

Model MDA-C5 Proximity Displacement Sensor



□Model List

Standard frequency	MDA-C5
First different frequency	MDA-C5B
Second different frequency	MDA-C5C

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

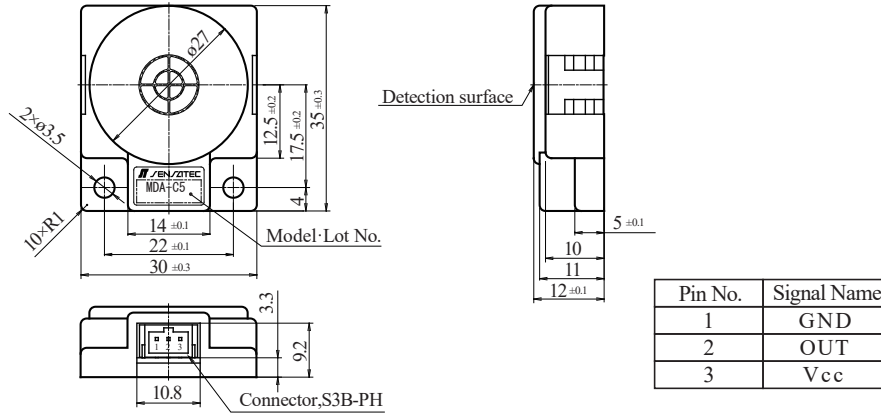
Characteristics

- Small, flat, and economical linear-output proximity displacement sensor.
- Models with detection ranges of 0.5 to 2.5 mm and 1 to 6 mm are available.
- No mechanical parts to increase the lifespan.
- Equipped with a connector slot.

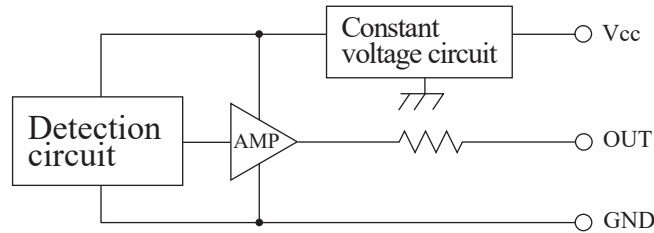
Rating / Performance

Model	MDA-C5
Detection Surface	Upper side detection
Detection Distance	1.0 to 6.0 mm
Standard Detection Target	Steel plate of 40 × 40 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	10 mA DC or less
Output	Output resistance 10 kΩ, linear output 1 V with standard point 1 mm ±0.2 mm 5 V ±0.1 V with standard point +5 mm output with no detection target, max output voltage 7.4 V
Linearity	±3.5% FS or less (at 25 °C)
Response Time	1 ms or less
Operating Temperature Range	-10 to 60 °C (-20 to 60 °C during storage) (Without dew condensation or freezing)
Operating Humidity Range	85% RH or less (85% RH or less during storage) (Without dew condensation)
Withstand Voltage	1 min at 500 V AC 50/60 Hz (Between the live part and case)
Insulation Resistance	50 MΩ or more measured with an ohmmeter at 500 V DC (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	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

External Dimensions Diagram



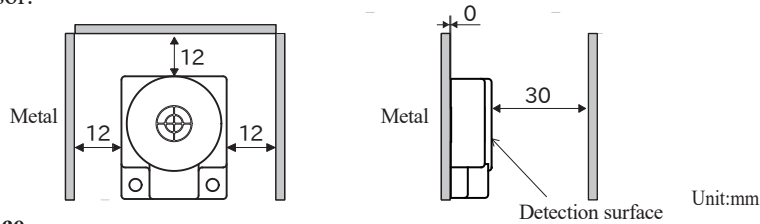
Output Circuit



Usage Precautions

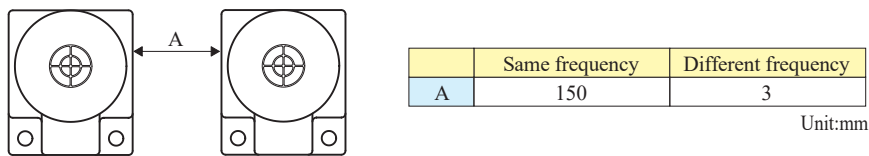
- Influence of surrounding metal

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. (Sensors with a different frequency are indicated with a B after the model name.)



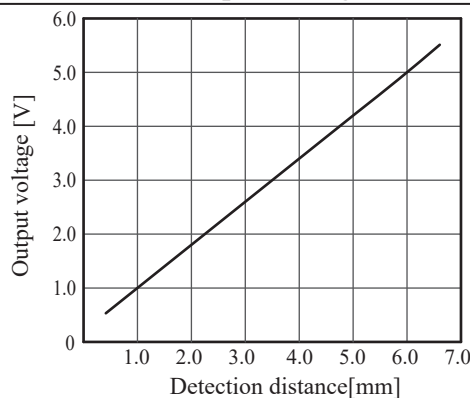
- Installation

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.