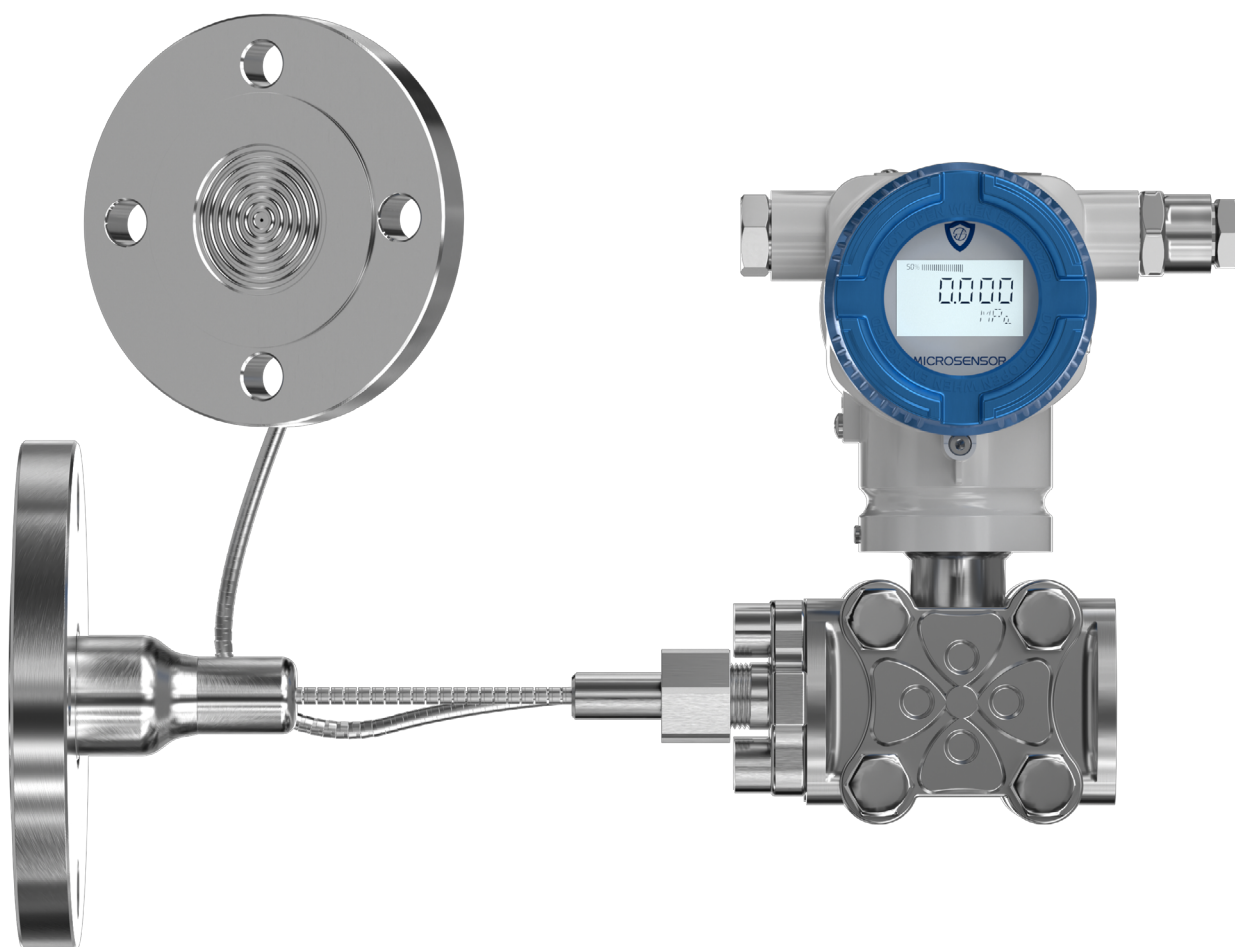


MDM7000-LP

**Smart Differential Pressure Transmitter with
Remote Diaphragm Seals**



Range

Nominal range	Minimum range	Lower (LRL)	Upper (URL)
0.4bar	0.1bar	-0.4bar	0.4bar
2.5bar	0.25bar	-2.5bar	2.5bar
10bar	1bar	-10bar	10bar
30bar	1.5bar	-30bar	30bar

LRV/URV setting: the lower limit value (LRV) and upper limit value (URV) are achieved between the upper and lower limits. If $|URV| \geq |LRV|$, $|URV|$ must be larger than the minimum pressure; if $|URV| \leq |LRV|$, $|LRV|$ must be larger than the minimum pressure. It is recommended to choose a range ratio with the minimum possible value.

Accuracy

1. Stated reference accuracy include best fit straight line (BFSL), hysteresis, and repeatability as per the standard and reference test conditions. Calibration temperature: $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$, based on Zero value.

2. Total performance is based on combined errors of indoor temperature accuracy, ambient temperature effects and static pressure effects, calculated by the following formula: $\text{Total performance} = \pm \sqrt{(E1)^2 + (E2)^2 + (E3)^2}$;

E1=Indoor temperature accuracy E2=Ambient temperature effects E3=Static pressure effects

Linear output accuracy	TD $\leq$ 5	$\pm 0.2\%$	0.4bar, 2.5bar, 10bar, 30bar
	TD > 5	$\pm (0.025 + 0.045\text{TD}) \%$	

Square root output accuracy is 1.5 times linear output accuracy.

Note: TD (Turn down) represents the range ratio, $\text{TD} = \text{Maximum range} / \text{Current range}$.

Maximum range = URL (range starts with 0, same as factory calibration range); Current range = SPAN (equivalent to $|URV - LRV|$).

Specifications

Accuracy ^①	$\pm 0.2\%$
Range	-30bar~30bar, see the specifications for details
Turn down ratio	100:1
Long-term stability	$\pm 0.1\%$ Span/10 years
Ambient temperature effects	The total effect per 10°C in the range of $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$: $(0.375 + 0.125\text{TD})\% / 10^{\circ}\text{C}$ of SPAN
Voltage effects	When the power supply voltage changes within 18.3V~44V DC, its zero point and range change should not exceed $\pm 0.005\%$ URL/V
Mounting position effects	The installation of the transmitter may produce a zero point error, which can be corrected by PV (primary value) = 0 reset without any effect on the range.
Vibration effects	$< 0.1\%$ SPAN as per GB/T18271.3/IEC61298-3
Output signal	4mA~20mA DC, HART7 4mA~20mA DC, HART5, bluetooth 1V~5V DC low power Modbus-485 FOUNDATION Fieldbus ^②
IP rating	IP66/IP67
Weight ^③	Net weight: Approx. 6.35kg (Aluminum alloy housing)

Note: ^① Overall accuracy must be determined specifically based on the product's measuring range, material, temperature, process connection, etc.

^② Please consult for details on FOUNDATION Fieldbus communication.

^③ Transmitter body weight only. Add 2.3kg for stainless steel housing, excluding mounting brackets, process connections, and other accessories.

