

# Simple Flow Direction Meter



The forward flow/backward flow signals are output collected via contact connection.
As all the equipment is attached to one side of the channel frame, no on-site human adjustment is necessary.



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This Simple Flow Direction Meter is installed on the wall of a sluice pipe or sluice way to capture the water flow direction based on in what way its sensing arm is inclined. To prevent erroneous detection, a build-in flow switch checks that the sensor is under water (and not sticking up above water). The sensor outputs the measurement data to the control unit as RS-485 signals, where they will be recorded. The control unit outputs forward flow/backward flow signals via contact connection.

# Specifications

### Simple flow direction meter

Model	TSFD-1S
Activation flow rate	0.05m/s
Measuring method	Acceleration sensing
Sensing device	Sensing arm (forward/reverse/none)
Water level detection device	Float switch on the water surface (turned ON when the water level rises)
Output signal	RS-485 signal
Output	Flow direction/Float switch ON/OFF
Power supply	DC12V(DC10.5 to 15V)
Depth limit	10m
Flow rate limit	6m/s
Operating condition (temperature)	-10°C to 50°C(No freezing)
Material	Detection arm : SUS316L Case: ASA (weather-resistant resin)
Dimensions	380W×200H×63D mm (excluding the detection arm and protrusions)
Weight	3.5 kg or less
Cable	Sheath material: Vinyl chloride Outer diameter : $\rho$ 8 mm approx. (finished outer diameter) Length : Standards 10m(Maximum 100m)

# Simple flow direction meter control unit

Model	TSFD-1RLB
Input	RS-485 signal Simple flow direction meter two input lines available
Comparative output	Forward flow • Reverse flow a-contact Non-voltage, PhotoMOS relay output
Serial output	Micro USB type-B connector x 1 (to PC)
Display • Operation	LCD, 16 characters x 2 lines, front operation panel (6 keys)
Recording media	Micro SD card (2 GB or less)
Recording interval	1, 3, 5, or 10 minutes
Power supply	DC10.5 to 19.6V
Solar cell	Nominal maximum power: 3.1 W, Nominal maximum operating voltage: 18.6 V
Battery	Nominal voltage: DC 12 V, Nominal capacity: 7.2 Ah, Guaranteed life: 30 days approx. (at Tx intervals of 10 minutes)
Operating condition (temperature)	-10°C to 50°C(No freezing)
Material	PC+ABS resin
Dimensions	300W×400H×165D mm(excluding protruding parts)
Weight	9.0 kg or less

## Configuration diagram



### Simple flow direction meter



### Simple flow direction meter control unit





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