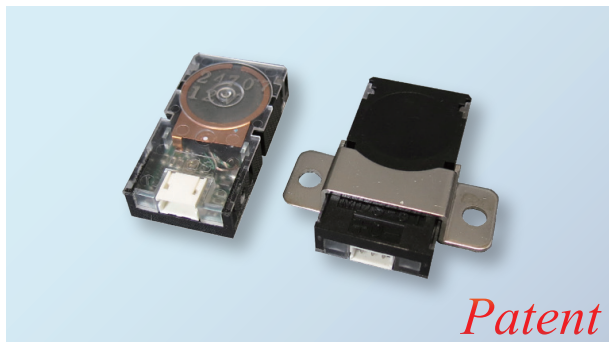


Model MDS-5T High-sensitivity Inductive Sensor



□Model List

Power Supply Voltage	Standard frequency	Different frequency
5V DC	MDS-5T-5	MDS-5T-5B
12V to 24 V DC	MDS-5T-12	MDS-5T-12B

Application

- Iron sheet detection
- Slot medal detection
- Detection of pachinko balls
- Detection of coins
- Detection of medals level
- Detection of pachinko balls level

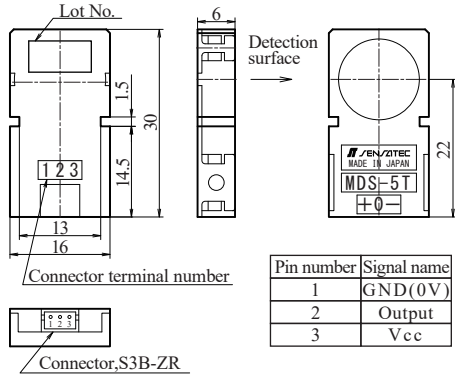
Features

- Small flat inductive sensor with a detection surface of 16 mm, a case of 6 mm in thickness, and a detection distance of 7 to 8 mm (Upper surface detection type).
- Equipped with a small connector for simple mounting and wiring.
- Features a keyway on the case side for an easy mounting in one touch.
- You may also use the mounting bracket (Sold separately).

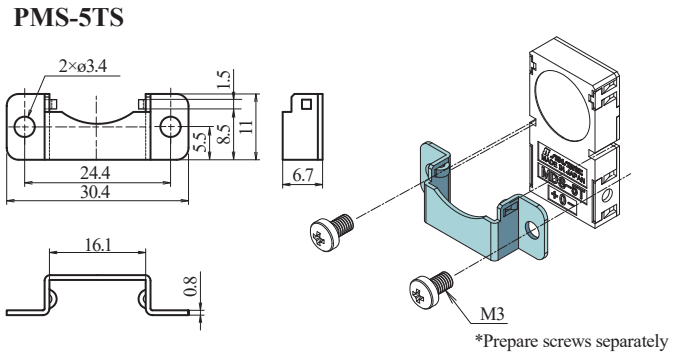
Rating / Performance

Model	MDS-5T-5	MDS-5T-12
Detection Surface	Upper side detection	
Detection Distance	7.5 mm ± 0.5 mm	
Hysteresis	15% or less of the detection distance	
Set Distance	0 to 6.0 mm	
Standard Detection Target	Iron sheet of 20 × 20 mm and 1 mm in thickness	
Power Supply Voltage	5 V DC (Operating voltage range : 4.5 V to 5.5 V DC)	12 V to 24 V DC (Operating voltage range : 10.8 V to 26.4 V DC)
Current Consumption	2 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	1 V DC or less (Load current 50 mA DC)	
Operation Status	Normally open (ON output when detecting)	
Response Frequency	100 Hz or more	
Temperature Range	-20 to 60 °C (-25 to 65 °C storage temperature range)(Without dew condensation or icing)	
Humidity Range	35 to 85% RH (35 to 85% RH 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	200 m/s ² (Approx. 20 G) in X, Y and Z directions 3 times each (at power off)	
Static Electricity Resistance	15 kV between the external cover and the electrode (C = 500 pF, R = 330 Ω), but only on the detection side	
Protection	IP50	
Case Material	ABS	
Connector	Connector: S3B-ZR(3-pin) (from J.S.T. Mfg. Co., Ltd.) [Connections] Housing: ZHR-3, Contact: SZH-002T-P0.5 (from J.S.T. Mfg. Co., Ltd.)	
Weight	Approx. 4 g	
Accessories (Sold Separately)	Mounting bracket : PMS-5TS Connector harness : SZH-3-300	