Environmental Conditions

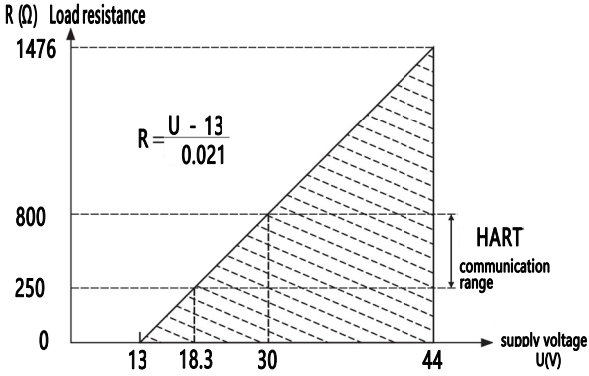
Items	Conditions
Ambient temperature ^①	Without LCD display: $-50^{\circ}\text{C} \sim 85^{\circ}\text{C}$; with LCD display: $-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Storage temperature	Without LCD display: $-50^{\circ}\text{C} \sim 100^{\circ}\text{C}$; with LCD display: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
Ambient humidity	5%RH~100%RH@ 40°C

|| Fill Fluid Specifications ||

Filling oil type	Code	Medium temperature	Density
Standard silicone oil	S	-40°C ~200°C	0.95g/cm ³
High temperature silicone oil	H	0°C ~315°C	1.07g/cm ³
Low temperature silicone oil	L	-50°C ~120°C	0.913g/cm ³
Fluorinated oil	E	-40°C ~ 85°C	1.81g/cm ³

|| Power Supply and Load Requirements ||

Items	Conditions
Supply voltage	HART communication protocol/RS 485: 18.3V~44V DC ^①
	Intrinsically safe HART communication protocol: 18.3V~30V DC
	FOUNDATION Fieldbus Communication: 9V~32V DC
Load resistance	0Ω~1476Ω ^② for operation mode; 250Ω~800Ω for HART communication
Transmission distance	<1000m
Power consumption	
4mA~20mA	≤500mW@24V DC, 20.8mA



Note: ^① When HART communication is not used, the minimum supply voltage can be 13V. Please consult MICROSENSOR for details.
^② 1476Ω= (44V-13V) /21mA

|| EMC Effects ||

SN	Test items	Basic Standards	Test Conditions	Performance Level
1	Radiated interference (housing)	GB/T 9254.1/CISPR 32	30MHz~1000MHz	Qualified
2	Conducted interference (DC power port)	GB/T 9254.1/CISPR 32	0.15MHz~30MHz	Qualified
3	Electrostatic discharge immunity test	GB/T 17626.2/IEC61000-4-2	8kV (contact), 15kV (air)	B
4	Radiated, radio-frequency, electro-magnetic field immunity test	GB/T 17626.3/IEC61000-4-3	10V/m (80MHz~1GHz)	A
5	Power frequency magnetic field immunity test	GB/T 17626.8/IEC61000-4-8	30A/m	B
6	Electrical fast transient / burst immunity test	GB/T 17626.4/IEC61000-4-4	4kV (5/50ns, 100kHz)	B
7	Surge immunity requirements	GB/T 17626.5/IEC61000-4-5	2kV (line to line) 4kV (line to ground) (1.2/50μs)	B
8	Immunity to conducted disturbances induced by radio frequency fields	GB/T 17626.6/IEC61000-4-6	3V (150kHz~80MHz)	A

Note : Performance level A: Normal operation within specified limits

Performance level B: Temporary performance degradation permitted, with automatic recovery and no data loss

|| Time Index ||

Damping time constant: equals to the combined damping time of electronic components and sensor module
Electronic components damping time: 0s~100s configurable
Sensor module damping time(sensor isolated diaphragm and filled silicone oil):≤ 0.2s (Note: This item is related to the sensor type and whether there is a diaphragm component.)
Turn-on time: ≤6s
Factory reset time: ≤31s
Frequency response: 20Hz

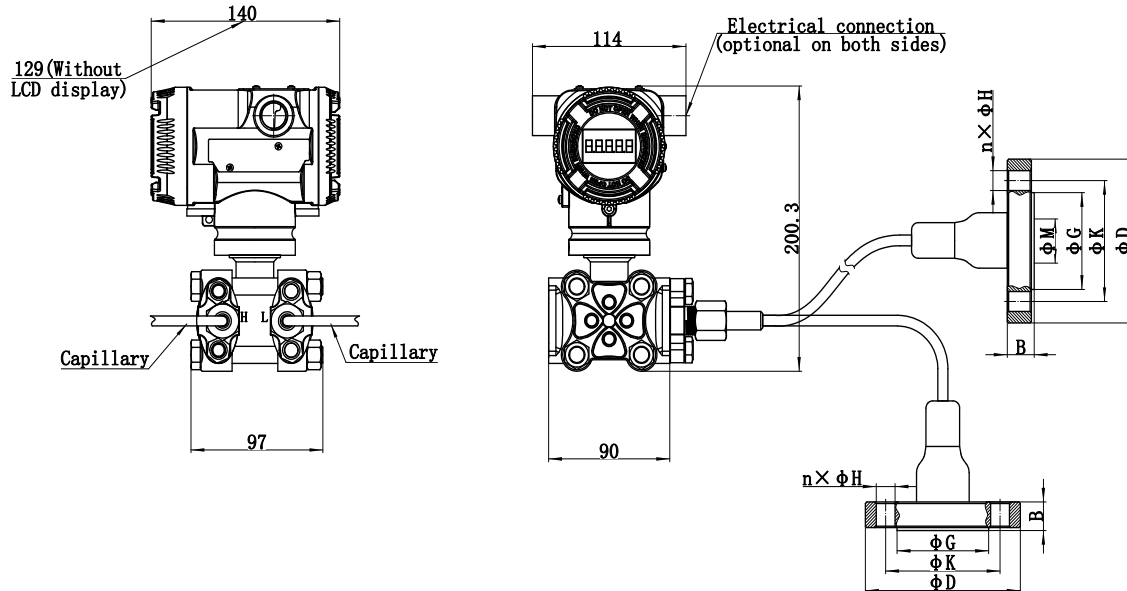
|| Hazardous Area ||

	Ex Standards (association)	Mark	Standard
Hazardous area	Ex Intrinsically safe (PCEC)	Ex ia IIC T4 Ga	GB/T 3836.1-2021 GB/T 3836.4-2021
	Ex Flameproof (PCEC)	Ex db IIC T6 Gb	GB/T 3836.1-2021 GB/T 3836.2-2021
	Ex Dust ignition protection (NEPSI)	Ex tb IIC T85°C Db	GB/T 3836.1-2021 GB/T 3836.31-2021
	ATEX Intrinsically safe (CSA)	II 1G Ex ia IIC T4 Ga	EN IEC 60079-0:2018 EN 60079-11:2012
	ATEX Flameproof (CSA)	II 2G Ex db IIC T6 Gb	EN IEC 60079-0:2018 EN 60079-1: 2014
	ATEX Dust ignition protection (CSA)	II 2D Ex tb IIIC T80°C Db	EN IEC 60079-0:2018 EN 60079-31: 2014
	IECEx Intrinsically safe (CSA)	Ex ia IIC T4 Ga	IEC 60079-0: 2017 IEC 60079-11: 2011
	IECEx Flameproof (CSA)	Ex db IIC T6 Gb	IEC 60079-0: 2017 IEC 60079-1: 2014
	IECEx Dust ignition protection (CSA)	Ex tb IIIC T80°C Db	IEC 60079-0: 2017 IEC 60079-31: 2022
	NA Intrinsically safe (CSA)	Class I, Division 1, Groups A, B, C and D T4 Ex ia IIC T4 Ga Class I, Zone 0, AEx ia IIC T4 Ga	CSA C22.2 No. 60079-0:19 CAN/CSA C22.2 No. 60079-11:14(R2023) CAN/CSA C22.2 No. 61010-1-12, UPD1:2015, UPD2:2016, AMD1:2018 ANSI/UL 60079-0-2020 Seventh Edition ANSI/UL 60079-11-2018 (R2023)Sixth Edition ANSI/UL 913-2022 Eighth Edition UL 61010-1, 3rd Edition (2012), AMD1: 2018
	NA Flameproof (CSA)	Class I, Division 1, Group A, B, C and D T6 Class II, Division 1 Group E, F and G T80°C Class III Ex db IIC T6 Gb Class I, Zone 1, AEx db IIC T6 Gb Ex tb IIIC T80°C Db Zone 21, AEx tb IIIC T80°C Db	CAN/CSA C22.2 No.61010-1-12. UPD1:2015. UPD2:2016.AMD1:2018 CSA C22.2 No.25-17 CSA C22.2 No.30-20+UPD1(2023) CSA-C22.2 No.60079-0:19 CAN/CSA-C22.2 No.60079-1:16 (R2021) CAN/CSA-C22.2 No.60079-31:15 (R2020) UL 61010-1. 3rd Edition (2012). AMD1:2018 FM 3600:2022 FM 3615:2022 FM 3616:2022 ANSI/UL 60079-0-2020 Seventh Edition ANSI/UL 60079-1-2020 Seventh Edition ANSI/UL 60079-31-2015 Second Edition
	EAC Explosion-proof	1Ex db IIC T6 Gb 0Ex ia IIC T4 Ga	TP TC012/2011 GOST 31610.0-2019 GOST 31610.11-2014 GOST IEC 60079-1-2013

