



# TECHNICAL GUIDANCE

For high temperature (up to 150°C)  
Applicable to Galden and Fulorinert

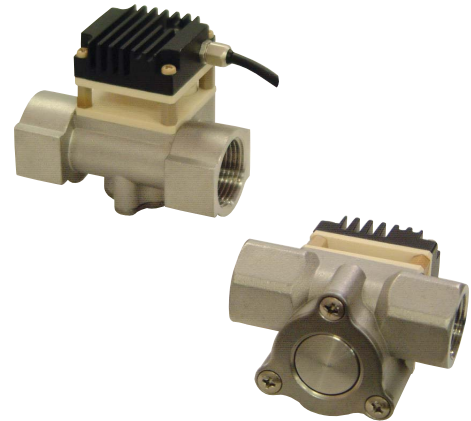
## W-3000

## MINI-WHEEL FLOWMETER

W-3000 Mini-Wheel Flowmeter, based on the acknowledged W-2000 series, can make measurement of fluids up to 150°C by the special fin structure.  
This is very suitable to build in semiconductor chiller devices in high temperature.

### FEATURES

- Very compact and light in the precision casting body
- Open collector pulse output available
- Continuous measurement of high temperature fluids can be made by the effect of radiation fin.
- Easy to disassemble or wash



### STANDARD SPECIFICATION

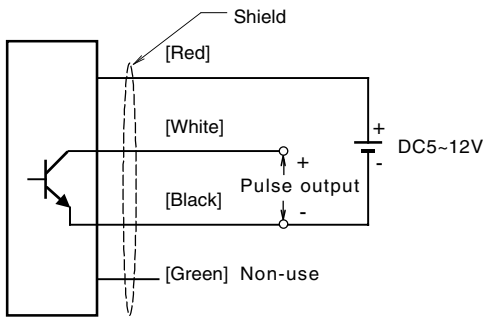
Measuring liquid : Various liquids (Fulorinert, Galden)  
 Allowable viscosity : Less than 3.0mPa·s (W-3016 to 3019)  
                                   Less than 2.0mPa·s (W-3012 to 3015)  
 Fluid temperature : Max.150°C  
 Ambient temperature : Less than 50°C (Without dew condensation)  
 Fluid pressure : Max.1.0 MPa  
 Installation : Flow of fluid: Make it parallel or vertical.  
                                   (Make the position of wheel shaft parallel  
                                   and the flow path to be on the upper part of  
                                   wheel.)

Construction : Indoor use (IP20 equiv.)  
 Output : Open collector pulse (Unscaled pulse)  
 Pulse frequency : 85Hz approx. (Actual measurement value  
                                   indicated on tag plate)  
 Power supply : DC5 to 12V, 12mA  
 Load rating : Max. DC18V, 15mA  
 Accuracy : ±3% F.S. (W-3013 to 3019)  
                                   ±5% F.S. (W-3012)  
 Electric connection : AWG26 (12/0.12) x 3C  
                                   UL2941 4-core cable (Green: Non-use)

