

HHGP/DP Smart

Diaphragm Seal Differential Pressure/Pressure Transmitter

HHDP (smart) remote pressure transmitter provides a reliable way of measuring medium and preventing damage to the transmitter by incorporating a diaphragms seal.



FEATURES

Transmitters with remote device are suitable for the following operation conditions:

- ❖ Mediums with high temperature should be isolated from the transmitter.
- ❖ Measured mediums who cause corrosion to sensitive parts of transmitters.
- ❖ Suspending liquid or mediums with high viscosity
- ❖ Measured mediums solidize or crystalize due to change of environment or process temperature.

MEASURING RANGE

(Specifications of flange and capillary tube are shown in the additional sheet)

- | | |
|---|--|
| 1. Remote double flush flange | 4. Remote one-flush & one-insertion flange type |
| HHDP-4420 0-6-36kPa | HHDP-4350 0-1.2-7.2kPa |
| HHDP-4520 0-30-180kPa | HHDP-4450 0-6-36kPa |
| HHDP-4620 0-160-1000kPa | HHDP-4550 0-30-180kPa |
| HHDP-4720 0-400-2500kPa | HHDP-4650 0-160-1000kPa |
| HHDP-4820 0-1600-10000kPa | HHDP-4750 0-400-2500kPa |
| 2. Remote single flush flange (pressure type) | 5. Remote single insertion flange type (pressure type) |
| HHDP-1410 0-6-36kPa | HHDP-1330 0-1.2-7.2kPa |
| HHDP-1510 0-30-180kPa | HHDP-1430 0-6-36kPa |
| HHDP-1610 0-160-1000kPa | |
| HHDP-1710 0-400-2500kPa | |

HHDP-1810 0-1600-10000kPa

HHDP-1530 0-30-180kPa

HHDP-1630 0-160-1000kPa

3. Remote double insertion flange type

HHDP-1730 0-400-2500kPa

HHDP-4340 0-1.2-7.2kPa

HHDP-1830 0-1600-10000kPa

HHDP-4440 0-6-36kPa

HHDP-4540 0-30-180kPa

HHDP-4640 0-160-1000kPa

HHDP-4740 0-400-2500kPa

STRUCTURE MATERIALS

1. Remote measuring head, capillary tube and fill liquid
2. Diaphragm and exhaust/vent valve : 316 stainless steel
3. Remote transmission side flange : carbon-steel plating cadmium or 316 stainless steel
4. Flange or bolt : carbon-steel plating cadmium
5. Fill liquid: silicone oil or inert liquid
6. O ring : fluorine rubber
7. Body Material: low copper-aluminum alloy

ELECTRICAL CONNECTION

NPT1/2 Female (or to be specified)

SIZE OF FLANGE AND CAPILLARY TUBE

1. Thread type remote device

(Order transmitter from the model and specification sheet; choose capillary tube and fill liquid from sheet VI)

Sheet I

RTW type	Code		Flushing hole	
	11		with	
	21		without	
	Code		Diaphragm material of remote device	
	A		316 SS	
	B		Hastelloy C	
	C		Tantalum	
	Code		Structure material	
	11		Up bracket -316 SS	
	Code		Bottom bracket material	
A		316 SS		
B		Hastelloy		
C		Tantalum		
code		Ignition voltage connecting hole		

11	NPT1/4 (V-cone thread)
12	NPT3/8
13	NPT1/2
15	NPT1
17	NPT1/2(no flushing hole)



RTW	11	A	11	A	17
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2. Flange type remote device

Sheet II

RFW type	Code	Flushing hole			
	11	without			
	21	with			
		Code	Diaphragm material of remote device		
		A	316 SS		
		B	Hastelloy C		
		C	Tantalum		
		Code	Structure material		
		11	Up bracket-316 SS, flange-carbon steel plating cadmium, heat loop-white asbestos		
		Code	Size and material of down bracket		
		A21	1 "	1501b.	316 SS
		B21	1"	1501b.	HC
		E21	1"	1501b.	CS
		A41	1 1/2 "	1501b.	316 SS
		B41	1 1/2 "	1501b.	HC
		E41	1 1/2 "	1501b.	CS
		A51	2 "	1501b.	316 SS
		B51	2 "	1501b.	HC
		E51	2 "	1501b.	CS
		A71	3 "	1501b.	316 SS
		B71	3 "	1501b.	HC
		E71	3 "	1501b.	CS
		A81	4 "	1501b.	316 SS
		B81	4 "	1501b.	HC
		E81	4 "	1501b.	CS
		A22	1"	3001b.	316 SS
		B22	1"	3001b.	HC
		E22	1"	3001b.	CS
		A42	1 1/2 "	3001b.	316 SS
		B42	1 1/2 "	3001b.	HC
		E42	1 1/2 "	3001b.	CS
		A52	2 "	3001b.	316 SS