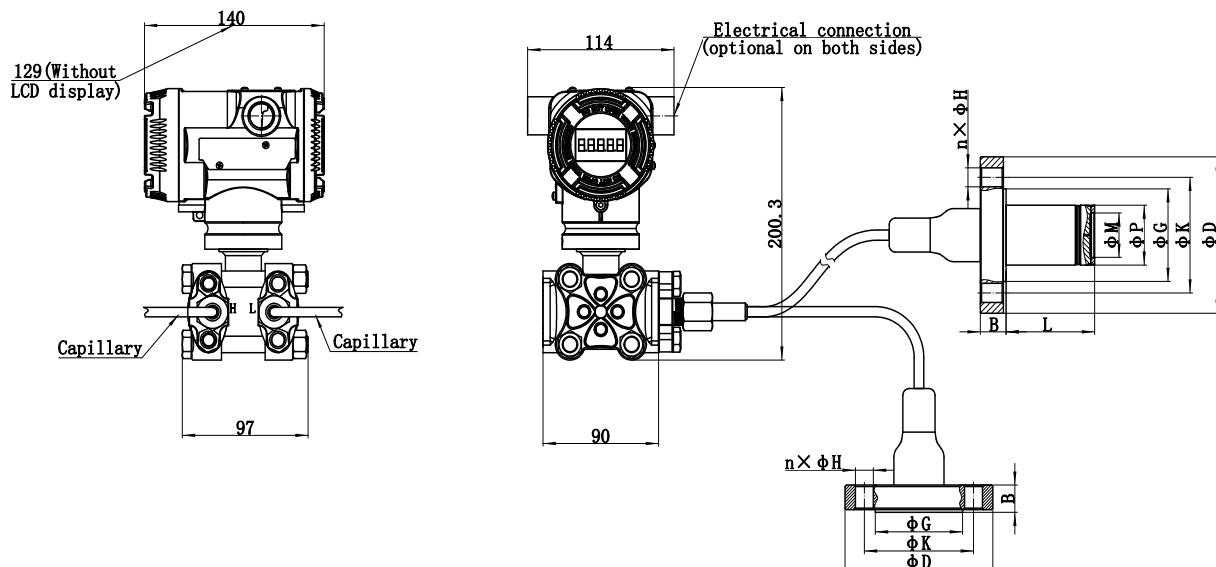
Dimensions

Unit: mm

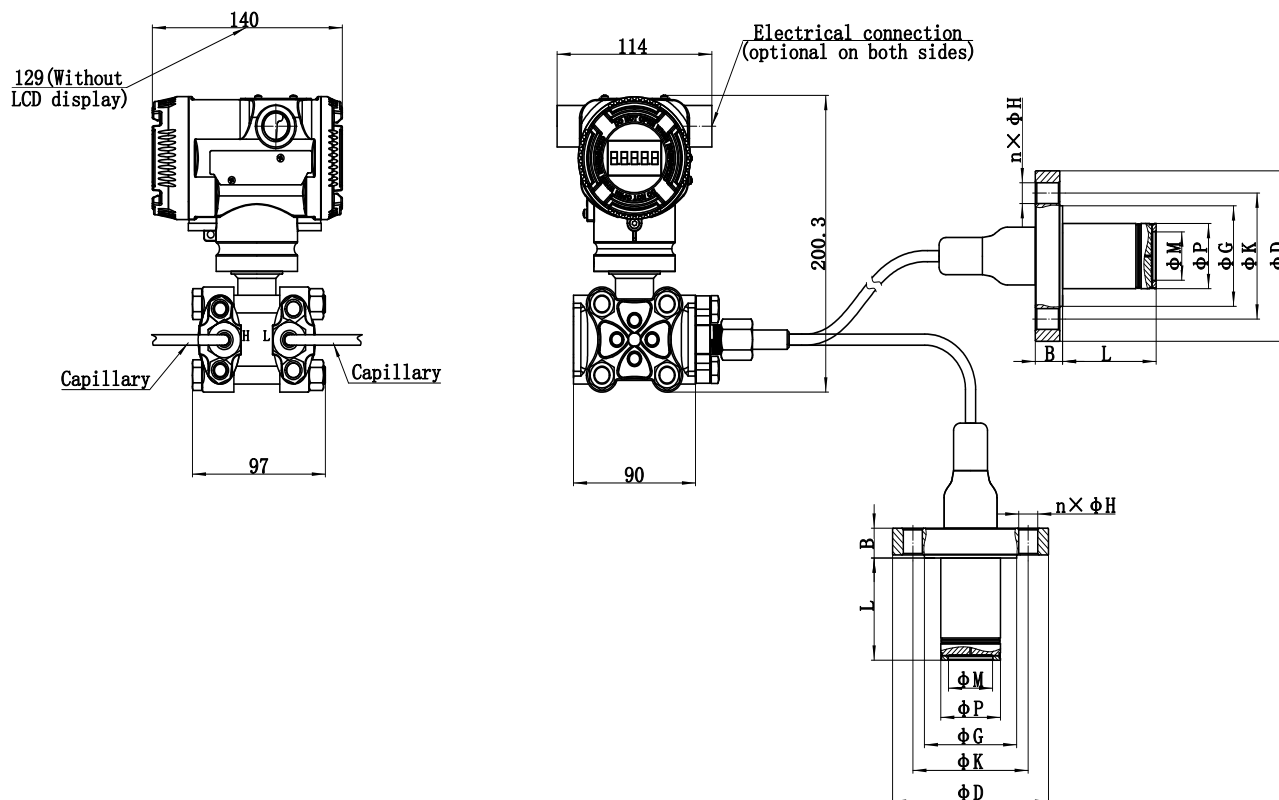
Remote Fixed Flange + Remote Fixed Flange With Display