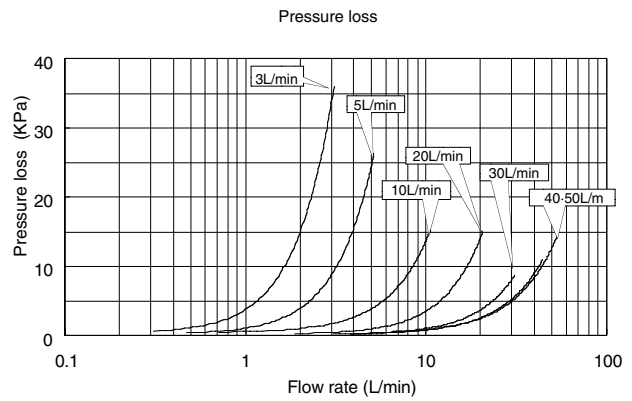
### MODEL CODE

Model code											Description			
W-30	1	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	S	3	0	-	<input type="checkbox"/>	Pulse output: Open collector (Unscaled pulse)	
Output	1													
Range of flow rate Connection size	2												0.5 ~ 3 L/min (Flow path nozzle φ3.0)	
	3												0.7 ~ 5 L/min (Flow path nozzle φ4.0)	
	4												1.0 ~ 10 L/min (Flow path nozzle φ6.4)	
	5												2.0 ~ 20 L/min (Flow path nozzle φ10)	
	6												3.0 ~ 30 L/min (Flow path nozzle φ12)	
	7												4.0 ~ 40 L/min (Flow path nozzle φ14)	
	8												5.0 ~ 50 L/min (Flow path nozzle φ16)	
	9												6.0 ~ 60 L/min (Flow path nozzle φ16)	
	Inflow direction											R	Right to Left or Bottom to Top (Wheel on left side against flow path) (Standard)	
										L	Left to Right or Bottom to Top (Wheel on right side against flow path)			
Cable length											1	1m (Standard)		
											2	2m		
Material of O-ring											F	FKM (Fluoro rubber)		
											E	EPDM (Ethylene propylene rubber)		
											S	FVMQ (Fluorosilicone rubber)		
Material of monitoring window											S	SUS316		
Material of wheel, bearing and shaft											3	Wheel: PPS, Bearing: carbon containing PTFE, Shaft: Quarts glass		
Accessories											0	None		
Incidental specification (Put applicable number in case of plural case.)											A	Degrease treatment (Standard)		
											B	Non-water treatment (Standard)		

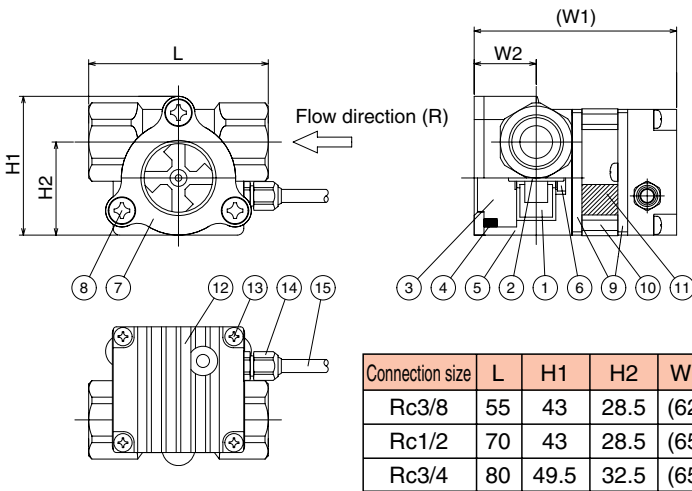
WIRING



PRESSURE LOSS



DIMENSION AND MATERIAL



Connection size	L	H1	H2	W1	W2	Mass
Rc3/8	55	43	28.5	(62)	19	0.35kg
Rc1/2	70	43	28.5	(65)	22	0.4kg
Rc3/4	80	49.5	32.5	(65)	22	0.5kg

No.	Parts	Material
①	Wheel/Bearing	PPS/Carbon containing PTFE
②	Shaft	Quartz glass
③	Monitoring window	SUS316
④	O ring	Refer to MODEL CODE
⑤	Body	SCS14
⑥	Bush	Carbon containing PTFE
⑦	Plate	SUS316
⑧	Stop screw	SUS304
⑨	Heat insulation plate	PPS
⑩	Spacer	PPS
⑪	Sensor	—
⑫	Fin	ADC12
⑬	Stop screw	PPS
⑭	Cable clamp	Brass/EPDM
⑮	Cable	Covered with heat resistant PVC

NOTES

- Do not put a signal cable adjacent to other power lines.
- Inside diameter of process piping and fitting is to be more than that of flow path nozzle.
- Installation is to be made at the place free from the influence of external magnetic field which affects the property.
- Use this flowmeter where there is no stagnation of air around the wheel and also in the state of water filled up.
- Avoid the air blow since wheel and shaft may be damaged.
- Keep body and process piping warm, and do not prevent the ventilation between heat insulation plates.
- Besides the above, the instruction manual describes in details installation, operation and maintenance.

\* Specification is subject to change without notice.

**TIV TOKYO KEISO CO., LTD.**

Head Office : Shiba Toho Building, 1-7-24 Shibakoen, Minato-ku, Tokyo 105-8558  
 Tel : +81-3-3431-1625 (KEY) ; Fax : +81-3-3433-4922  
 e-mail : overseas.sales@tokyokeiso.co.jp ; URL : http://www.tokyokeiso.co.jp

