



□Model list

Normally open	MDS-L5U
Normally closed	MDS-L5U1

Application

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

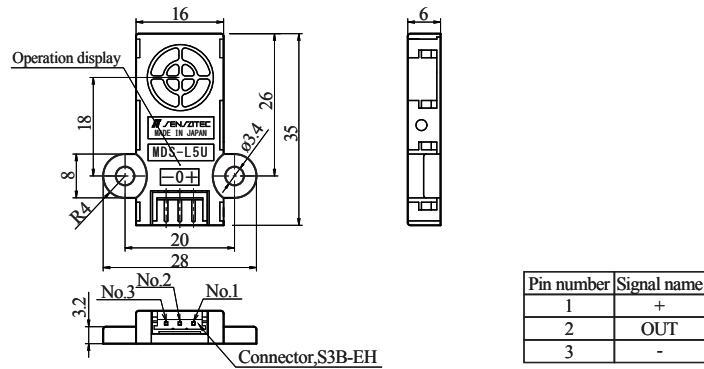
Characteristics

- Small flat proximity sensor with a detection surface of 16 mm and a detection distance of 5 mm (upper surface detection type).
- Equipped with a small connector for simple installation and wiring.

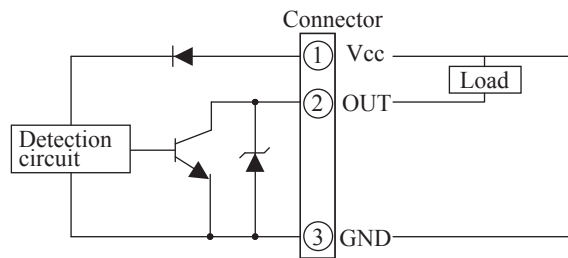
Rating and performance

Model name	MDS-L5U	MDS-L5U1
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	12 V to 24 V DC (Operating voltage range: 10 V to 30 V DC)	
Power consumption	DC 8 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)	Normally closed (Off output with detection target)
Operation display	Red LED (lit when On output)	
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	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	

External dimensions diagram



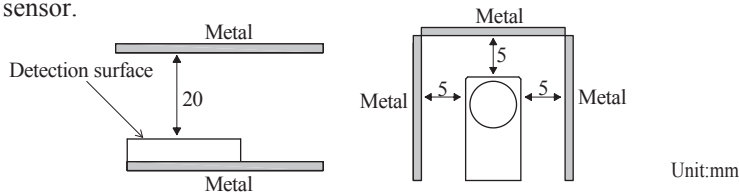
Output circuit



Usage precautions

- Influence of surrounding metal

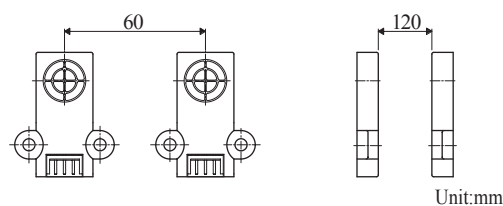
If there are metal objects around the proximity sensor, leave at least the space indicated in the figure below between them and the sensor.



- 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.

(*The MDS-L5U model does not include different frequency types.)



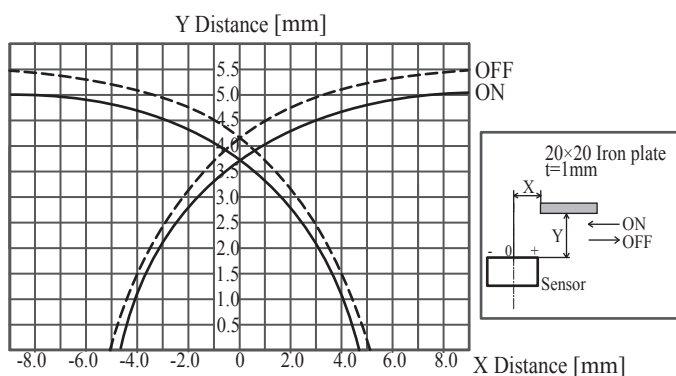
- Installation

Tighten the case with a torque of 0.5 N.m or less. (Please attached using a flat washer always)

- See proximity sensor general usage precautions for other precautions.

Characteristics graph (typical example)

Detection area diagram



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

Material and size - Detection distance characteristics

