



# TECHNICAL GUIDANCE

CE MARKING AND HIGH PERFORMANCE

## W-100

### MINI-WHEEL FLOWMETER

#### OUTLINE

W-100 Series paddle wheel type Flowmeter has been realized by adopting the mag-wheel technology which has been cultivated up to today.

What is more, the CPU signal processing circuit has been integrated and excellent linearity of an analog output is achieved.

#### FEATURES

- The flow of fluid can be directly monitored.
- Easy reassembling and cleaning
- Preeminent cost performance
- CE marking
- Excellent linearity of voltage output type owing to CPU measuring circuit.
- Compact in design and made of precision casting.



#### MODEL CODE

Model code			Description	
W-1	<input type="checkbox"/>	<input type="checkbox"/>		
Output	1		Open collector pulse	
	2		DC0 to 5V	
	3		Open collector pulse + 1 point alarm	
	4		DC0 to 5V + 1 point alarm	
	Z		Special	
Scale range and Size	1		0.6 ~ 3L/min	Rc1/4
	2		0.6 ~ 5L/min	
	3		1 ~ 10L/min	Rc3/8
	4		2 ~ 20L/min	
	5		5 ~ 50L/min	Rc3/4
	6		8 ~ 80L/min	
	7		10 ~ 100L/min	
	Z		Special	

#### STANDARD SPECIFICATIONS

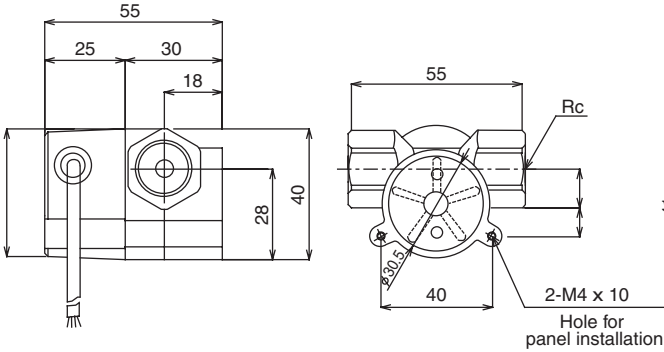
- Measuring fluid : Cooling water or low viscosity liquids (Less than 2mP-s)
- Fluid pressure : Max. 1.0MPa at 25°C
- Fluid temp. : 0 to 50°C (Without freezing)
- Ambient temp. : 0 to 50°C (Without freezing)
- Installation : Horizontal (Axis of wheel should be horizontal, and install the flow path upward.) or vertical
- Mass (approx.) : Approx. 0.2kg (W-1□1~W-1□4)  
Approx. 0.38kg (W-1□5~W-1□7)
- Accuracy : ±3%F.S.

#### FUNCTION

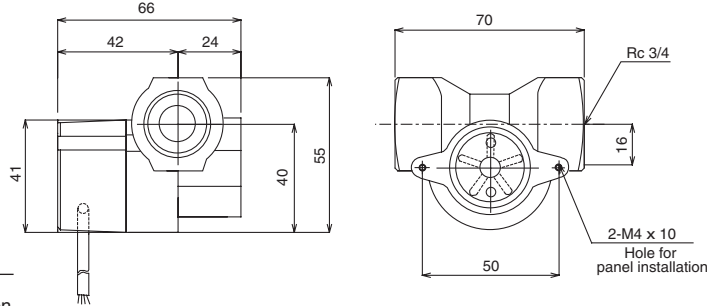
Model	Power supply	Output	Construction	Electric connection
W-11□	DC12~24V, 50mA	Open Collector pulse (Unscaled pulse) Load rating: Max.DC24V,15mA	Equivalent to IP65	4-core, AWG28 (1m)
W-12□	DC12V±10%, 50mA	DC0~5V Load rating: More than 100kΩ	Equivalent to IP65	4-core, AWG28 (1m)
W-13□	DC24V±10%, 50mA	Open Collector pulse + 1 point alarm (Refer to W-11□ for pulse output version) Alarm output : 1 point relay contact (SPDT) Alarm setting : Freely adjustable by adjustment knob between 10% to 100% of maximum rating flow rates Contact rating: DC24V, 100mA or less Hysteresis : 5% of max flow rate or less	Equivalent to IP64	6-core, AWG28 (1m)
W-14□	DC24V±10%, 50mA	DC0~5V + 1 point alarm (Refer to W-12□ for DC0~5V, W-13□ for alarm version)	Equivalent to IP64	6-core, AWG28 (1m)

DIMENSION

W-1□1~1□4



W-1□5~1□7



MATERIAL

Name	Material
Wheel/Shaft	Nylon12 / Engineering plastic (M250)
Shaft	HC-276
Bearing	POM
Window	Acryl
O ring	NBR
Cover	ABS
Cable	PVC coating
Body	SCS14

POM : Polyacetal

WIRING

Color	W-11□
Gray	GND
White	Pulse out
Black	Power supply (-)
Red	Power supply (+)
Black (thick)	Shield

Color	W-12□
Gray	Vout (-)
White	Vout (+)
Black	Power supply (-)
Red	Power supply (+)
Black (thick)	Shield

Color	W-13□
Yellow	Pulse out
Black	Power supply (-) GND
Red	Power supply (+)
Orange	Normal open
Brown	Normal close
Green	Common
Black (thick)	Shield

Color	W-14□
Blue	Vout (-)
Yellow	Vout (+)
Black	Power supply (-)
Red	Power supply (+)
Orange	Normal open
Green	Normal close
Brown	Common
Black (thick)	Shield

PRESSURE LOSS AND DIAMETER OF FLOW PATH

Model	ΔP (kPa)*	Diameter of flow path (mm)
W-1□1	5	6
W-1□2	15	6
W-1□3	10	8
W-1□4	20	10
W-1□5	5	15
W-1□6	2.5	18
W-1□7	5	20

\* at max flow

\* Specification is subject to change without notice.

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