

## External Option : Compact Waterproof Electrode (Noncontact Waterproof Option) IP67

Master Cylin  
model **SWRZ0** <sup>W</sup> <sub>WX</sub> **0-M**

W : NPN  
WX : PNP

Tool Adapter  
model **SWRZ0** <sup>W</sup> **0-T**

For both  
NPN and PNP.

### Specifications

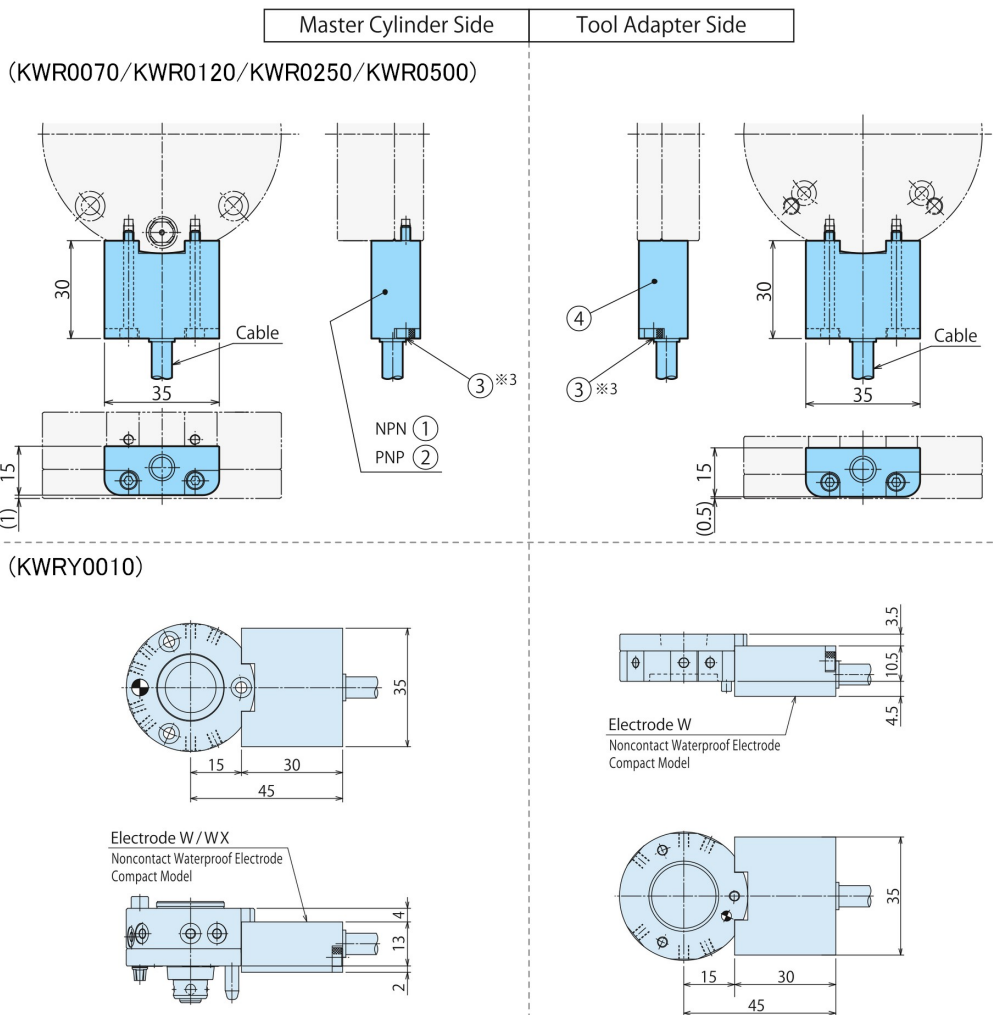
Number of Signals (per electrode)		4
Protection Grade <sup>※1</sup>		IP67
Cable		PUR $\phi$ 6.3 7×0.259mm <sup>2</sup>
Cable Length	Master Cylinder Side	2m
	Tool Adapter Side	1m
Weight <sup>※2</sup>	Master Cylinder Side	Electrode 20g Cable 60g/m × 2m Bracket for SWR0030 8g
	Tool Adapter Side	Electrode 20g Cable 60g/m × 1m Bracket for SWR0030 8g

※1. Protection grade of the electrode part.

