medium, to achieve mechanical isolation and thermal isolation. The sintered glass integrated sensor leads achieve high-strength electrical insulation with a metal matrix, improving the electronic circuit's flexible performance and ability to withstand transient voltage protection. The monocrystalline silicon sensor packaging technologies ensure that AT5010 differential pressure remote transmitter can handle complex chemical and mechanical loads while providing strong electromagnetic interference resistance for demanding industrial environment applications.



Main Parameters

- Range: -100 kPa to 1 MPa (minimum range 0 to 10 kPa). See model code for details.
- Output signal: 4 to 20 mA and HART 7, Modbus-RTU/RS485 and others.
- Reference accuracy: $\pm 0.2\%$ FS, $\pm 0.1\%$ FS (optional). See datasheet for details.

Measuring Medium

Liquid, gas, steam and other medium which is suitable for wetted parts.

Applications

Pressure, differential pressure, level, density, interface and flow rate.

Model Code

DN50 Dual Flange

Model Type	Code	Description
AT5010-		DN50 dual flange level transmitter (accuracy $\pm 0.2\%$ FS)
Type	YDP	Monocrystalline silicon sensor (gauge pressure -100 kPa to 1 MPa, minimum range 0 to 10 kPa)
Range	3	0 to 40 kPa
	4	0 to 250 kPa
	5	0 to 1 MPa
Sealing method	W	Stainless steel welded seals
Electrical connection & housing	-E1	Aluminum housing, polyurethane coating, 1/2 NPT F cable entry
	-E2	Aluminum housing, polyurethane coating, M20 \times 1.5 F cable entry
	-E3	SS316 housing, 1/2 NPT F cable entry
	-E4	SS316 housing, M20 \times 1.5 F cable entry
Output signal	S7	24 V DC loop power supply, 4 to 20 mA, HART 7, two-wire
	R	Modbus RTU, four-wire, 24 V DC loop power supply
Display mode	M0	Without display
	M5	LCD with backlight display module, physical buttons and magnetic bar
Connection location	/HL	Connection of high and low pressure end (same parameters for high and low pressure end, /L option not selected)
	/H	High pressure end connection (for if the parameters of the high and low pressure ends do not coincide)
Connection type	C	Capillary tapping
Capillary type	P	PVC sheath and armored SS304
H-end capillary	00	Capillary-free
	01	1 m capillary tube, PVC sheath and armored SS316
	02	2 m capillary tube, PVC sheath and armored SS316
	03	3 m capillary tube, PVC sheath and armored SS316
	04	4 m capillary tube, PVC sheath and armored SS316
	05	5 m capillary tube, PVC sheath and armored SS316
	06	6 m capillary tube, PVC sheath and armored SS316
	07	7 m capillary tube, PVC sheath and armored SS316
	08	8 m capillary tube, PVC sheath and armored SS316
	09	9 m capillary tube, PVC sheath and armored SS316
	10	10 m capillary tube, PVC sheath and armored SS316

Isolation fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Process flange	S4	SS304
	S6	SS316
	X	More optional materials
Isolation diaphragm	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C-276 (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H20	HG/T 20592-2009 DN50 RF, PN10 to PN40
	H21	HG/T 20592-2009 DN50 RF, PN64
	H22	HG/T 20592-2009 DN50 RF, PN100
	X	Optional flange
Diaphragm extension	D0	No diaphragm extension
	D505	OD 46 mm, length 50 mm
	D510	OD 46 mm, length 100 mm
	D515	OD 46 mm, length 150 mm
Connection location	/L	Low pressure end connection (if the parameters of the high and low pressure end are the same, low pressure end options from connection location to diaphragm extension are not selected)
Connection type	C	Capillary tapping
Capillary type	P	PVC sheath and armored SS304
L-end capillary	00	Capillary-free
	01	1 m capillary tube, PVC sheath and armored SS316
	02	2 m capillary tube, PVC sheath and armored SS316
	03	3 m capillary tube, PVC sheath and armored SS316
	04	4 m capillary tube, PVC sheath and armored SS316
	05	5 m capillary tube, PVC sheath and armored SS316
	06	6 m capillary tube, PVC sheath and armored SS316
	07	7 m capillary tube, PVC sheath and armored SS316
	08	8 m capillary tube, PVC sheath and armored SS316
	09	9 m capillary tube, PVC sheath and armored SS316
	10	10 m capillary tube, PVC sheath and armored SS316

