□Model list

Standard frequency	MDS-5LT
First different frequency	MDS-5LTB
Second different frequency	MDS-5LTC

Application

- Displacement measurement
- Pressure, the pressure measurement
- Amplitude measurement
- Detects the number of layers or the thickness difference of 2 bills or pieces of paper
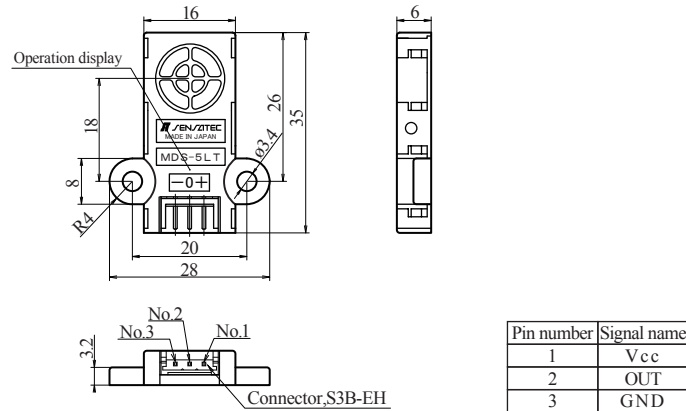
Characteristics

- Small, flat, and economical linear-output proximity displacement sensor.
- No mechanical parts to increase the lifespan.
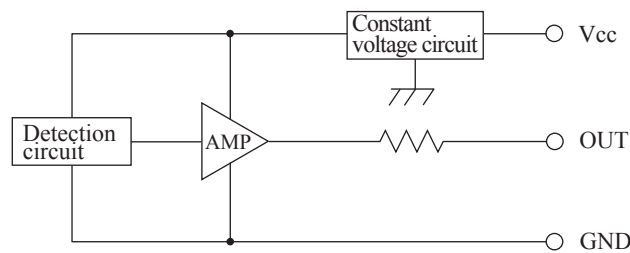- Equipped with a connector slot.

Rating and performance

Model name	**MDS-5LT**
Detection surface	Upper side detection
Detection distance	0.5 to 2.5 mm
Standard detection target	Iron plate of 18 × 18 mm and 1 mm in thickness
Power supply voltage	12 V to 24 V DC(Operating voltage range: 10.8 V to 26.4 V DC)
Power consumption	DC 10 mA or less
Output	Output resistance 1 kΩ, linear output 1 V with standard point 0.5 mm ±0.2 mm 4 V ±0.1 V with standard point +2 mm output with no detection target, max output voltage 7.4 V
Linearity	±2% FS or less (at 25 °C)
Response time	3 ms or less
Operating temperature range	-10 to 60 °C (-20 to 60 °C during storage)
Operating humidity range	35 to 85% RH (35 to 85% RH during storage)
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	Polyarylate
Connector	Connector: S3B-EH (3-pin), housing: EHR-3, contact: SHE-001T-P0.6 (from J.S.T. Mfg. Co., Ltd.)
Weight	Approx. 5 g
Options (sold separately)	Connector harness : CNH-S3B03S26-300

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http://www.sensatec.co.jp

External dimensions diagram

Operation display

MADE IN JAPAN
MDS-5LT

Connector,S3B-EH

Pin number	Signal name
1	Vcc
2	OUT
3	GND

Output circuit

Detection circuit — AMP — Constant voltage circuit — Vcc
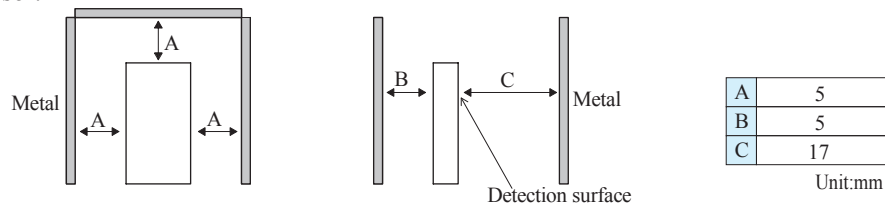
OUT

GND

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.

Metal

Metal

Detection surface

A	5
B	5
C	17

Unit:mm

- 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.)
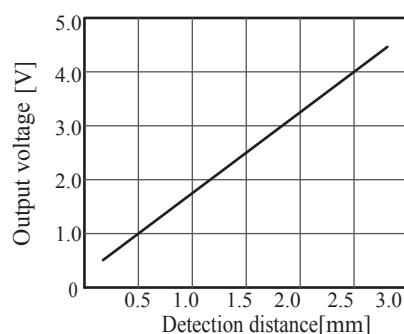
	When they have the same frequency	Combination with different frequencies
A	150	0

Unit:mm
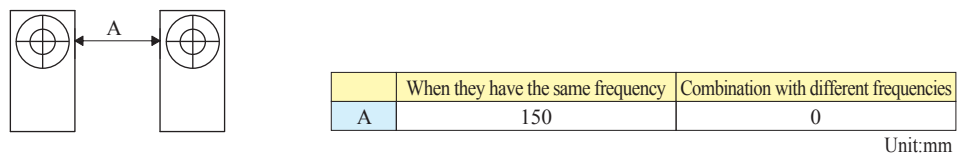
- Installation
  Always use plain washers to tighten the case and use a torque of 0.5 N.m or less.

- See proximity sensor general usage precautions for other precautions.

Characteristics graph (typical example)

Detection distance - Output voltage characteristics

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