

Paddle Wheel Flow Sensor

You can equip with below :



F1 series
flowmeter



DMST blind
transmitter



PLC / IPC



Hi/Lo alarm



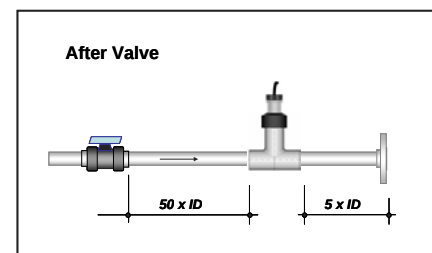
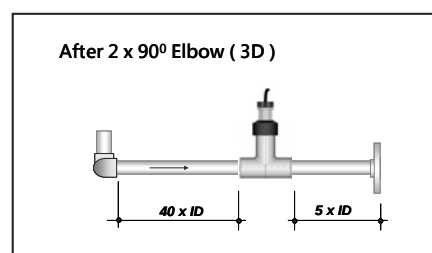
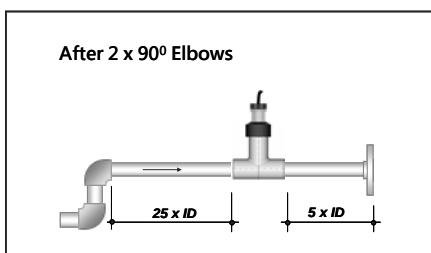
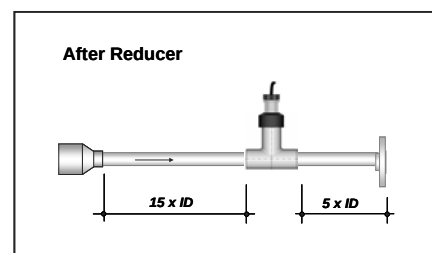
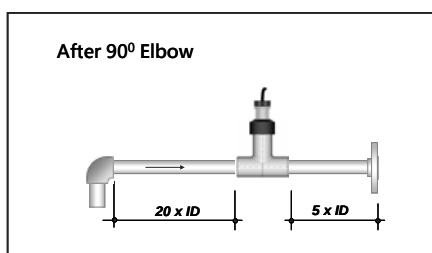
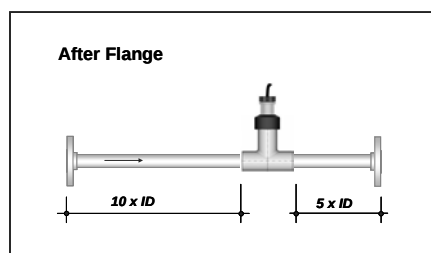
Features

- SUS and chemical resistant body.
- New stable & high resolution rotor.
- Connect to PLC / IPC directly.
- Water-proof IP68 enclosure.
- Low power consumption.
- Easy maintains, easy operation.

Application

- Water treatment and regeneration.
- UF / RO equipments.
- Water distribution & irrigation.
- Factory process and utility system .
- Chemicals filling system.
- Dairy and beverage process CIP.
- Heat exchanger & chilling system.
- Swimming pool circulation.

Installation Guide – Refer to EN ISO 5167-1



DMS Paddle Wheel Flow Sensor



Specification

- Type : Hall effect element, bi-direction
- Flow velocity : 0.3 – 10.0 m/s
- Material : Body – CPVC, PTFE, SUS316L
: 6 Blade – ECTFE(Halar)
: Bearing & Shaft – H.D. Ceramic
: Oring – EPDM, Viton, Viton coating PTFE
- Power supply : <10μA @ 5V DC or 12~30V DC connect to PLC/IPC directly
- Signal output : Square wave frequency pulse output
- Accuracy : ± 0.5 % FS (K factor calibrated) @ V ≥ 0.5 m/s
- Repeatability : ± 0.5 % FS
- Enclosure : IP68, epoxy resin infused
- Fluid Temp. : CPVC body – Up to 85°C ; PTFE & SUS316L body – Up to 100°C
- Operating Pressure : Plastic piping system – Max. 10 bar @ 20°C water
: Metal piping system – Max. 16 bar
- Wiring : PVC insulated, 3wire AWG #22 isolated cable (Max. up to 150M)
: or M12 x 4 Pins female cable, IP68 enclosure
: or Plastic / AL alloy / SUS316 industrial terminal box
- Storage temp. : -10 ~ 65°C
- Approval : CE Approval, IEC61000