Isolation fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Process connection	S4	SS304
	S6	SS316
	X	More optional materials
Isolation diaphragm material	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C-276 (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H20	HG/T 20592-2009 DN50 RF, PN10 to PN40
	H21	HG/T 20592-2009 DN50 RF, PN64
	H22	HG/T 20592-2009 DN50 RF, PN100
	X	Optional flange
Diaphragm extension	D0	No diaphragm extension
	D505	OD 46 mm, length 50 mm
	D510	OD 46 mm, length 100 mm
	D515	OD 46 mm, length 150 mm
Mounting bracket	-B01	Bend bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	-B02	Bend bracket mounted in backboard with install components and fasteners,, carbon steel
	-B03	Flat bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	-B14	Bend bracket mounted in 2" fixed pipe with install components and fasteners, SS304
	-B34	Flat bracket mounted in 2" fixed pipe with install components and fasteners, SS304
Anti-explosion	d	ExdbIICT6 Gb, NEPSI
	i	ExialIICT4 Ga, NEPSI
	NA	Unavailable
Special treatment	T	Degreasing (removing oil and grease from product surface)
	NA	Unavailable

Extended warranty	2W	2-year warranty
	3W	3-year warranty
Flushing ring	R50	DN50, SS316, clamping type
Subsidiary requirements	E	English stainless steel nameplate
	R	Russian stainless steel nameplate
	E5	Anti-explosion cable gland, SS316, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E6	Anti-explosion cable gland, SS316, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E7	Nickel plated brass cable gland, 1/2 NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E8	Nickel plated brass cable gland, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
Report	R	Calibration certificate
Special certifications	SIL	SIL
	Ad	ATEX Exd
	Ai	ATEX Exia
	CE	Certificate of Compliance
	Id	IEC Exd
	Ii	IEC Exia
	N	NACE
	P	PMI certificate
	E	EN10204
Alarm output	HH	NAMUR NE43 analog output, high alarm, 20.8 mA
	LL	NAMUR NE43 analog output, low alarm, 3.8 mA
	NA	Unavailable

Model Code

DN80 Dual Flange

Model Type	Code	Description
AT5010-		DN80 dual flange level transmitter (accuracy $\pm 0.2\%$ FS)
Sensor type	YDP	Monocrystalline silicon sensor (gauge pressure -100 kPa to 1 MPa, minimum range 0 to 10 kPa)
Measurement range	3	0 to 40 kPa
	4	0 to 250 kPa
	5	0 to 1 MPa
Sealing method	W	Stainless steel welded seals
Electrical connection	-E1	Aluminum housing, polyurethane coating, 1/2 NPT F cable entry
	-E2	Aluminum housing, polyurethane coating, M20 \times 1.5 F cable entry
	-E3	SS316 housing, 1/2 NPT F cable entry
	-E4	SS316 housing, M20 \times 1.5 F cable entry
Output signal	S7	24 V DC loop power supply, 4 to 20 mA, HART 7, two-wire
	R	Modbus RTU, four-wire, 24 V DC loop power supply
Display mode	M0	Without display
	M5	LCD with backlight display module, physical buttons and magnetic bar
Connection location	/HL	Connection of high and low pressure end (same parameters for high and low pressure end, /L option not selected)
	/H	High pressure end connection (for if the parameters of the high and low pressure ends do not coincide)
Connection type	C	Capillary tapping
Capillary type	P	PVC sheath and armored SS304
H-end capillary length	00	Capillary-free
	01	1 m capillary tube, PVC sheath and armored SS316
	02	2 m capillary tube, PVC sheath and armored SS316
	03	3 m capillary tube, PVC sheath and armored SS316
	04	4 m capillary tube, PVC sheath and armored SS316
	05	5 m capillary tube, PVC sheath and armored SS316
	06	6 m capillary tube, PVC sheath and armored SS316
	07	7 m capillary tube, PVC sheath and armored SS316
	08	8 m capillary tube, PVC sheath and armored SS316
	09	9 m capillary tube, PVC sheath and armored SS316
	10	10 m capillary tube, PVC sheath and armored SS316

