Model MDS-C10(-5) Inductive sensor to detect coins

SENSATEC CO.,LTD.
http://www.sensatec.co.jp

□Model List

>Normally open type

	Power supply voltage	
	12V to 24 V DC	5V DC
Standard frequency	MDS-C10	MDS-C10-5
First different frequency	MDS-C10B	MDS-C10B-5
Second different frequency	MDS-C10C	MDS-C10C-5

>Normally closed type

	Power supply voltage	
	12V to 24 V DC	5V DC
Standard frequency	MDS-C101	MDS-C101-5
First different frequency	MDS-C101B	MDS-C101B-5
Second different frequency	MDS-C101C	MDS-C101C-5

Application

- Coin detection of ATM
- Detection of coin vending machine
- Level detection of steel ball of the magnetic metal
- Detection of medals

Features

- Inductive sensor to detect coins.
- The detection distance for a 1 yen coin (aluminum) is 4.7 mm.
- Maintenance is easy thanks to the connector.
- Can be used in a variety of environments and installed directly on metal surfaces with.

Rating / Performance

Model	**MDS-C10**	**MDS-C101**	**MDS-C10-5**	**MDS-C101-5**
Detection Surface	Upper side detection			
Detection Distance	4.7 mm ±10%			
Hysteresis	15% or less of the detection distance			
Set Distance	3.7 mm			
Standard Detection Target	1 yen coin			
Power Supply Voltage	12 V to 24 V DC (Operating voltage range: 10 V to 30 V DC)		5 V DC (Operating voltage range: 4.5 V to 5.5 V DC)	
Current Consumption	8 mA DC or less		6 mA DC or less	
Output	30 V DC 50 mA DC or less NPN transistor open collector			
Output Residual Voltage	0.5 V DC or less (Load current 50 mA DC)			
Operation Status	Normally open (ON output when detecting)	Normally closed (OFF output when detecting)	Normally open (ON output when detecting)	Normally closed (OFF output when detecting)
Response Frequency	400 Hz or more			
Temperature Range	-10 to 60 °C (-25 to 65 °C storage temperature range)(Without dew condensation or icing)			
Humidity Range	90% RH or less (90% RH or less storage humidity range) (Without dew condensation)		85% RH or less (90% RH or less storage humidity range) (Without dew condensation)	
Dielectric Strength	500 V AC for 1minute (Between the live part and case)			
Insulation Resistance	50 MΩ or more at 500 V DC megger (Between the live part and case)			
Vibration Resistance	10 to 55 Hz, 1.5 mm double amplitude in X, Y and Z directions for 2 hours each (at power off)			
Shock Resistance	1000 m/s² (Approx. 50 G) in X, Y and Z directions 3 times each (at power off)			
Protection	IP50			
Case Material	PBT			
Connector	Connector: S3B-PH-SM4-TB (3-pin) (from J.S.T. Mfg. Co., Ltd.) [Connections] Housing: PHR-3, Contact: SPH-002T-P0.5 (from J.S.T. Mfg. Co., Ltd.)			
Weight	Approx. 15 g			
Options (Sold Separately)	Connector harness : CNH-PHR03S24-300			

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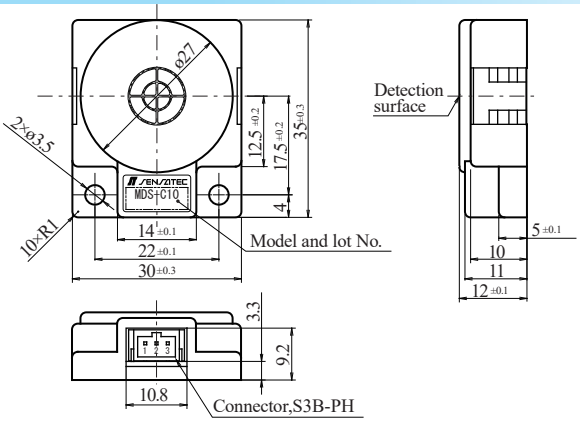
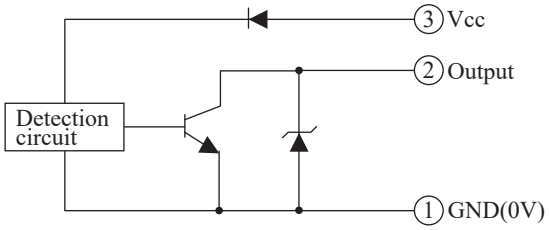
Outline Dimensions



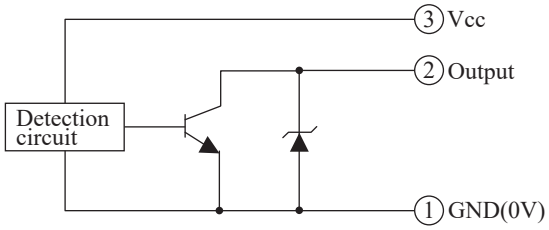
Pin number	Signal name
1	GND(0V)
2	Output
3	Vcc

Output Circuit

MDS-C10, MDS-C101



MDS-C10-5, MDS-C101-5

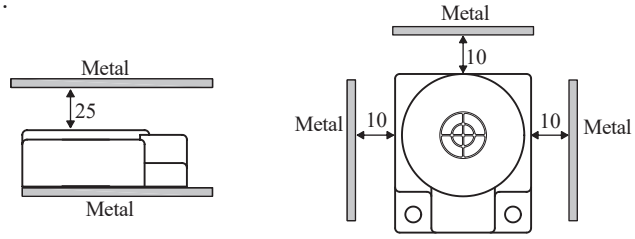


*Because there is no reverse connection protection diode built-in, pay careful attention to the polarity of the power supply.

Precautions Durring Use

- Influence of surrounding metal

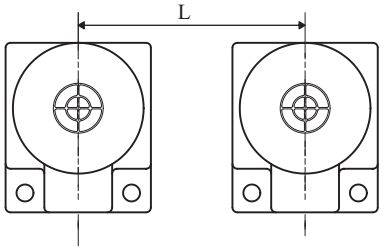
If there are metal objects around the inductive sensor, leave at least the space indicated in the figure below between them and the sensor.



Unit:mm

- Mutual interference

If you use a number of the same product, separate them at least by the distances shown in the figure below to prevent reciprocal interference. (Sensors with a different frequency are indicated with a B or C after the model name.)



When they have the same frequency	L = 80mm
Combination with different frequencies	L = 35mm

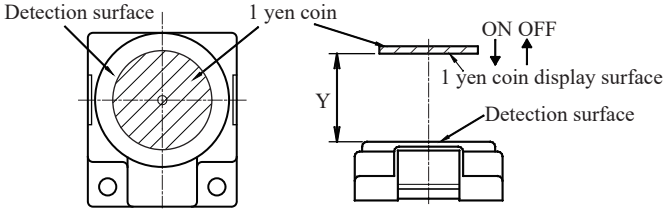
- Mounting

Always use plain washers to tighten the case and use a torque of 0.5 N·m or less.

- See inductive sensor general usage precautions for other precautions.

Typical Values

Type of coin and detection distance	
1 yen coin	4.7 mm
5 yen coin	5.4 mm
10 yen coin	5.0 mm
50 yen coin	7.2 mm
100 yen coin	7.2 mm
500 yen coin	6.3 mm



The detection distance is the position Y where the output is ON when the 1 yen coin moves perpendicular and approaches the detection surface (standard surface) with the center of the coin aligned to the center of the detection surface.

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