※2. Weight per electrode.

Bracket weight shows the weight of SWRZ050-T.

### External Dimensions



Model No.	No.	Name	Quantity
SWRZ0W0-M	①	Electrode (Master Side) <b>NPN</b> (B & Plus)	1
	③	Hexagon Socket Bolt M3×0.5×30 (SUS) <sup>※1</sup>	2
SWRZ0WX0-M	②	Electrode (Master Side) <b>PNP</b> (B & Plus)	1
	③	Hexagon Socket Bolt M3×0.5×30 (SUS) <sup>※1</sup>	2

Model No.	No.	Name	Quantity
SWRZ0W0-T	④	Electrode (Tool Side)	1
	③	Hexagon Socket Bolt M3×0.5×30 (SUS) <sup>※1</sup>	2

Notes : 1. The tightening torque for M3 mounting bolts marked with ※1 should be 0.63 N · m.

## ● Details and Notes on External Option : Compact Noncontact Waterproof Electrode

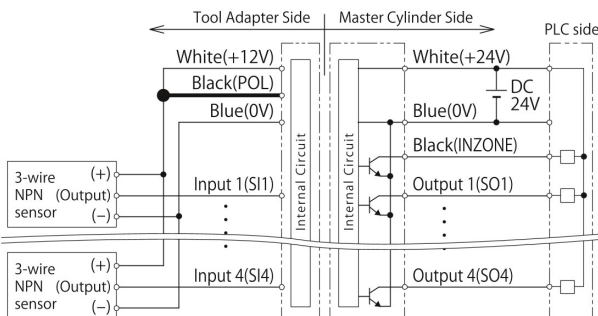
Applicable Sensor		Electrode Specifications (Tool Adapter Side)		Electrode Specifications (Master Cylinder Side)		LED Indication Status LED : Green	
Supply Voltage	12V DC	Model No.	SWRZ0W0-T	Model No.	SWRZ0W0-M	LED	Meaning
Total Current Consumption	≤60mA	Applicable Sensor	DC 3-Wire Sensor	No. PNP	SWRZ0WX0-M	ON ○	The power is supplied.
Residual Voltage	≤3.5V	Output Voltage	12V ±1.5V DC	Supply Voltage (Input Voltage)	24V DC ±10% (Including Ripple)	OFF ●	The power is not supplied.
		No. of Input Signals	4	Current Consumption	≤200mA	Blink ⚡	Blinks in case of abnormality.
		Total Output Current	≤30mA / ≤60mA	No. of Output Signals	4 + 1 (Inzone)		
		Operating Distance	0~3mm / 0~2mm	Load Current	≤50mA / 1 Output		
		Operating Temperature	0 ~ 50°C	Operating Temperature	0 ~ 50°C		
		Protection Grade	IP67	Protection Grade	IP67		
		Material	ABS	Material	ABS		
			PUR φ6.3 / 7×0.259mm <sup>2</sup>		PUR φ6.3 / 7×0.259mm <sup>2</sup>		
		Cable	Hitachi Metals, Ltd. RBT-VUCTF	Cable	Hitachi Metals, Ltd. RBT-VUCTF		

※ Total current consumption of sensors must not exceed the total rated output current.