Isolated fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Process flange	S4	SUS304
	S6	SUS316
	X	More optional materials
Isolation diaphragm	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C-276 (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H30	HG/T 20592-2009 DN80 RF, PN10
	H31	HG/T 20592-2009 DN80 RF, PN16
	H32	HG/T 20592-2009 DN80 RF, PN40
	H33	HG/T 20592-2009 DN80 RF, PN64
	X	Optional flange
Diaphragm extension	D0	No diaphragm extension
	D805	OD 66 mm, length 50 mm (for DN80 flange)
	D810	OD 66 mm, length 100 mm (for DN80 flange)
	D815	OD 66 mm, length 150 mm (for DN80 flange)
Connection location	/L	Low pressure end connection (if the parameters of the high and low pressure end are the same, low pressure end options from connection location to diaphragm extension are not selected)
Connection type	C	Capillary tapping
Capillary type	P	PVC sheath and armored SS304
L-end capillary	00	Capillary-free
	01	1 m capillary tube, PVC sheath and armored SS316
	02	2 m capillary tube, PVC sheath and armored SS316
	03	3 m capillary tube, PVC sheath and armored SS316
	04	4 m capillary tube, PVC sheath and armored SS316
	05	5 m capillary tube, PVC sheath and armored SS316
	06	6 m capillary tube, PVC sheath and armored SS316
	07	7 m capillary tube, PVC sheath and armored SS316
	08	8 m capillary tube, PVC sheath and armored SS316
	09	9 m capillary tube, PVC sheath and armored SS316
	10	10 m capillary tube, PVC sheath and armored SS316

Isolation fluid	S	Normal temperature silicone oil, temperature range -40 to 205°C
	H	High temperature silicone oil, temperature range 0 to 315°C
Process flange	S4	SS304
	S6	SS316
	X	More optional materials
Isolation diaphragm	A	SS316L
	C	Tantalum (SS316 for process connections)
	P	SS316 and PTFE coating (range ≥ 50 kPa)
	H	Hastelloy C-276 (SS316 for process connections)
	G	SS316L gold plated
	X	More optional materials
Process connection	H30	HG/T 20592-2009 DN80 RF, PN10
	H31	HG/T 20592-2009 DN80 RF, PN16
	H32	HG/T 20592-2009 DN80 RF, PN40
	H33	HG/T 20592-2009 DN80 RF, PN64
	X	Optional flange
Diaphragm extension	D0	No diaphragm extension
	D805	OD 66 mm, length 50 mm (for DN80 flange)
	D810	OD 66 mm, length 100 mm (for DN80 flange)
	D815	OD 66 mm, length 150 mm (for DN80 flange)
Mounting bracket	-B01	Bend bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	-B02	Bend bracket mounted in backboard with install components and fasteners,, carbon steel
	-B03	Flat bracket mounted in 2" fixed pipe with install components and fasteners, carbon steel
	-B14	Bend bracket mounted in 2" fixed pipe with install components and fasteners, SS304
	-B34	Flat bracket mounted in 2" fixed pipe with install components and fasteners, SS304
Anti-explosion	d	ExdbIICT6 Gb, NEPSI
	i	ExialIICT4 Ga, NEPSI
	NA	Unavailable
Special treatment	T	Degreasing (removing oil and grease from product surface)
	NA	Unavailable

Extended warranty	2W	2-year warranty
	3W	3-year warranty
Flushing ring	R80	DN80, SS316, clamping type
Subsidiary requirements	E	English stainless steel nameplate
	R	Russian stainless steel nameplate
	E5	Anti-explosion cable gland, 1/2" NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E6	Anti-explosion cable gland, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E7	Nickel plated brass cable gland, SS316, 1/2" NPT, cable diameter 6 to 8 mm, optional 11 to 17 mm
	E8	Nickel plated brass cable gland, SS316, M20 × 1.5, cable diameter 6 to 8 mm, optional 11 to 17 mm
Report	R	Calibration certificate
Special certifications	SIL	SIL
	Ad	ATEX Exd
	Ai	ATEX Exia
	CE	Certificate of Compliance
	Id	IEC Exd
	Ii	IEC Exia
	N	NACE
	P	PMI certificate
	E	EN10204
Alarm output	HH	NAMUR NE43 analog output, high alarm, 20.8 mA
	LL	NAMUR NE43 analog output, low alarm, 3.8 mA
	NA	Unavailable