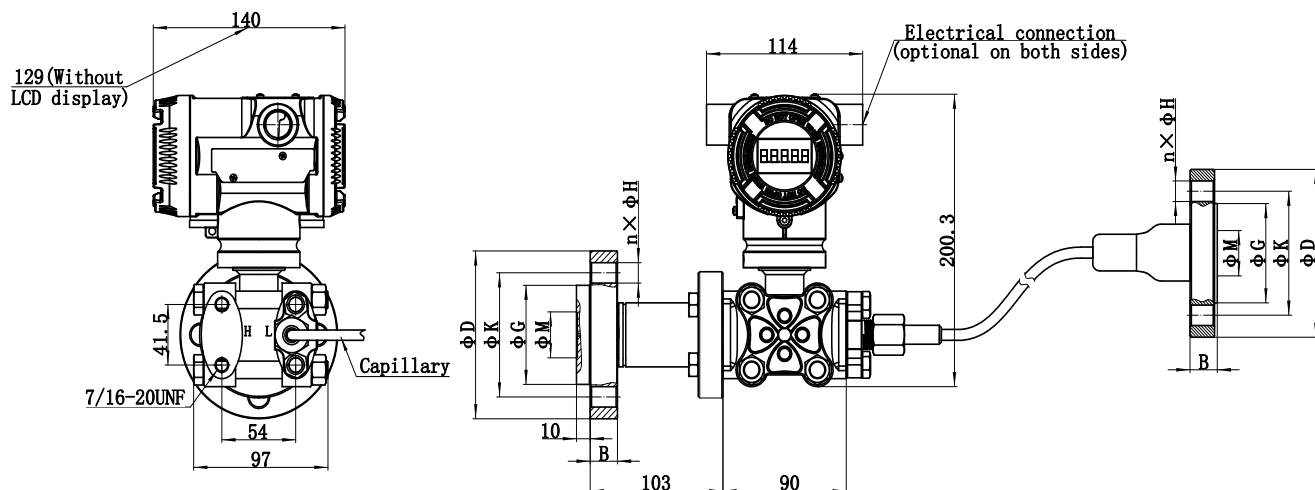
Remote Fixed Flange Insertion Sleeve + Remote Fixed Flange With Display



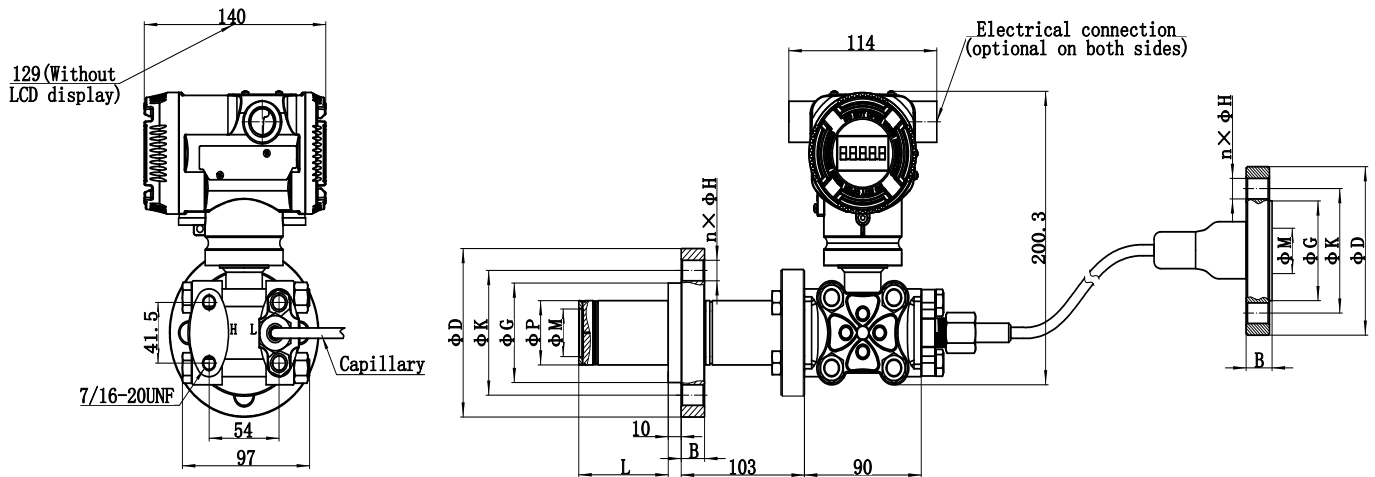
Remote Fixed Flange Insertion Sleeve + Remote Fixed Flange Insertion Sleeve With Display



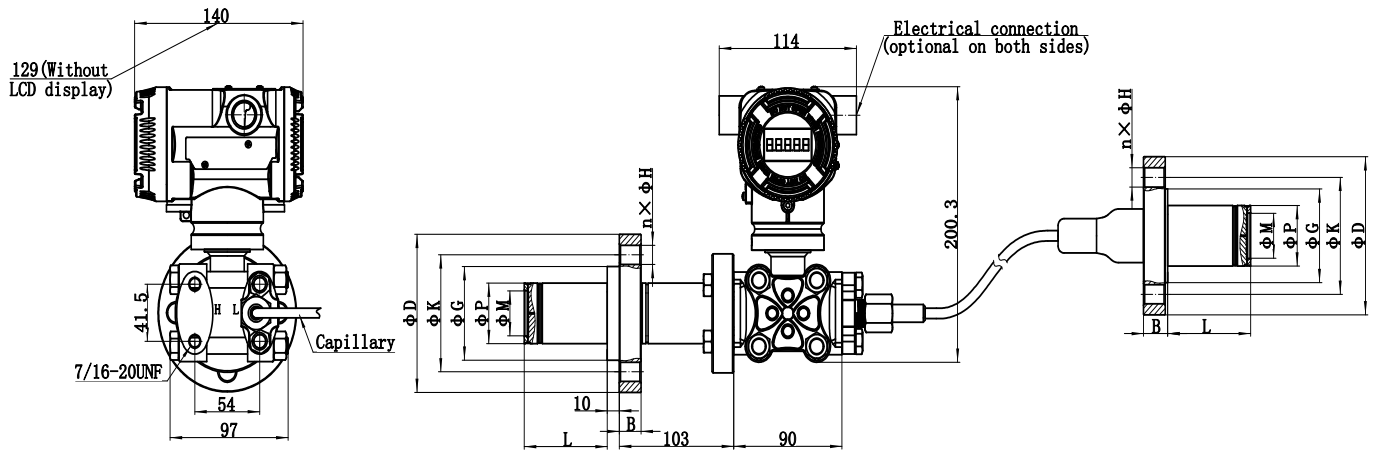
Side Mounted Movable Flange + Remote Fixed Flange With Display



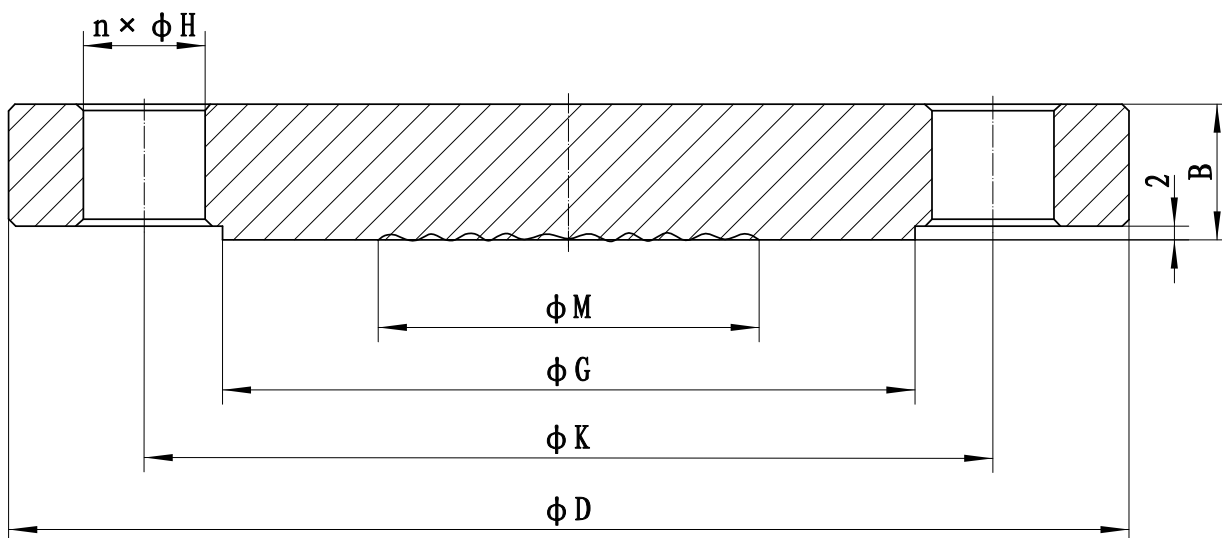
Side Mounted Movable Flange Insertion Sleeve+ Remote Fixed Flange With Display