Order information

Model selection Ex. : DMSFS-N-C-V-S-N-010

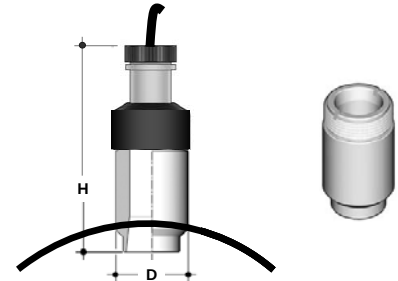
DMSFS -	X-	X-	X-	X-	X	-XXX	Description
Sensor Type	N-						Accept 5V DC
	P-						Accept 12 ~ 30V DC
Sensor body		C-					CPVC
		P-					PTFE
		S-					SUS316L
O ring			E-				EPDM
			V-				Viton
			P-				Viton coating PTFE
Sensor size (According to the installed fitting)				S-			Short
				L-			Long
Operating condition option, with the SUS sensor cap (Fluid temp. > 80°C or Working Pressure > 6 bar)					N		No
					Y		Yes
Electronic wiring						-NNN	M12/4Pin connector
						-010~-150	3 wires isolated cable (m)
						-XXX	Compact version with F1 series
						-TBP	With plastic terminal box
						-TBA	With Aluminum alloy terminal box
						-TBS	With SUS316 terminal box

DMSFS Paddle Wheel Flow Sensor

Installed fitting (Unit : mm)

- **Weld-on : Material / SUS316(-XXXSW) / CS(-XXXBW)**
PVC (-XXXVW)/ PP (-XXXPW)/ CPVC(-XXXCW) / PVDF(-XXXDW)

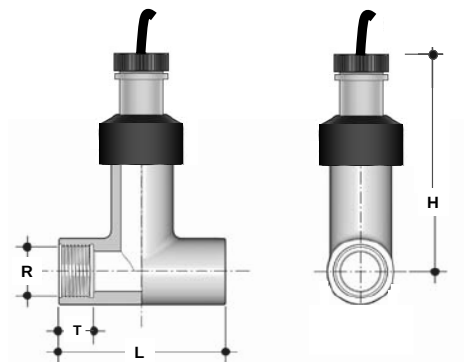
SIZE	-XXX	Sensor	H	D
2" - 8"	020~080	-S	127	43
10" - 16"	100~160	-L	158	43



- **Metal Tee Fitting (threaded female): Material / SUS316**

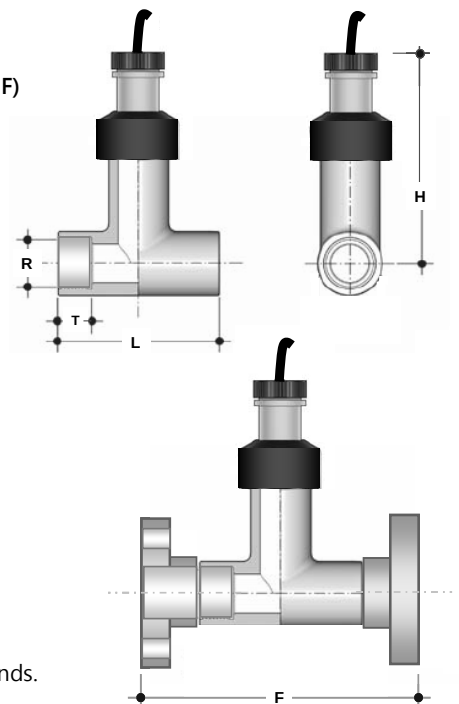
(-XXXPTS, PT) (-XXXNTS, NPT) / CS (-XXXPTC, PT) (-XXXNTC, NPT)

SIZE	-XXX	Sensor	R	T	L	H
1/2"	004	-S	1/2"	19	120	127.3
3/4"	006	-S	3/4"	19	120	129.9
1"	010	-S	1"	22.5	120	132.7
1-1/4"	012	-S	1-1/4"	22.5	150	135.9
1-1/2"	015	-S	1-1/2"	25	150	138.0
2"	020	-S	2"	25	150	142.4