Certifications

Name	Description
NEPSI	NEPSI explosive-proof Ex db IIC T4...T6 Gb Applicable standard: GB/T 3836.1-2021, GB/T 3836.2-2021,GB/T 3836.31-2021
	NEPSI dust explosion prevention Ex tb IIIC T80°C ...T130°C Db Applicable standard: GB/T 3836.1-2021, GB/T 3836.2-2021,GB/T 3836.31-2021
	NEPSI intrinsically safe Ex ia IIC T4 Ga Applicable standard: GB/T 3836.1-2021, GB/T 3836.4-2021,GB/T 3836.20-2010
NACE	NACE Component & Brinell Hardness Applicable standard: NACE MR0175
	NACE Component & Vickers Hardness Applicable standard: NACE MR0175
	NACE Hydrogen-Induced Cracking (HIC) Applicable standard: NACE MR0175, NB/T 47010-2017
	NACE Sulfide Stress Corrosion Cracking (SSC) Applicable standard: NACE MR0175, NB/T 47010-2017
SIL	The measuring instrument can be used as a pressure monitoring system, up to SIL2/3
HART	Measurement system can meet HART7, equipment can be used with the certified equipment of other suppliers (interoperability)
Modbus	Modbus- RTU/RS485
CE	Certificate of Compliance, EN IEC 61326-1:2021, electromagnetic compatibility directive 2014/30/EU
ATEX	ATEX Exd, ATEX Exia
IEC Ex	IEC Exd, IEC Exia
PMI	PMI verification and certificate
EN	EN10204

Appendix Table of Anti-corrosion Properties of Commonly Used Metal Materials

A - Excellent B - Possible C - Poor X - Unavailable

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Inorganic acid	Sulfuric acid	5	25	A	A	A
			100	C	B	A
		10	25	C	A	A
			00	C	C	A
		20	25	B	A	A
			100	C	C	A
		60	25	C	A	A
			100	×	C	A
		80	25	A	A	A
			00	C	C	B
		98	25	B	A	A
			100	×	A	A
		Fuming sulfuric acid	25	C	B	C
			100	C	B	C
	Carbamide	10	25	A	B	A
			100	A	B	A
		30	25	A	B	A
			100	B	C	A
		68	25	A	A	A
			100	×	×	A
	Hydrochloric acid	Fuming	25	×	B	A
		5	25	C	B	A
			100	C	C	A
		10	25	C	B	A
			100	C	C	A
		20	25	C	B	A
			100	C	C	A
		35	25	C	B	A
			100	C	C	A
Organic acid	Sodium pyrophosphate	20	25	A	A	A
			100	A	A	A
		30	25	A	A	A
			100	B	A	A
		50	25	A	A	A
			100	B	A	A
		70	25	C	A	A
			100	C	B	A
		85	25	C	A	A
			100	C	C	A
		90	25	C	B	A
			100	C	B	A

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Inorganic acid	Hydrofluoric acid	5	25	C	C	C
			100	C	C	C
		40	25	C	A	×
			100	C	C	×
		90	25	C	B	×
			100	C	×	×
	Hydrobromic acid	< 60	25	C	×	A
			100	C	×	A
	Hydrocyanic acid		25	B	B	A
			100	B	B	A
	Argon-sulfuric acid		25	B	B	A
			100	B	B	A
	Guanosine	10	25	B	A	A
			100	C	×	A
		100	25	A	A	A
			100	A	×	A
	Chromate	< 50	25	C	B	A
			100	C	B	A
		> 50	25	C	B	A
			100	C	×	A
	Chlorate	10	25	C	B	A
			100	C	×	A
	Hypochlorous acid		25	C	A	A
			100	C	×	A
	Boric acid	0 to 100	25	A	A	A
			100	A	A	A
	Chlorosulfonic acid	10	25	C	B	A
			100	C	×	A
		100	25	B	A	A
			100	B	A	A
	Chrome water	20	25	×	A	A
			100	×	×	A
	Aqua regia		25	C	C	A
			100	C	C	×