Side Mounted Flange Insertion Sleeve+Remote Flange Insertion Sleeve With Display



Process Connection

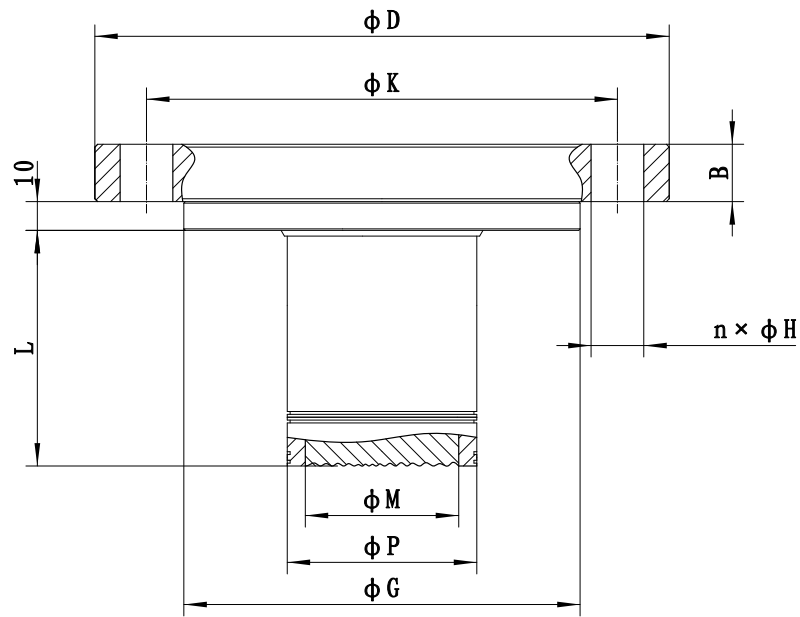


Specification	Outer diameter (φD)	Hole circumference (φK)	RF diameter (φG)	Corrugation diameter (φM)	Hole diameter (φH)	Quantity (n)	Thickness (B)
PN10	165	125	102	56	18	4	18
PN25	165	125	102	56	18	4	20
PN63	180	135	102	56	22	4	26
PN100	195	145	102	56	26	4	28

Specification	Outer diameter (φD)	Hole circumference (φK)	RF diameter (φG)	Corrugation diameter (φM)	Hole diameter (φH)	Quantity (n)	Thickness (B)
PN10	200	160	138	56	18	8	20
PN25	200	160	138	56	18	8	24
PN63	215	170	138	56	22	8	28
PN100	230	180	138	56	26	8	32

Specification	Outer diameter (φD)	Hole circumference (φK)	RF diameter (φG)	Corrugation diameter (φM)	Hole diameter (φH)	Quantity (n)	Thickness (B)
PN10	220	180	158	56	18	8	20
PN25	235	190	162	56	22	8	24
PN63	250	200	162	56	26	8	30
PN100	265	210	162	56	30	8	36

Insertion Sleeve



Insertion sleeve diameter (ϕP)	Corrugation diameter (ϕM)	Insertion sleeve length (L)
46	42	50
46	42	100
46	42	150
46	42	200
66	56	50
66	56	100
66	56	150
66	56	200
77	56	50
77	56	100
77	56	150
77	56	200

Order Guide

MDM7000-LP Smart Pressure Transmitter

Item	Code	Description
MDM7000-LP	—	Monocrystalline Silicon Differential Pressure Transmitter

Basic options

Application of hazardous area	0	Non-hazardous area		
	1	China, Flameproof, CE23.6650 Ex db IIC T6 Gb, GB/T3836.1-2021, GB/T3836.2-2021		
	2	China, Intrinsically safe, CE23.7688X Ex ia IIC T4 Ga, GB/T3836.1-2021, GB/T3836.4-2021		
	3	China, Dust ignition protection, GYB24.1215X Ex tb III C T85°C Db, GB/T3836.1-2021, GB/T 3836.31-2021		
	4	China, Flameproof, Intrinsically safe		
	5	China, Flameproof, Dust ignition protection, Intrinsically safe		
	A	CSA, Flameproof, Dust ignition protection, CSA26CA80192884X Class I, Division 1, Group A, B, C and D T6 Class II, Division 1 Group E, F and G T80°C Class III Ex db IIC T6 Gb Class I, Zone 1, AEx db IIC T6 Gb Ex tb IIIC T80°C Db Zone 21, AEx tb IIIC T80°C Db		
	B	CSA, Intrinsically safe, CSA24CA80156531X Class I, Division 1, Groups A, B, C and D T4 Ex ia IIC T4 Ga Class I, Zone 0, AEx ia IIC T4 Ga		
	C	CSA, Flameproof, Intrinsically safe		
	E	ATEX, Flameproof, Dust ignition protection, CSANe 25ATEX1107X II 2G Ex db IIC T6 Gb, II 2D Ex tb IIIC T80°C Db		
	F	ATEX, Intrinsically safe, CSANe 24ATEX1178X II 1G Ex ia IIC T4 Ga		
	G	ATEX, Flameproof, Intrinsically safe		
	J	IECEX, Flameproof, Dust ignition protection, IECEX CSA 25.0059X Ex db IIC T6 Gb, Ex tb IIIC T80°C Db		
	K	IECEX, Intrinsically safe, IECEX CSA 24.0045X Ex ia IIC T4 Ga		
	L	IECEX, Flameproof, Intrinsically safe		
	M	EAC, Explosion-proof, RU C-CN.AX58.B.05884/24 1Ex db IIC T6 Gb, 0Ex ia IIC T4 Ga		
Output signal	H	4mA~20mA DC, HART7		
	B	4mA~20mA DC, HART5, bluetooth		※
	V	1V~5V DC low power ^①		※
	R	Modbus-RS485 ^②		※
Note: ^① The accuracy for 1V~5V DC low power is 0.1%. ^② Modbus RTU protocol.				
Housing	S	Cast 316L SS housing, 2 × M20×1.5 female entries		※
	U	Cast 316L SS housing, 2 × 1/2 NPT female entries ^①		※
	P	Aluminum alloy housing (polyester resin coated), 2 × M20×1.5 female entries		
	N	Aluminum alloy housing (polyester resin coated), 2 × 1/2 NPT female entries ^①		
	D	Low copper and zinc housing (polyester resin coated) ^② , 2 × M20×1.5 female entries		※
	A	Aluminum alloy housing (polyurethane coated), 2 × M20×1.5 female entries		※
	B	Aluminum alloy housing (polyurethane coated), 2 × 1/2 NPT female entries ^①		※

Note: ^① For 1/2 NPT female entry, cable gland must be Code 0 or Code B.