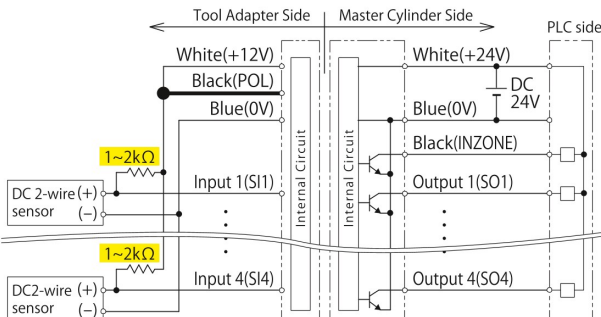
### Wiring Diagram

#### SWRZ0W0-M (NPN)

##### ■ For DC 3-wire NPN sensor connection



##### ■ For DC 2-wire sensor connection (when NPN is set)

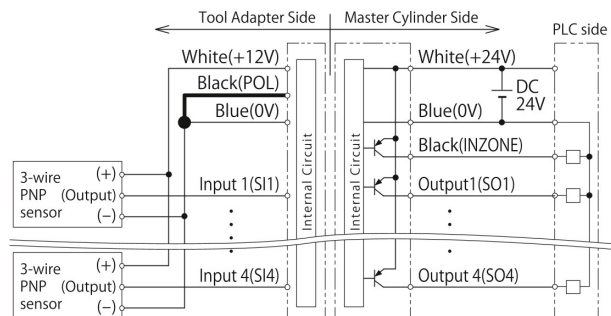


■ When connecting a DC 2-wire sensor, ensure to wire a resistor of about 1 to 2 kΩ.

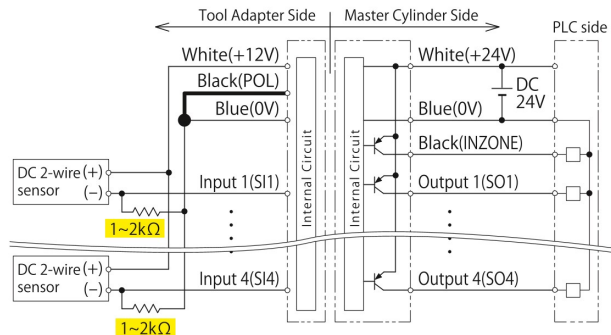
■ POL is wiring for switching the polarity (NPN/PNP) of the sensor.

#### SWRZ0WX0-M (PNP)

##### ■ For DC 3-wire PNP sensor connection



##### ■ For DC 2-wire sensor connection (when PNP is set)



### Wiring Color

#### ■ Electrode for Tool Adapter side

Output + 12V	White
Output 0V	Blue
Polarity Switching POL	Black
Input 1 (SI1)	Brown
Input 2 (SI2)	Red
Input 3 (SI3)	Yellow
Input 4 (SI4)	Green

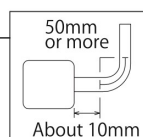
#### ■ Electrode for Master Cylinder side

Input +24V	White
Input 0V	Blue
INZONE	Black
Output 1 (SO1)	Brown
Output 2 (SO2)	Red
Output 3 (SO3)	Yellow
Output 4 (SO4)	Green

### Bending Radius of Cable

The minimum bending radius for the sensors are 50mm.

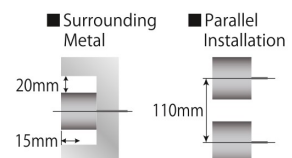
※ Do not pull the cable with excessive force.



### Attention for Installation

(Read this section thoroughly before installation.)

- ◆ Ensure the power is switched off during installation or maintenance operations.
- ◆ Use a regulated power supply, e.g. switch-model type. Simpler power supplies, such as a full-wave rectification type, will cause the permissible ripple rating to be exceeded and may cause malfunction.
- ◆ Do not put metal objects between electrodes during operation. Failure to do so may cause heat generation, ignition, or malfunction.
- ◆ Ensure correct connections by referencing the wiring diagram.
- ◆ To avoid malfunction caused by induction noise, cable should be kept apart from motor or other power cable.
- ◆ The control communication device in the product may affect electronic devices and medical devices. Persons wearing pacemakers should stay away from this product.
- ◆ In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described on the right.



The information above is quoted from B & Plus K.K. Remote System User's Guide (No.T315201G).

Please contact B & Plus K.K. (TEL 81(0)-493-71-5160) for further information about electrodes (Model No. SWRZ0W0-M-\_\_ / SWRZ0W0-T-\_\_).