

 Reliability Creativity Service	Product Specifications		FZ01-361B1	1/4
	Instantaneous / Accumulated Flow Meter		Model	OF□□Z□WN OF□□Z□WP

### 1. Specifications

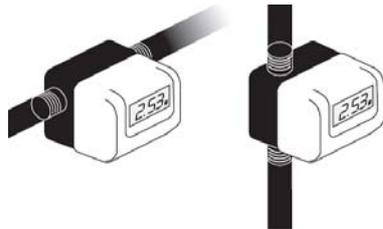
OF-WN type		OF05ZAWN	OF10ZAWN	OF05ZZWN	OF10ZZWN
OF-WP type (with pulse output)		OF05ZAWP	OF10ZAWP	OF05ZZWP	OF10ZZWP
Nominal diameter		5mm	10mm	5mm	10mm
Accuracy guaranteed flow-rate range	Fluid viscosity: 0.3 to 0.8mPa·s	0.085 to 0.85 L/min	0.7 to 5 L/min	0.085 to 0.85 L/min	0.7 to 5 L/min
	Fluid viscosity: 0.8 to 2.0mPa·s (Equivalent to cool/hot water or kerosene)	0.05 to 0.85 L/min	0.35 to 5 L/min	0.05 to 0.85 L/min	0.35 to 5 L/min
	Fluid viscosity: 2.0 to 5.0mPa·s (Equivalent to light oil)	0.017 to 0.85 L/min	0.17 to 5 L/min	0.017 to 0.85 L/min	0.17 to 5 L/min
	Fluid viscosity: 5.0 to 200mPa·s (Equivalent to heavy oil)	0.0085 to 0.85 L/min	0.085 to 5 L/min	0.0085 to 0.85 L/min	0.085 to 5 L/min
Accuracy	Instantaneous flow-rate display (in standard installation position)	±2%RS±0.007L/min	±2%RS±0.04L/min	±2%RS±0.007L/min	±2%RS±0.04L/min
	Accumulated flow volume display (in standard installation position)	±2%RS			
Fluid to be measured		Cool/hot water, kerosene, light oil, heavy oil		Weak acid/weak alkaline, Cool/hot water, kerosene, light oil, heavy oil	
Fluid viscosity range *1		0.3 to 200 mPa·s			
Fluid temperature range		0 to +60°C (No freezing)			
Working ambient temperature /humidity range		0 to +60°C 35 to 85%RH (No dew condensation)			
Storage ambient temperature/humidity range		0 to +60°C 35 to 85%RH (No dew condensation)			
Maximum working pressure		0.5MPa (at the fluid temperature of 20°C)			
Pulse output unit (OF-WP type only)		10mL/P (standard)			
Pressure drop (at the accuracy guaranteed maximum flow-rate)		4 kPa or less	10 kPa or less	4 kPa or less	10 kPa or less

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OF-WN type		OF05ZAWN	OF10ZAWN	OF05ZZWN	OF10ZZWN	
OF-WP type (with pulse output)		OF05ZAWP	OF10ZAWP	OF05ZZWP	OF10ZZWP	
LCD display portion	Instantaneous flow-rate	Minimum scaling unit	0.007L/min	0.04L/min	0.007L/min	0.04L/min
		Display and unit	0.000L/min	00.00L/min	0.000L/min	00.00L/min
	Accumula ted flow volume	Minimum digit unit	0.001L	0.01L	0.001L	0.01L
		Display and unit	00000.000L	000000.00L	00000.000L	000000.00L
	Update interval		2 sec (default) 0.5, 1, 2, 3, 4, or 5 sec (Selectable by setting)			
	Other functions		Accumulated flow volume display zero clear (reset) function Trip accumulated flow volume function Instantaneous flow-rate value hold function Function to change decimal points of accumulated flow volume and instantaneous flow-rate value			
	Rotation range		Approximately 270° to the left and 50° to the right from the original position (Do not rotate the display further than the position where it's rotation is stopped by the stopper.)			
	Standard Installation Position *2		Position the LCD display is vertical to the ground. Installation positions that LCD display faces upward or downward are not available.			
Flow direction		Direction indicated by the arrow on the product				
Pipe connection		R 1/4	R 1/2	R 1/4	R 1/2	
Protection grade		Indoor specification (Equivalent to IP X4)				
Power supply		Lithium battery (Battery life: Approximately 4 years, battery not replaceable)				
Weight		Approximately 240 g	Approximately 260 g	Approximately 240 g	Approximately 260 g	
Main materials of wetted parts *3	Casing	PPS				
	Rotor	PPS				
	O-ring	NBR		FKM		
	Shaft	SUS304		SiC		
Others		CE Marking product, RoHS directive compliant.				

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- \*1: In case the fluid to be measured is weakly acid or weakly alkaline solution, ensure that the wetted parts' materials have corrosion resistance against the fluid.
- \*2: The standard installation position means the position that the LCD display is vertical against the ground.  
Accuracy is not guaranteed for installation positions other than the standard installation position.



- In case particle foreign substances can be contained in the fluid to be measured, provide a strainer of 200 meshes or finer before the flowsensor.

\*3: Material symbols

PPS	Polyphenylene Sulfide
NBR	Nitrile Rubber (Acrylonitrile-Butadiene Rubber)
FKM	Fluoro Rubber
SUS304	Stainless
SiC	Silicon Carbide Ceramic

2. Specifications Common to Products with Pulse Output

Output signal format	Open drain pulse (Equivalent to open collector pulse)
	Pulse ON time: Approximately 5msec (one-shot pulse) Maximum applied voltage: 30V DC Output capacity ON-time resistance: 150Ω or less, OFF-time resistance: 100kΩ or more (Input current Residual voltage should be 1.5V or lower at 10mA or lower.)
Pulse output unit change function	Pulse is outputted at increasing of the value of the designated number of digit. (The designated number of digit is selectable by setting)
Cable length	Cable length: Approximately 500mm 2-core AWG26 Outer diameter Φ2.4 White: + / Black: -

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### 3. Precautions for handling

Before handling the product, be sure to read the handling manual carefully. And, use the product correctly.

#### 3-1. Working environment, fluid to be measured

- (1) Ensure that the wetted parts' materials have corrosion resistance against fluid to be measured.
- (2) Keep the product away from a strong magnetic field or a source of electric noise.
- (3) The product is not explosion-proof specification. Do not use the product in an explosive atmosphere such as flammable gas, etc.
- (4) In case pulsation exists in reverse flow, the measurement accuracy is to be affected. Prevent reverse flow using a check valve, etc.
- (5) Avoid installation at a place exposed to direct sunlight and/or rain (Indoor specification).

#### 3-2. Precautions for piping

- (1) No air shall be in the fluid to be measured. The measurement accuracy is to be affected.  
Do not install the product at a place where air accumulation can easily occur (e.g. upstream side of a falling pipe).  
Also, before start measurement, remove air sufficiently.
- (2) The product can be installed in vertical and horizontal piping. However, the installation position shall be such that its display is vertical against the ground.
- (3) Devices such as a flow-rate adjusting valve, etc., which disturb flow shall be installed in the downstream of the flowsensor.
- (4) Avoid installing the product where it is exposed to excessive pressure, such as water hammer, etc.
- (5) In case foreign substances, oil, etc., exist in the piping, install the flowsensor after cleaning inside of the pipe.
- (6) Make sure to align the flow direction of the fluid with the flow direction indicated by the arrow on the main body.
- (7) Around the place of installation, provide enough space for maintenance.
- (8) Fluid containing foreign substances cannot be measured. In case they can be in the fluid, provide a strainer of 200 meshes or finer to remove them.