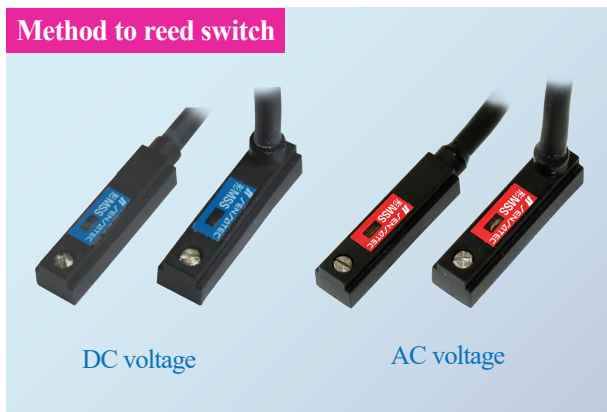


# Model MSS-SDI(L)/SAI(L) Small Electromagnetic Sensor

## Method to reed switch



## Model List

12 V to 24 V DC

	Cable Direction	
	Horizontal	Perpendicular
Cable of 1 m in length	MSS-SDI	MSS-SDL
Cable of 3 m in length	MSS-SDI-3M	MSS-SDL-3M
Cable of 5 m in length	MSS-SDI-5M	MSS-SDL-5M

100 V AC

	Cable Direction	
	Horizontal	Perpendicular
Cable of 1 m in length	MSS-SAI	MSS-SAL
Cable of 3 m in length	MSS-SAI-3M	MSS-SAL-3M
Cable of 5 m in length	MSS-SAI-5M	MSS-SAL-5M

## Application

- Cylinder position detection and control
- Relay and programmable controller control
- Magnet detection

## Characteristics

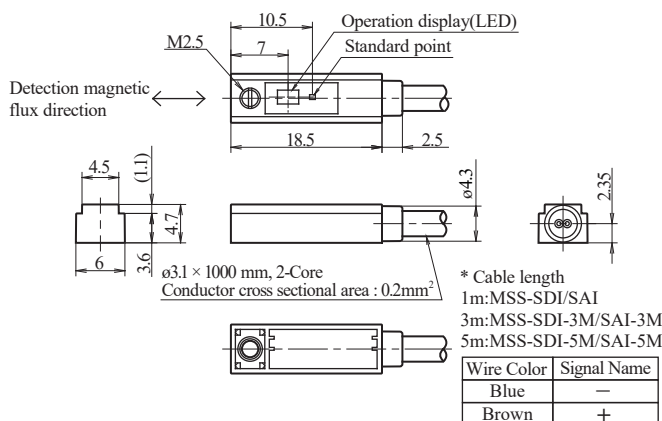
- Because use a reed switch method, leakage current is 0μA.
- Welding prevention resistor built-in.
- Cable connection available on the side or on the top.
- Cable of 1 m and 3 m and 5 m length, are available.
- Molded type that can be used safely even in places where water may splash.

## Rating / Performance

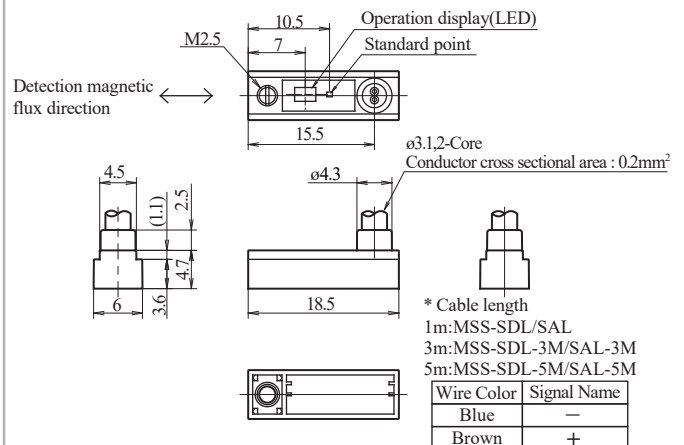
Model	MSS-SDI	MSS-SDL	MSS-SAI	MSS-SAL
Detection Surface	Front side detection			
Detection Sensitivity	Detection : 6.5 mT (65 G) or more (At the standard point), Reset : 1.5 mT (15 G) or less (At the standard point)			
Detection Polarity	N pole and S pole			
Power Supply Voltage	12 V to 24 V DC (Operating voltage range : 10 V to 30 V DC)		100 V AC (Operating voltage range : 70 V to 100 V AC)	
Leakage Current	0 μ A DC when Off			
Power Consumption	5 mA to 50 mA DC		7 mA to 20 mA AC	
Output Residual Voltage	4 V DC or less (Load current 50 mA DC and a 1-meter cord)		4 V AC or less (Load current 20 mA AC and a 1-meter cord)	
Welding Prevention Resistance	22 Ω		100 Ω	
Operation Configuration	Normally open (On with magnetic field)			
Operation Indication	Red LED (Lit when On output)			
Max Response Frequency	200Hz			
Temperature Range	-10 to 60 °C (-15 to 60 °C during storage)(Without dew condensation or freezing)			
Humidity Range	95% RH or less (95% RH or less during storage)(Without dew condensation)			
Withstand Voltage	1 min at 1000 V AC 50/60 Hz (Between the live part and case)			
Insulation Resistance	50 MΩ or more measured with an ohmmeter at 500 V DC (Between the live part and case)			
Vibration Resistance	Durability : 2 hours in each X, Y, Z direction at 10 to 55 Hz and with peak-to-peak amplitude of 1.5 mm (At power off)			
Shock Resistance	Durability : 10 times at 294 m/s <sup>2</sup> (approx. 30 G) in each X, Y, Z direction (At power off)			
Protection Rating	IP67			
Case Material	PBT			
Cable	ø3.1, 2-core round cord of 0.2 mm <sup>2</sup> (Oil and heat resistant)			
Cable Direction	Horizontal	Vertical	Horizontal	Vertical
Weight	Approx. 15 g (1 m in cable length)			