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Organic acid	Carboxylic acid	10	25	x	A	A
			100	x	A	A
		100	25	x	A	A
			100	x	A	A
	Acetic acid	< 100	25	A	A	A
			100	A	A	A
		10	25	B	A	A
			100	B	A	A
	Propanoic acid	60 to 90	25	B	A	A
			100	B	A	A
	Butyric acid		25	A	A	A
			100	A	A	A
	Butenoic acid		25	B	B	A
			100	B	B	A
	Stearate		25	A	A	A
			100	A	A	A
	Fatty acids		25	A	A	A
			100	A	A	A
	Glycolic acid C2H4O3		25	B	B	A
			100	B	B	A
	Pyromellitate	10	25	A	B	A
			100	A	x	A
		100	25	B	A	A
			100	x	x	A
	Monochloroacetic acid	< 70	25	C	B	A
			100	C	B	A
		100	25	B	A	A
			100	x	A	A
	Lactic acid	< 20	25	A	B	A
			100	B	B	A
		> 70	25	A	B	A
			100	B	B	A
	Oxalic acid C2H2O4	10	25	B	B	A
			100	C	B	B
	Succinic acid	< 50	25	B	B	A
			100	B	B	A
		100	25	B	B	A
			100	B	B	A
	Benzoic acid C6H5COOH	< 70	25	B	A	A
			100	B	A	A
	Citrate	0 to 100	25	A	A	A
			100	A	A	A
	Salicylate		25	B	B	A
			100	B	x	A
	Mminobenzoic acid		25	B	B	A
			100	B	B	A
	Benzenesulfonic acid	0 to 100	25	B	B	A
			100	x	B	A
	Naphthalene sulfonic acid	100	25	B	A	C
			100	x	A	C

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Bases and hydroxides	Caustic soda	10	25	A	A	C
			100	A	A	C
		20	25	A	B	A
			100	A	B	B
		40	25	A	B	C
			100	A	B	C
		70	25	A	A	C
			100	B	A	C
	potassium hydroxide	< 60	25	A	B	C
			100	A	B	C
		100	25	A	B	C
			100	A	×	C
	Ammonium hydroxide	0 to 100	25	A	A	×
			100	B	A	×
	slaked lime	< 50	25	A	A	A
			100	A	A	A
	magnesium hydroxide	100	25	A	A	A
			100	A	A	A
	Lithium hydroxide	10	25	B	B	×
			100	B	B	×
	Aluminum hydroxide	10	25	A	B	A
			100	A	B	A
Salt	Ammonium sulfate	< 40	25	B	B	A
			100	B	B	A
	Ammonium nitrate	10	25	A	B	A
			100	B	B	A
	Ammonium carbonate	100	25	B	B	A
			100	B	B	A
	Ammonium chloride	< 40	25	A	A	A
			100	A	A	A
		100	25	×	B	A
			100	×	B	A
	Ammonium acetate	0 to 100	25	A	A	×
			100	A	A	×
	Ammonium sulfite	< 30	25	B	B	A
			100	B	B	A
	Sodium sulfate	< 40	25	×	×	A
			100	×	B	A
	Soda	10	25	A	A	A
			100	A	A	A
		100	25	B	B	A
			100	B	B	A
	Sodium hypochlorite (hypochlorite NaOH)	< 20	25	C	B	A
			100	C	B	A
	Sodium chloride	< 30	25	B	B	A
			100	C	B	A