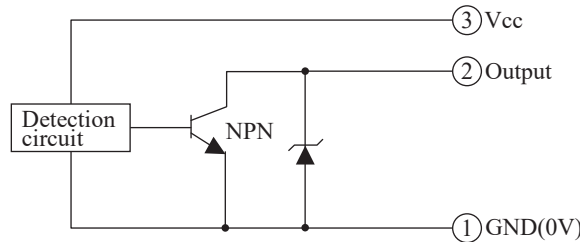
Outline Dimensions



Mounting Bracket (Sold Separately)



Output Circuit

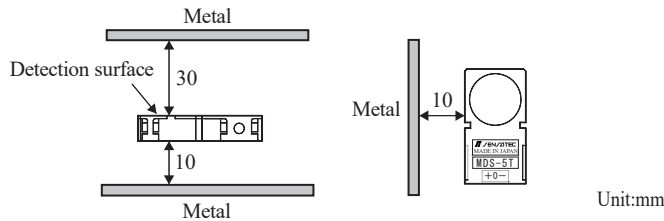


*Because there is no reverse connection protection diode built-in, pay careful attention to the polarity of the power supply.

Precautions During Use

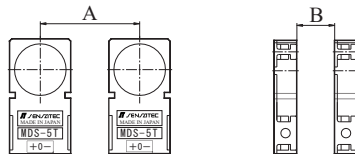
- Influence of Surrounding Metal

Do not place metal objects around the inductive sensor, i.e. within 30 mm from the detection surface, 10 mm from the front side, or 10 mm from the sides. Otherwise, the detection distance may increase or other malfunctions may occur. Also, if there are surrounding metals on two or more sides including the side surface, please contact us in advance.



- 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 after the model name.)



	When they have the same frequency	Combination with different frequencies
A	110	20
B	200	100

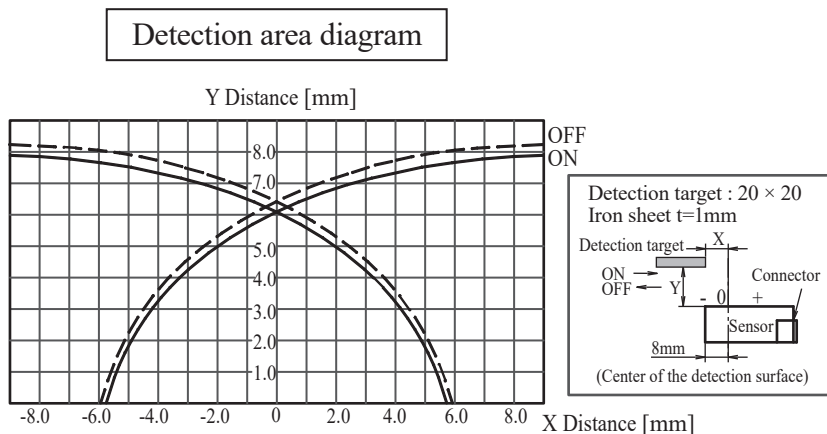
Unit:mm

- Mounting Precautions

Note that inductive sensors cannot be used if installed on metal surfaces.

- See inductive sensor general usage precautions for other precautions.

Characteristics Graph (Typical Example)



Reference Operating Sensitivity

Detection Target	Operation Distance
Stainless steel medal	5.5 mm
Daika medal	5.4 mm
Bimetallic medal	4.9 mm
Nickel silver medal	4.4 mm
Nickel medal	3.6 mm
Golden nickel silver medal	3.5 mm
Brass Kirinsu medal	3.5 mm
Gold plated medal	3.6 mm
Pachinko ball	5.0 mm
20 × 20 × t1 Iron sheet	8.0 mm

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