B52	2 "	3001b.	HC
E52	2 "	3001b.	CS
A72	3 "	3001b.	316 SS
B72	3 "	3001b.	HC
E72	3 "	3001b.	carbon steel
A82	4 "	3001b.	316 SS
B82	4 "	3001b.	HC
E82	4 "	3001b.	CS



RFW	11	A	11	A71
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Flange type remote device

Pipe size	Rated pressure rating	D	h	d	Blot hole		
					Distributed diameter	quantity	aperture
1 "	1501b	Ø108	14.3	Ø66.6	Ø78.4	4	Ø15.7
	3001b	Ø124	17.5	Ø66.6	Ø88.9	4	Ø19.1
1 1/2 "	1501b	Ø127	17.3	Ø78.7	Ø98.4	4	Ø15.7
	3001b	Ø156	20.6	Ø78.7	Ø114.3	4	Ø22.4
2 "	1501b	Ø152	19.1	Ø95.3	Ø120.7	4	Ø19.1
	3001b	Ø165	22.2	Ø95.3	Ø127	8	Ø19.1
3 "	1501b	Ø190	23.8	Ø127	Ø152.4	4	Ø19.1
	3001b	Ø210	28.6	Ø127	Ø168.3	8	Ø22.4

3. Flat type remote device

Sheet III

PFW	Code	Type
	11	Standard 3 " –1501b and 3001b
		Code Diaphragm material of remote device
	A	316 SS
	B	Hastelloy C
	C	Tantalum
		Code Body material
		11 316 SS

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PFW	11	A	11
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4. PFW flat type remote device

5. Calliper-ring remote device (apply to sanitation and food system)

Sheet IV

SCW type	Code	Model of remote device
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12	3 " calliper ring (capillary tube connection)		
14	3 " calliper ring (liquid level connection)		
	Code	Diaphragm material of remote device	
	A	316 SS	
		code	Body material
		11	316 SS

SCW	12	A	11
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6. SCW calliper-ring type remote transmission device

7. Insertion trunk type remote transmission device

Sheet V

EFW	Code	Diameter and material of insertion trunk	
	9	2" 316SS	
	10	2" Hastelloy C	
	11	3 " (76.2 mm) 316 SS	
	12	3 " (76.2 mm) Hastelloy alloy	
	13	4 " (101.6mm) 316 SS	
	14	4 " (101.6mm) Hastelloy alloy	
	15	Customer Specify	
		Code	Material of Diaphragm
		A	316 SS
		B	Hastelloy alloy (only 12, 14)
			Code
			Length of insertion trunk
		20	2 " (50.8mm)
		40	4 "(101.6mm)
		60	6 "(152.4mm)
		80	8"
		10	Customer Specify
			Code
			Material of Flange
			A
			45 steel
			Code
			Flange specification
			11
			Max working pressure of 1501b 1.89MPa
			12
			Max working pressure of 3001b 4.9 MPa

EFW	11	A	20	A	11
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Capillary tube

Sheet VI

CAP	Code	Material and size of capillary tube	
	13	316 SS	
	Code	Terminal fitting of transmitter	
	A	Low volume flanged 316 SS	
	Code	Length of capillary tube (m)	
	05	1.5	
	10	3.0	
	15	4.5	
	20	6.0	
	25	7.5	
	30	≥ 10	
	Code	Initial and terminal fitting of remote device	
	A	1/2-2UNF-2A thread, no support pipe(only go with RTW, RFW and SCW)	
	B	1/2-2RNF-2A thread, with support pipe(only go with PFW)	
	Code	Protection Tube	
	11	Armored 316 SS system	
	12	PVC Protection Tube, armored 316	

CAP Capillary tube

Code	Fill liquid of remote device
C1	Silicone oil, temperature range -29°C ~ +149°C
C2	Inert liquid, temperature range -18°C ~ 204°C

C1 -----	Typical type
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