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Salt	Sodium bicarbonate	< 30	25	A	B	A
			100	C	B	A
	sodium nitrite		25	A	A	A
			100	A	A	A
	sodium acetate (chemistry)	< 60	25	A	B	A
			100	A	B	A
	Sodium benzoate, E211 (a food preservative)	< 60	25	B	B	B
			100	B	B	B
	Potassium sulfate	< 20	25	A	A	A
			100	A	A	A
	Potassium nitrate	< 100	25	B	B	A
			100	x	x	A
	Potassium carbonate	< 50	25	B	B	x
			100	B	B	C
	Potassium perchlorate	10	25	B	B	x
			100	B	B	x
	Dicalcium phosphate	< 30	25	A	B	A
			100	A	B	A
	Potassium bromide	< 30	25	B	B	A
			100	B	B	A
	Potassium chromate	< 30	25	B	A	A
			100	B	A	A
	Potassium permanganate	10	25	B	B	X
			100	B	B	x
	Aluminum sulfate	< 50	25	A	A	A
			100	A	A	A
	Aluminum chloride	0 to 100	25	B	A	A
			100	x	A	A
	Magnesium sulfate	< 30	25	A	A	A
			100	A	A	A
	Magnesium nitrate		25	B	B	A
			100	B	B	A
	Magnesium chloride	< 40	25	B	A	A
			100	B	A	A
	Calcium sulfate	10	25	A	B	A
			100	A	B	A
		100	25	B	B	A
			100	B	B	A
	Talc	100	25	B	B	A
			100	x	B	A
	Calcium phosphate	10	25	B	B	A
			100	B	B	A
	Calcium chloride	< 80	25	B	A	A
			100	B	A	A
	Ferric chloride	30	25	C	B	A
			100	C	C	A

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Elements, gases and their inorganic compounds	Chlorine	Dry air	25	B	A	A
			100	B	B	A
		Wet air	25	C	B	A
			100	C	C	A
	Chlorine water	Saturated	RT	C	B	A
	Bromine	Dry	25	C	A	A
			100	C	B	A
		Wet	25	×	A	A
			100	×	A	A
	Phosphorus		25	A	A	×
			100	A	×	×
	Sodium		270	A	A	A
	Hydrogen chloride	100	25	A	A	A
			100	A	A	A
	Sulfur dioxide	10	25	A	A	×
			100	A	A	×
		90 to 100	25	B	B	×
			100	B	B	×
	Phosphorous trichloride	Dry	25	A	A	A
			100	×	A	A
	Arsenic trichloride	10	25	C	B	×
			100	C	B	×
	Sodium peroxide Na ₂ O ₂	10	25	A	B	×
			100	A	B	×
	Sulfur dichloride	Wet		A	×	A
	Hydrogen sulfide	Wet	25	A	×	A
Alcohols, aldehydes, ethers, ketones, lipids	Methyl alcohol		25	A	A	A
			100	A	A	A
	Ethanol		25	A	A	A
			100	A	A	A
	Formaldehyde	< 70	25	A	B	A
			100	A	B	A
	Acetaldehyde		25	A	A	A
			100	A	×	A
	(ii) Methyl ether		25	B	B	A
			100	B	B	A
	(ii) Ether		25	A	B	A
			100	A	B	A
	Acetone		25	A	A	A
			100	A	A	A
	Butanone	< 100	25	B	B	A
			100	B	B	A
	Formic acid methyl ester	< 30	25	B	B	B
			100	B	B	B
	Ethyl acetate		25	A	B	A
			100	B	B	A

Type	Medium Name	Concentration/%	Temperature/°C	316/316L	Hastelloy C	Tantalum
Hydrocarbons and petroleum products	Methane CH ₄		25	A	A	A
			100	A	A	A
	Benzene		25	B	B	A
			100	B	B	A
	Toluene		25	A	A	A
			100	A	A	A
	Phenol	90	25	B	A	A
			100	B	A	A
	Acrylonitrile		25	A	A	A
			100	A	A	A
	Urea (NH ₂) ₂ CO	< 50	25	B	B	A
			100	B	B	A
	Nitroglycerine		25	A	A	A
			100	A	×	A
	Nitrotoluene		25	A	B	A
			100	A	B	A
Others	Sea water		25	A	A	A
			80	A	A	A
	Salted water		25	B	A	A
			80	B	A	A
Mixers	35%HCL +65%HN03		25	×	×	A
	90%H ₂ S04 +10%HN03		25	×	×	A
	70%H ₂ S04 +30%HN03		RT	×	×	A
	50%H ₂ S04 +50%HN03		RT	×	×	A



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