Model **MDP-C10** Cylindrical Inductive Sensor

Model List	Operation Status
MDP-C10	Normally open
MDP-C101	Normally closed

Application

- Magnetic metal detection
- Positioning of the processing machines
- Position detection of the the metal pallets and moving table

Features

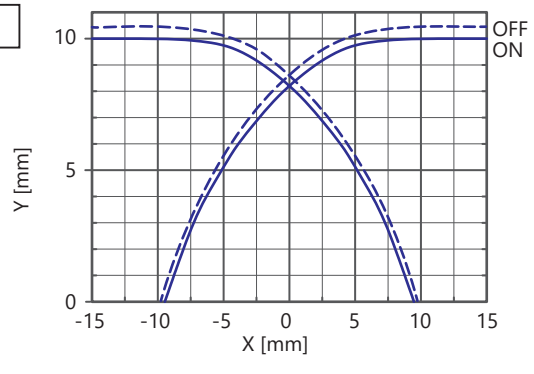
- Shaped as a screw for easy mounting and position adjustment.
- Safely available even in the place where water may splash thanks to its molded type.
- Cylindrical inductive sensor of M30 screw.

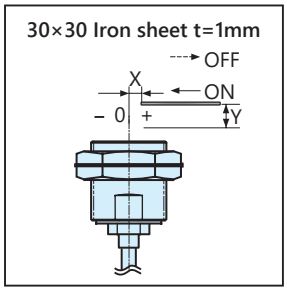
Rating/Performance

Model	MDP-C10	MDP-C101
Detection Surface	Front side detection	
Detection Distance	10.0 mm ± 10 % (With detection target of iron sheet of 30 × 30 mm and 1 mm in thickness)	
Hysteresis	10 % or less of the detection distance	
Set Distance	0 to 8.0 mm	
Power Supply Voltage	12 V to 24 V DC (Operating voltage range : 10 V to 30 V DC)	
Current Consumption	10 mA DC or less	
Output	NPN transistor open collector 30 V DC, 100 mA DC or less	
Output Residual Voltage	1 V DC or less (Load current 100 mA DC and a 1-meter cord)	
Operation Status	Normally open (ON output when detecting)	Normally closed (OFF output when detecting)
Operation Indicator	Red LED (Lit when the output is ON)	
Response Frequency	400 Hz or more	
Temperature Range	-25 to 70 °C (-25 to 80 °C storage temperature range) (Without dew condensation or icing)	
Humidity Range	35 to 95 % RH (35 to 95 % RH storage humidity range) (Without dew condensation)	
Dielectric Strength	1000 V AC for 1 minute (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	1000 m/s^2 (Approx. 100 G) in X, Y and Z directions 10 times each (at power off)	
Protection	IP67	
Case Material	Case : Brass nickel coating, Detection surface : PBT, Connected part : Polyarylate	
Cable	ø6, 3-core round cord of 0.5 mm^2 and insulation 1.9 mm and 1 m in length (Oil and heat resistant vinyl) * Can change to ø4, 3-core round cord of 0.3 mm^2	
Weight	Approx. 165 g (Including accessories)	
Accessories	2 hex nuts (Brass nickel coating), 1 toothed washer	

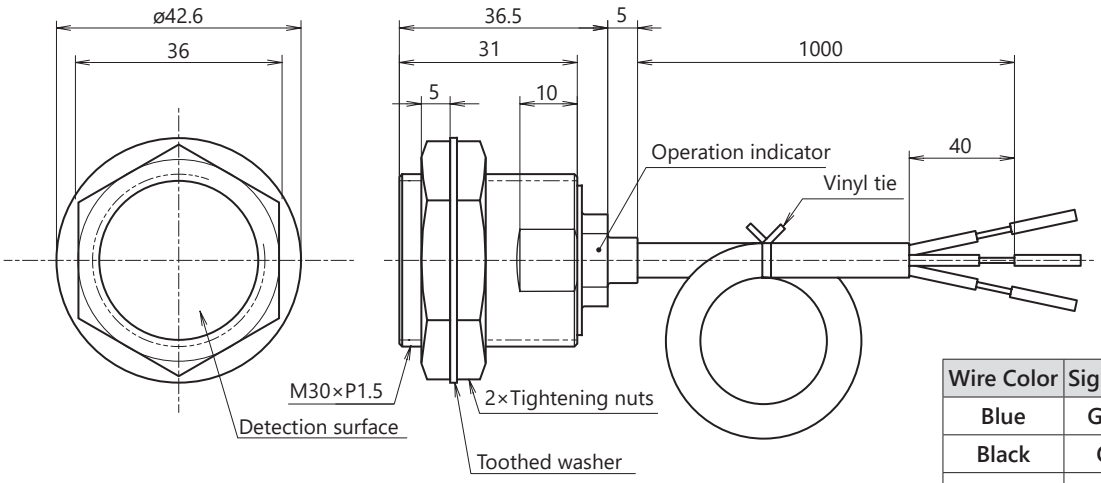
Characteristics Graph (Typical Example)

