

□Model list

Power supply voltage	Standard frequency	Different frequency
5V DC	MDS-5T-5S	MDS-5T-5SB
12V DC	MDS-5T-12S	MDS-5T-12SB

Application

- Iron plate detection
- Positioning of the processing machines
- There is no space, the magnetic detection of a narrow place
- Position detection of the moving table and metal pallets

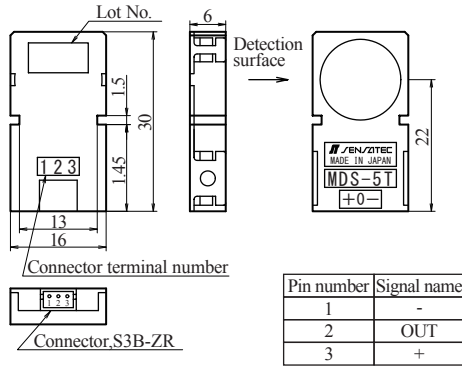
Characteristics

- Small flat proximity sensor with a detection surface of 16 mm, a case of 6 mm in thickness, and a detection distance of 5 mm (upper surface detection type).
- Equipped with a small connector for simple installation and wiring.
- The MDS-5T-□S features a keyway on the case side for an easy installation in one touch. You may also use the installation bracket (sold separately).

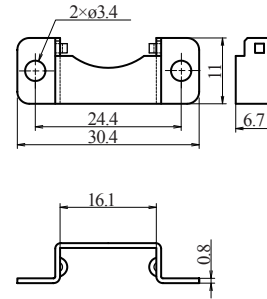
Rating and performance

Model name	MDS-5T-5S	MDS-5T-12S
Detection surface	Upper side detection	
Detection distance	5 mm ±10%	
Hysteresis	15% or less of the detection distance	
Set distance	0 to 4.0 mm	
Standard detection target	Iron plate 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)
Power consumption	DC 2 mA or less	DC 6 mA or less
Output	DC 30 V DC 50 mA or less NPN transistor open collector	
Output residual voltage	DC 1 V or less (load current DC 100 mA)	
Operation configuration	Normally open (On output with detection target)	
Response frequency	500 Hz or more	
Operating temperature range	-20 to 60 °C (-25 to 65 °C during storage)	
Operating humidity range	35 to 85% RH (35 to 85% RH during storage) (no condensation)	
Withstand voltage	1 min at AC 500 V 50/60 Hz (between the live part and case)	
Insulation resistance	50 MΩ or more measured with an ohmmeter at DC 500 V (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: 3 times at 200 m/s ² (approx. 20 G) in each X, Y, Z direction (at power off)	
Protection rating	IP50	
Case material	ABS	
Connector	Connector: S3B-ZR (3-pin), housing: ZHR-3, contact: SZH-002T-P0.5 (from J.S.T. Mfg. Co., Ltd.)	
Weight	Approx. 4 g	
Options (sold separately)	Installation bracket : PMS-5TS Connector harness : SZH-3-300	

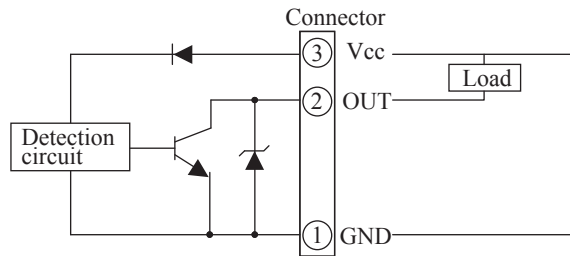
External dimensions diagram



Installation bracket (sold separately)



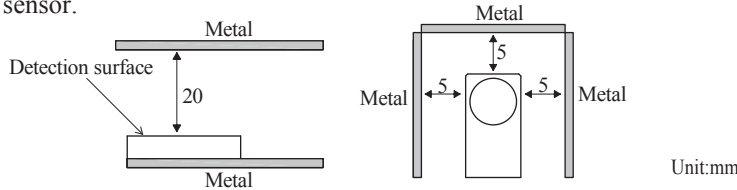
Output circuit



Usage precautions

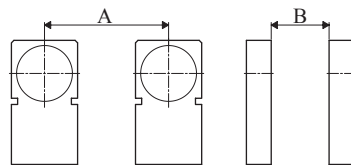
- Influence of surrounding metal

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



- Mutual interference

If you use two or more 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	100	60
B	200	100

Unit:mm

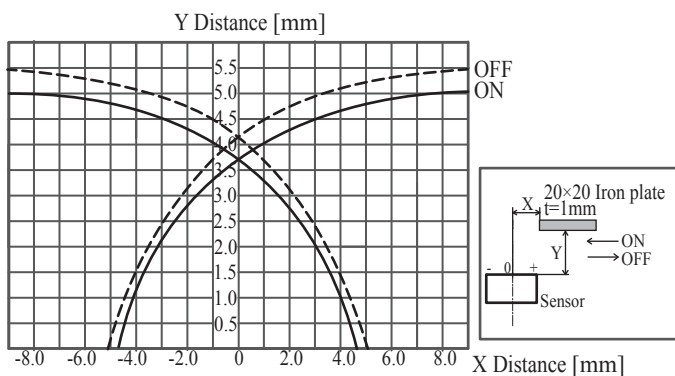
- Installation

Tighten the case with a torque of 0.5 N.m or less.

- See proximity sensor general usage precautions for other precautions.

Characteristics (typical example)

Detection area diagram



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

Material and size - Detection distance characteristics