^② w(Cu)≤0.1%, w(Zn)≤0.15%

Glands & adapters	Specification	Material	Applicable wire diameter	IP rating
0	None (No cable glands)			
A	Single-ended flameproof plug ^① , M20×1.5	316 SS		
B	Single-ended flameproof plug ^① , 1/2NPT	316 SS		
1	M20×1.5 Cable gland (watertight) with plug	PVC	6mm~12mm	IP67
2	Non-flameproof adapter M20x1.5 (M) to M20x1.5 (F) , with plug	316 SS	6mm~8mm	IP67
3	Flameproof adapter ^① M20x1.5 (M) to 1/2 NPT (F) , with plug	316 SS	6mm~12mm	IP67
4	Flameproof adapter ^① M20x1.5 (M) to M20x1.5 (F) , with plug	316 SS	6mm~12mm	IP67
5	Flameproof adapter ^① M20x1.5 (M) to G1/2 (F) , with plug	316 SS	6mm~12mm	IP67

Note: ^① Chinese flameproof approval by default

Display	N	Without LCD display, explosion proof type -40°C ~70°C , non-explosion proof type -50°C ~85°C
	L	With LCD display, explosion proof type/non-explosion proof -40°C ~70°C

Sensor module range	Nominal range	Minimum range	Lower (LRL)	Upper (URL)
2	0.4bar	0.1bar	-0.4bar	0.4bar
3	2.5bar	0.25bar	-2.5bar	2.5bar
4	10bar	1bar	-10bar	10bar
5	30bar	1.5bar	-30bar	30bar

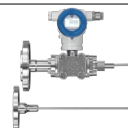
Process flange bolting	1	Bolts, nuts, and other components, 35CrMo Alloy steel
	6	Bolts, nuts, and other components, 316 SS, static pressure <25MPa

■ Diaphragm seal options - high pressure side

Diaphragm connection position/H	H	Differential pressure transmitter high pressure side
Diaphragm seal system code ^①	N	Side mounted movable flange
	M	Side mounted movable flange insertion sleeve
	F	Remote fixed flange
	E	Remote fixed flange insertion sleeve

Note: ^① Select module options per diaphragm seal system code.

Diaphragm seal system code N: Side mounted movable flange, options as follows



Flange standard/H	2	HG/T-20592
	1	EN1092-1
	5	HG/T-20615
	6	ANSI/ASME B16.5

Flange diameter/H		Applicable standard	
A	DN25 ^①	HG/T-20592, EN1092-1	※
B	DN50	HG/T-20592, EN1092-1	
C	DN80	HG/T-20592, EN1092-1	
D	DN100	HG/T-20592, EN1092-1	※
1	1inch ^①	HG/T-20615, ANSI/ASME B16.5	※
2	2inch	HG/T-20615, ANSI/ASME B16.5	
3	3inch	HG/T-20615, ANSI/ASME B16.5	
4	4inch	HG/T-20615, ANSI/ASME B16.5	

Note: ^① Recommended diaphragm materials: 316L or HC. For others, please consult MICROSENSOR

Pressure class/H			Applicable standard	Applicable flange diameter	
1	PN10/PN16		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
2	PN25/PN40		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
3	PN63		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
4	PN100		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	※
A	Class 150		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
B	Class 300		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
C	Class 600		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	※

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/H	6	316 SS			
Flange sealing face/H	1	RF Raised face ^①			
	A	FM Female face ^②			※
	B	M Male face ^②			※
	C	RJ Ring joint face ^④			※

Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500

^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500

^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500

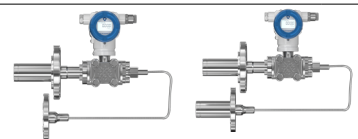
^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500

Wetted parts material/H		Measuring diaphragm			
6A	316L				
6B	HC-276				
6C	Tantalum				※
6D	Titanium				※
6E	Monel				※
LV	316L, high vacuum high temperature				※
TV	Tantalum, high vacuum high temperature				※
LJ	316L+gold plated (8μ)				※
HJ	HC-276+gold plated (8μ)				※
MJ	Monel+gold plated (8μ)				※
LP	316L+PTFE coating				※
HP	HC-276+PTFE coating				※
TP	Tantalum+PTFE coating				※
LA	316L+PFA coating				※
HA	HC-276+PFA coating				※

High pressure side fill oil /H	S	Standard silicone oil (Medium temperature: -40°C ~200°C)			
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)			※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)			※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)			※

Note: ^① Please consult for details.

Diaphragm seal system code M: Side mounted movable flange insertion sleeve, options as follows



Flange standard/H	2	HG/T-20592			
	1	EN1092-1			
	5	HG/T-20615			
	6	ANSI/ASME B16.5			

Flange diameter/H			Applicable standard	
B	DN50		HG/T-20592, EN1092-1	
C	DN80		HG/T-20592, EN1092-1	
D	DN100		HG/T-20592, EN1092-1	※
2	2inch		HG/T-20615, ANSI/ASME B16.5	
3	3inch		HG/T-20615, ANSI/ASME B16.5	
4	4inch		HG/T-20615, ANSI/ASME B16.5	

Note: ^① Recommended diaphragm materials: 316L or HC. For others, please consult MICROSENSOR

Pressure class/H			Applicable standard	Applicable flange diameter	
1	PN10/PN16		HG/T-20592, EN1092-1	DN50, DN80, DN100	
2	PN25/PN40		HG/T-20592, EN1092-1	DN50, DN80, DN100	
3	PN63		HG/T-20592, EN1092-1	DN50, DN80, DN100	
4	PN100		HG/T-20592, EN1092-1	DN50, DN80, DN100	※
A	Class 150		HG/T-20615, ANSI/ASME B16.5	2inch, 3inch, 4inch	
B	Class 300		HG/T-20615, ANSI/ASME B16.5	2inch, 3inch, 4inch	
C	Class 600		HG/T-20615, ANSI/ASME B16.5	2inch, 3inch, 4inch	※

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/H	6	316 SS	
Flange sealing face/H	1	RF Raised face ^①	
	A	FM Female face ^②	※
	B	M Male face ^②	※
	C	RJ Ring joint face ^④	※

Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500

^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500

^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500

^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500

Insertion sleeve diameter /H			Applicable flange diameter
	4	46mm	DN50, 2inch
	6	66mm	DN80, 3inch
	7	77mm	DN100, 4inch

Insertion sleeve length/H	A	50mm
	B	100mm
	C	150mm
	D	200mm

Insertion sleeve material /H	6	316 SS
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Wetted parts material/H		Measuring diaphragm	
	6A	316L	
	6B	HC-276	
	6C	Tantalum	※
	6D	Titanium	※
	6E	Monel	※
	LV	316L, high vacuum high temperature	※
	TV	Tantalum, high vacuum high temperature	※
	LJ	316L+gold plated (5μ)	※

	HJ	HC-276+gold plated (8μ)	※
	MJ	Monel+gold plated (8μ)	※
	LP	316L+PTFE coating	※
	HP	HC-276+PTFE coating	※
	TP	Tantalum+PTFE coating	※
	LA	316L+PFA coating	※
	HA	HC-276+PFA coating	※
High pressure side fill oil /H	S	Standard silicone oil (Medium temperature: -40°C ~200°C)	
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)	※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)	※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)	※

Note: ^① Please consult for details.