Detection range



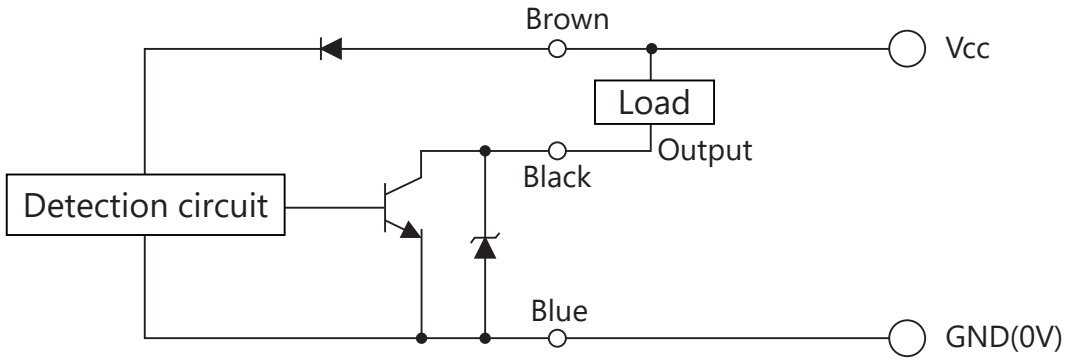


Outline Dimensions



Wire Color	Signal Name
Blue	GND(0V)
Black	Output
Brown	Vcc

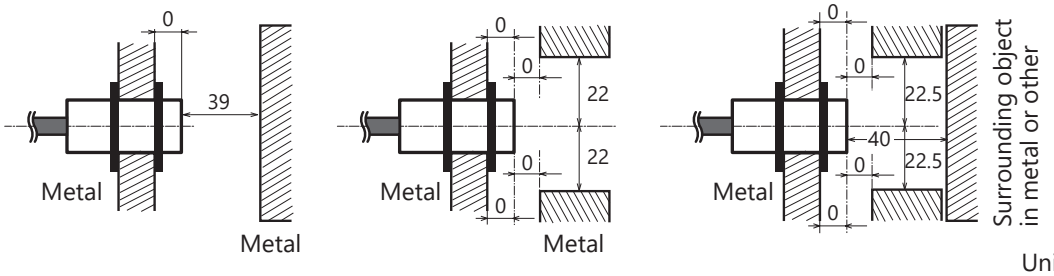
Output Circuit



Precautions During Use

Influence of surrounding metal

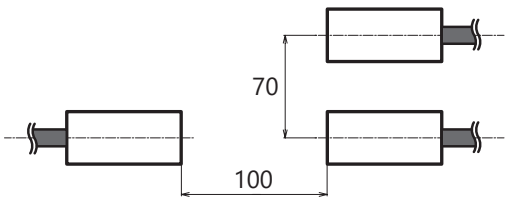
- If there are metal objects around the inductive sensor, leave at least the space indicated in the figure below between them and the sensor.



Unit : mm

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.



Unit : mm

Mounting

- Always use plain washers to tighten the case and use a torque of 180 N·m or less.

* Models with an "N" at the end of the model name come with a total of two toothed washers.

* For other precautions, refer to "General Precautions" for inductive sensors.