## External Dimensions Diagram

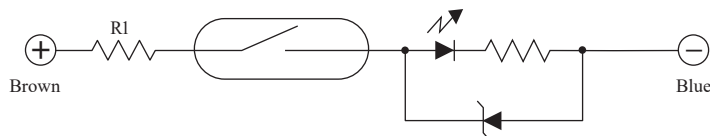
### MSS-SDI/SAI (Horizontal)



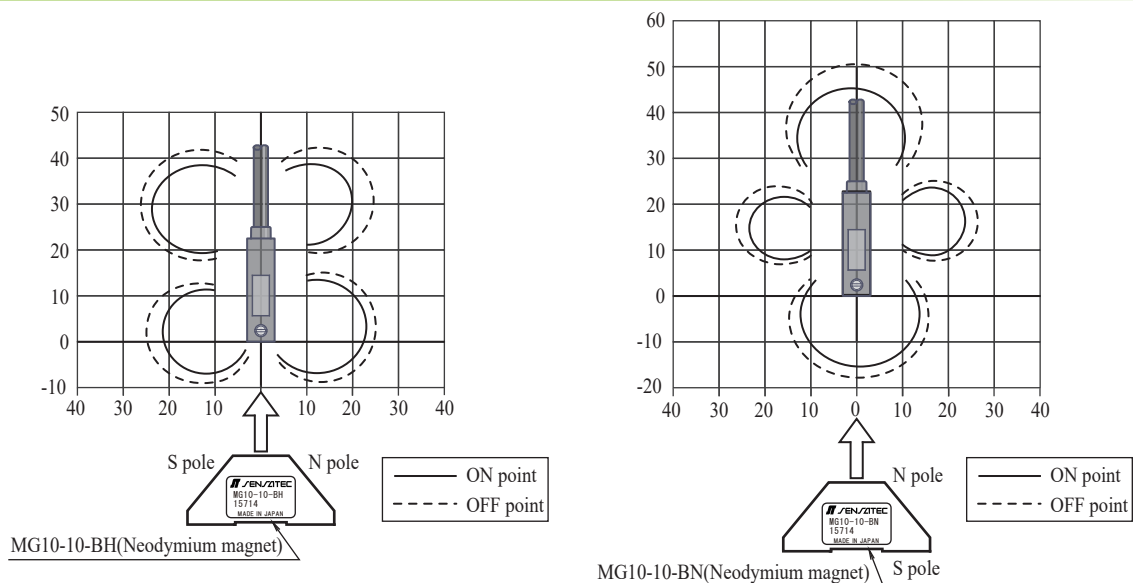
### MSS-SDL/SAL (Perpendicular)



## Output Circuit and Connections

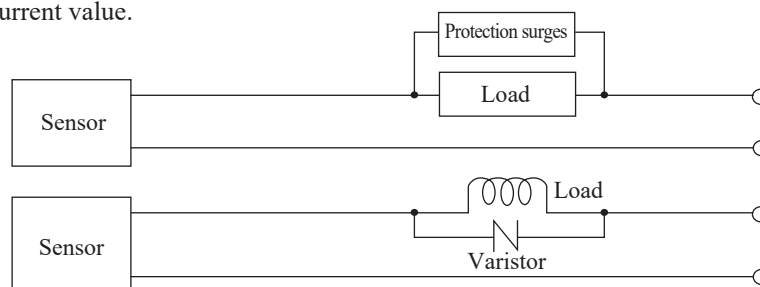


## Characteristics Graph (Typical Example)



## Usage Precautions

1. If the load of the magnetic sensor relay, the inductive load such as a solenoid, please use by using a surge protection circuit and varistor to load.
2. Because it is a reed switch type, please use as not to apply excessive shock or stress to those magnetic sensor.
3. If the load of the magnetic sensor is a large inrush current, such as capacity load, please use so as not to over the maximum load current value.



4. See Electromagnetic sensor general usage precautions for other precautions.

\*For a detailed specification of the other, please refer to specifications.