Diaphragm seal system code F: Remote fixed flange, options as follows —



Flange standard/H	2	HG/T-20592		
	1	EN1092-1		
	5	HG/T-20615		
	6	ANSI/ASME B16.5		
Flange diameter/H			Applicable standard	
	A	DN25 ^①	HG/T-20592, EN1092-1	※
	B	DN50	HG/T-20592, EN1092-1	
	C	DN80	HG/T-20592, EN1092-1	
	D	DN100	HG/T-20592, EN1092-1	※
	1	1inch ^①	HG/T-20615, ANSI/ASME B16.5	※
	2	2inch	HG/T-20615, ANSI/ASME B16.5	
	3	3inch	HG/T-20615, ANSI/ASME B16.5	
	4	4inch	HG/T-20615, ANSI/ASME B16.5	

Note: ^① Recommended diaphragm materials: 316L or HC. For others, please consult MICROSENSOR

Pressure class/H			Applicable standard	Applicable flange diameter	
	1	PN10/PN16	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	2	PN25/PN40	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	3	PN63	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	4	PN100	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	※
	A	Class 150	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
	B	Class 300	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
	C	Class 600	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	※

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/H	6	316 SS	
Flange sealing face/H	1	RF Raised face ^①	
	A	FM Female face ^②	※
	B	M Male face ^②	※
	C	RJ Ring joint face ^④	※

Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500

^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500

^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500

^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500

Wetted parts material/H	Measuring diaphragm	
6A	316L	
6B	HC-276	
6C	Tantalum	※
6D	Titanium	※
6E	Monel	※
LV	316L, high vacuum high temperature	※
TV	Tantalum, high vacuum high temperature	※
LJ	316L+gold plated (5μ)	※
HJ	HC-276+gold plated (8μ)	※
MJ	Monel+gold plated (8μ)	※
LP	316L+PTFE coating	※
HP	HC-276+PTFE coating	※
TP	Tantalum+PTFE coating	※
LA	316L+PFA coating	※
HA	HC-276+PFA coating	※

Capillary connection location/H	K	Rear connection
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Capillary type/H	U	3.5mm OD, armored 316L SS, PVC gray sheath
	L	3.5mm OD , armored 316L SS, stainless steel bellows sheath

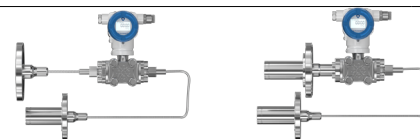
Capillary length/H	1	1m	
	2	2m	
	3	3m	
	4	4m	
	5	5m	
	6	6m ^①	※
	7	7m ^①	※
	8	8m ^①	※
	9	9m ^①	※
	A	10m ^①	※

Note: For high and low-temperature conditions, flanges of DN80 or above are recommended

High pressure side fill oil /H	S	Standard silicone oil (Medium temperature: -40°C ~200°C)	
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)	※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)	※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)	※

Note: ^① Please consult for details.

Diaphragm seal system code E: Remote fixed flange insertion sleeve, options as follows



Flange standard/H	2	HG/T-20592		
	1	EN1092-1		
	5	HG/T-20615		
	6	ANSI/ASME B16.5		
Flange diameter/H			Applicable standard	
	A	DN25 ^①	HG/T-20592, EN1092-1	※
	B	DN50	HG/T-20592, EN1092-1	
	C	DN80	HG/T-20592, EN1092-1	
	D	DN100	HG/T-20592, EN1092-1	※
	1	1inch ^①	HG/T-20615, ANSI/ASME B16.5	※
	2	2inch	HG/T-20615, ANSI/ASME B16.5	
	3	3inch	HG/T-20615, ANSI/ASME B16.5	
	4	4inch	HG/T-20615, ANSI/ASME B16.5	

Note: ^① Recommended diaphragm materials: 316L or HC. For others, please consult MICROSENSOR

Pressure class/H			Applicable standard	Applicable flange diameter	
	1	PN10/PN16	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	2	PN25/PN40	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	3	PN63	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
	4	PN100	HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	※
	A	Class 150	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
	B	Class 300	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
	C	Class 600	HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	※

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/H	6	316 SS		
Flange sealing face/H	1	RF Raised face ^①		
	A	FM Female face ^②		
	B	M Male face ^②		
	C	RJ Ring joint face ^④		

Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500

^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500

^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500

^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500

Insertion sleeve diameter /H		Applicable flange diameter	
	4	46mm	DN50, 2inch
	6	66mm	DN80, 3inch
	7	77mm	DN100, 4inch
Insertion sleeve length/H	A	50mm	
	B	100mm	
	C	150mm	
	D	200mm	
Insertion sleeve material /H	6	316 SS	
Wetted parts material/H		Measuring diaphragm	
	6A	316L	
	6B	HC-276	
	6C	Tantalum	※
	6D	Titanium	※
	6E	Monel	※

	LV	316L, high vacuum high temperature	※
	TV	Tantalum, high vacuum high temperature	※
	LJ	316L+gold plated (5μ)	※
	HJ	HC-276+gold plated (8μ)	※
	MJ	Monel+gold plated (8μ)	※
	LP	316L+PTFE coating	※
	HP	HC-276+PTFE coating	※
	TP	Tantalum+PTFE coating	※
	LA	316L+PFA coating	※
	HA	HC-276+PFA coating	※
Capillary connection location/H	K	Rear connection	
Capillary type/H	U	3.5mm OD, armored 316L SS, PVC gray sheath	
	L	3.5mm OD, armored 316L SS, stainless steel bellows sheath	
Capillary length/H	1	1m	
	2	2m	
	3	3m	
	4	4m	
	5	5m	
	6	6m ^①	※
	7	7m ^①	※
	8	8m ^①	※
	9	9m ^①	※
	A	10m ^①	※
Note: For high and low-temperature conditions, flanges of DN80 or above are recommended			
High pressure side fill oil /H	S	Standard silicone oil (Medium temperature: -40°C ~200°C)	
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)	※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)	※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)	※
Note: ^① Please consult for details.			

■ Diaphragm seal options - low pressure side

Diaphragm connection position/L	L	Differential pressure transmitter low pressure side	
Diaphragm seal system code ^①	F	Remote fixed flange	
	E	Remote fixed flange insertion sleeve	

Note: ^① Select module options per diaphragm seal system code.

Diaphragm seal system code F: Remote fixed flange, options as follows			
Flange standard/L	2	HG/T-20592	
	1	EN1092-1	
	5	HG/T-20615	
	6	ANSI/ASME B16.5	

Flange diameter/L			Applicable standard	
A	DN25 ^①		HG/T-20592, EN1092-1	※
B	DN50		HG/T-20592, EN1092-1	
C	DN80		HG/T-20592, EN1092-1	
D	DN100		HG/T-20592, EN1092-1	※
1	1inch ^①		HG/T-20615, ANSI/ASME B16.5	※
2	2inch		HG/T-20615, ANSI/ASME B16.5	
3	3inch		HG/T-20615, ANSI/ASME B16.5	
4	4inch		HG/T-20615, ANSI/ASME B16.5	

Note: ^① Recommended diaphragm materials: 316L or HC. For others, please consult MICROSENSOR

Pressure class/L			Applicable standard	Applicable flange diameter	
1	PN10/PN16		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
2	PN25/PN40		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
3	PN63		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	
4	PN100		HG/T-20592, EN1092-1	DN25, DN50, DN80, DN100	※
A	Class 150		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
B	Class 300		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	
C	Class 600		HG/T-20615, ANSI/ASME B16.5	1inch, 2inch, 3inch, 4inch	※

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/L	6	316 SS	
Flange sealing face/L	1	RF Raised face ^①	
	A	FM Female face ^②	※
	B	M Male face ^②	※
	C	RJ Ring joint face ^④	※

Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500

^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500

^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500

^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500

Wetted parts material/L		Measuring diaphragm	
6A		316L	
6B		HC-276	
6C		Tantalum	※
6D		Titanium	※
6E		Monel	※
LV		316L, high vacuum high temperature	※
TV		Tantalum, high vacuum high temperature	※
LJ		316L+gold plated (5μ)	※
HJ		HC-276+gold plated (8μ)	※
MJ		Monel+gold plated (8μ)	※
LP		316L+PTFE coating	※
HP		HC-276+PTFE coating	※
TP		Tantalum+PTFE coating	※
LA		316L+PFA coating	※
HA		HC-276+PFA coating	※

Capillary connection location/L	K	Rear connection
Capillary type/L	U	3.5mm OD, armored 316L SS, PVC gray sheath
	L	3.5mm OD, armored 316L SS, stainless steel bellows sheath

Capillary length/L	1	1m	
	2	2m	
	3	3m	
	4	4m	
	5	5m	
	6	6m ^①	※
	7	7m ^①	※
	8	8m ^①	※
	9	9m ^①	※
	A	10m ^①	※

Note: ^① For high and low-temperature conditions, flanges of DN80 or above are recommended

Low pressure side fill oil /L	S	Standard silicone oil (Medium temperature: -40°C ~200°C)	
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)	※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)	※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)	※

Note: ^① Please consult for details.