- **Plastic Tee Fitting : Material / PVC / CPVC**
– Socket welding(-XXXVS) (-XXXCS)/Flange type(-XXXVS-F) (-XXXCS-F)

SIZE	-XXX	Sensor	R ^{*1.}	T	L	H	F ^{*3.}
1/2" ^{*2.}	004	-S	21.54	30.58	112.0	130.5	200.0
3/4" ^{*2.}	006	-S	26.87	30.58	112.0	130.5	188.0
1"	010	-S	33.66	30.58	96.0	130.5	155.0
1-1/4"	012	-S	42.42	34.75	115.5	131.2	189.5
1-1/2"	015	-S	48.56	37.93	128.0	134.5	202.0
2"	020	-S	60.63	41.10	145.5	136.0	228.3
2-1/2"	025	-S	73.38	47.45	171.0	138.2	266.4
3"	030	-S	89.31	50.63	196.0	147.2	297.8
4"	040	-S	114.76	60.15	237.5	164.3	359.7



*1. The socket size in ASTM SCH80 standard. *2. 1/2" , 3/4" with reducing bushing ends.

*3. Socket tee add the flange, and JIS 10K (-XXXXX-FJ)/ ANSI 150#(-XXXXX-FA) flange ends on request.

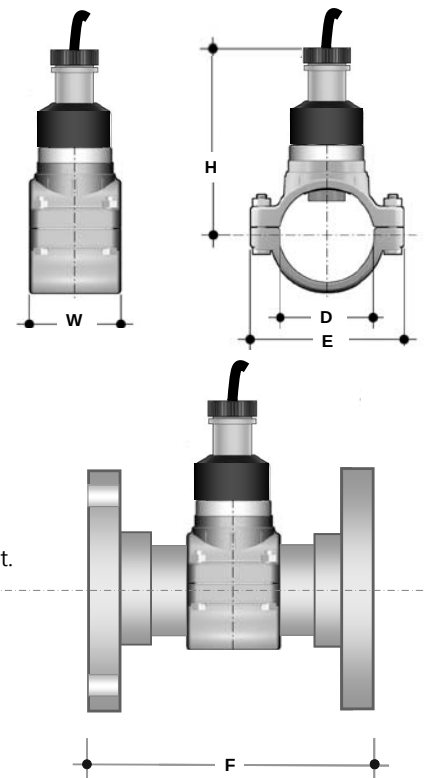
DMSFS Paddle Wheel Flow Sensor

■ PP Saddle type(-XXXPSX) *4.

SIZE	-XXX	Sensor	D	E	W	H	F*5.
2"	020	-S	63.0	101.0	67.0	136.0	170.0
2-1/2"	025	-S	75.0	116.0	77.0	138.2	190.0
3"	030	-S	90.0	132.0	87.0	147.2	190.0
4"	040	-S	110.0	172.0	101.0	164.3	210.0
6"	060	-L	160.0	237.0	168.0	202.1	300.0
8"	080	-L	225.0	333.0	125.0	230.8	300.0

*4. Insertion parts : PVC(-XXXPSV) standard, CPVC(-XXXPSC), PVDF(-XXXPSD)

*5. Pipe add the flange, and JIS 10K (-XXXXXX-FJ)/ ANSI 150#(-XXXXXX-FA) flange ends on request.



■ Pipe size vs. Flow rate (m³/hr)

Size	Min. Flow *6. @0.5m/s	Max. Flow *6. @6.0m/s
1/2"	0.32	3.82
3/4"	0.56	6.78
1"	0.88	10.6
1-1/4"	1.44	17.4
1-1/2"	2.26	27.1
2"	3.54	42.4
2-1/2"	5.98	71.4
3"	9.04	108.6
4"	14.1	169.8
5"	22.1	265.2
6"	31.8	381.6
8"	56.6	678.6
10"	88.4	1060.2
12"	127.2	1527.1
14"	173.2	2078.4
16"	226.1	2714.4

*6. Accuracy : The recommend operating value within $\pm 0.5\%$ FS.



SUS316L/PTFE/CPVC Sensor



Sensor with terminal box