Diaphragm seal system code E: Remote fixed flange insertion sleeve, options as follows —

Flange standard/L	2	HG/T-20592	
	1	EN1092-1	
	5	HG/T-20615	
	6	ANSI/ASME B16.5	
Flange diameter/L		Applicable standard	
	B	DN50	HG/T-20592, EN1092-1
	C	DN80	HG/T-20592, EN1092-1
	D	DN100	HG/T-20592, EN1092-1
	2	2inch	HG/T-20615, ANSI/ASME B16.5
	3	3inch	HG/T-20615, ANSI/ASME B16.5
	4	4inch	HG/T-20615, ANSI/ASME B16.5
Pressure class/H		Applicable standard	
		Applicable flange diameter	
	1	PN10/PN16	HG/T-20592, EN1092-1
	2	PN25/PN40	HG/T-20592, EN1092-1
	3	PN63	HG/T-20592, EN1092-1
	4	PN100	HG/T-20592, EN1092-1
	A	Class 150	HG/T-20615, ANSI/ASME B16.5
	B	Class 300	HG/T-20615, ANSI/ASME B16.5
	C	Class 600	HG/T-20615, ANSI/ASME B16.5

Note: The maximum static pressure or overload depends on the flange pressure class

Flange material/H	6	316 SS	
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Flange sealing face/L	1	RF Raised face ^①			
	A	FM Female face ^②			※
	B	M Male face ^③			※
	C	RJ Ring joint face ^④			※
Note: ^① Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 150~Class 2500					
^② Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class 300~Class2500					
^③ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN10~PN160 or Class300~ Class2500					
^④ Flange diameter DN25~DN100 or 1in~4in, flange pressure PN63~PN160 or Class 150~Class2500					
Insertion sleeve diameter /L		Applicable flange diameter			
	4	46mm	DN50, 2inch		
	6	66mm	DN80, 3inch		
	7	77mm	DN100, 4inch		
Insertion sleeve length/L	A	50mm			
	B	100mm			
	C	150mm			
	D	200mm			
Insertion sleeve material /L	6	316 SS			
Wetted parts material/L		Measuring diaphragm			
	6A	316L			
	6B	HC-276			
	6C	Tantalum			※
	6D	Titanium			※
	6E	Monel			※
	LV	316L, high vacuum high temperature			※
	TV	Tantalum, high vacuum high temperature			※
	LJ	316L+gold plated (5μ)			※
	HJ	HC-276+gold plated (8μ)			※
	MJ	Monel+gold plated (8μ)			※
	LP	316L+PTFE coating			※
	HP	HC-276+PTFE coating			※
	TP	Tantalum+PTFE coating			※
	LA	316L+PFA coating			※
	HA	HC-276+PFA coating			※
Capillary connection location/L	K	Rear connection			
Capillary type/L	U	3.5mm OD, armored 316L SS, PVC gray sheath			
	L	3.5mm OD, armored 316L SS, stainless steel bellows sheath			
Capillary length/L	1	1m			
	2	2m			
	3	3m			
	4	4m			
	5	5m			
	6	6m ^①			※
	7	7m ^①			※
	8	8m ^①			※
	9	9m ^①			※
	A	10m ^①			※

Note: ^① For high and low-temperature conditions, flanges of DN80 or above are recommended

Low pressure side fill oil /L	S	Standard silicone oil (Medium temperature: -40°C ~200°C)	
	H	High temperature silicone oil (Medium temperature: 0°C ~315°C)	※
	L	Low temperature silicone oil (Medium temperature: -50°C ~120°C)	※
	E	Fluorinated oil ^① (Medium temperature: -20°C ~85°C)	※

Note: ^① Please consult for details.

General diaphragm seal options —			
Nameplate material	4	304 SS	
	6	316L SS	
Language ^①	CN	Chinese documents	
	LE	English documents	
	LR	Russian documents	

Note: ^① Factory documentation includes nameplate, operation manual, certificate of conformity, and factory verification report.

Factory calibration range	CAL	Provide MICROSENSOR standard verification report based on the range, default linear output Contract specifies: LRL - URL, display unit*
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Options-Certificates

Approvals	/CS1	CCS, China Classification Society, XA25PTB00017	
	/CS2	DNV, Det Norske Veritas, TAA00000Y1	
	/CS3	BV, Bureau Veritas, 77759/A0 BV	
	/CS4	ABS, American Bureau of Shipping, 24-2536413-PDA	
	/CS5	LR, Lloyd's Register, LR2520052TA	
	/CS6	KR, Korean Register, NAJ50160-AE001	
	/CS7	NK, Nippon Kaiji Kyokai, TA24376M	
	/CS8	RS, Russian Maritime Register of Shipping, 24.44.01.01398.266	
Metrological certification (Russia & CIS)	/PAC	Pattern Approval Certificate of Measuring Instruments, Russia, 94159-24	
	/PBY	Pattern Approval Certificate of Measuring Instruments, Belarus, 18634	

Options-Specifications

Mounting bracket accessories	/G0	Bend bracket, 316L SS	※
	/G1	Bend bracket, 316 SS	※
	/G2	Bend bracket, Q195 carbon steel	※
	/G3	Flat bracket, 316 SS	※
	/G4	Flat bracket, Q195 carbon steel	※
	/G10	Standard L-bracket, 316 SS	
	/G11	Standard L-bracket, Q235 Carbon steel	
	/G12	Standard L-bracket, 316L SS	
Verification report	/Q1	Provide data according to the customer's template requirements. Contract specifies: LRL - URL, display unit*	※

Note: Standard Micro Sensor format. For custom formats, please select this option and provide a template.

Damping time setting	/ST	Adjustable range 0s~100s, default 0s Contract specifies: Damping time*
Fault alarm setting	/WH	High alarm current value, 21mA
	/WL	Low alarm current value, 3.7mA, default
Tag plate	/PT	Supplied with 316L SS hanging tag plate Contract specifies: Tag content (max. 16 characters)*
Diaphragm sticking	/PFA	The diaphragm is covered with PFA film (protective cover), applicable to corrosion-resistant conditions ※
Note: Corrosive application applies to non-vacuum conditions with process pressure ≥ 0 (positive pressure).		
Oil-free treatment	/CL1	Degreasing and cleaning treatment of the wetted parts ※
Note: Fluorinated oil (code: E) shall be selected for oxygen condition		
Delivery service	/XM	In addition to standard documents, any documentation required for project acceptance shall be specified with a detailed list upon ordering ※
Accuracy	/AL6	$\pm 0.2\%$
	/AL7	$\pm 0.5\%$

Note: Specifications for options shall be specified in the contract. Products marked with (※) have extended lead times.

Example: MDM7000-LP-0HP1L-31-HF-2B1616AKL1S-LF-2B1616AKL2S-4CN/G10/AL6- 【CAL: 0bar~0.4bar】