

# GS-M53P

Holding force 500N M12 Connector type Advanced function type PNP

*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

| | | |
|---|---|---|
| Model | | GS-M53P |
| Type | | For hinged door Small M12 Connector Advanced function |
| Holding force when locked | | 500N |
| Holding force when unlocked | | Approx. 30N *1 |
| Cascading | | Max. 20 units |
| Operating distance | Sao(OFF→ON) | 0.1 mm 0.004" *2 |
| | Sar(ON → OFF) | 15 mm 0.59" *2 |
| Response time (ms) | Lock→Unlock | 250 ms *3 |
| | Unlock→Lock | |
| | Detect→ Not detect | 20 ms + 2 ms × (number of cascaded unit -1) *3 |
| | Not detect→ Detect | 300 ms + 25 ms × (number of cascaded unit -1) *3 |
| Control output (OSSD output) | Output | Transistor outputs × 2 |
| | Max. load current | 150 mA |
| | Residual voltage (during ON) | Max. 2.5 V (with a cable length of 5 m 16.4')<br>Max. 3.5 V (with a cable length of 31 m 101.7') |
| | OFF state voltage | Max. 2.0 V (with a cable length of 5 m 16.4')<br>Max. 3.0 V (with a cable length of 31 m 101.7') |
| | Leakage current | Max. 0.5 mA |
| | Max. capacitive load | 0.8 µF |
| | Load wiring resistance | Max. 2.5Ω |
| AUX (Non-safety related output) | Output | Transistor output<br>(Only advanced function type has two outputs.) |
| | Max. load current | 50 mA |
| | Residual voltage (during ON) | Max. 2.5 V(with a cable of 5 m 16.4')<br>Max. 3.5 V(with a cable of 31 m 101.7') |
| External input (Short-circuit current) | Safety input | Approx. 1.5 mA × 2 |
| | Reset/EDM input | Approx. 5 mA<br>(For advanced function type only) |
| | Lock control input | Approx. 2.5 mA |
| | OSSD operation switching input | Approx. 2.5 mA<br>(For advanced function type only) |
| Applicable Standards (Safety) | | EN61508, IEC61508(SIL3), EN ISO13849-1:2015(PL e, Category 4),<br>EN ISO14119(Type4), IEC60947-5-3, EN60947-5-3, UL 60947-5-2 |
| Protection circuit | | Reverse current protection, short-circuit protection and surge protection for each output |
| Power supply | Power voltage | 24 V DC ±20 % (Ripple P-P 10% or less, Class2) |
| | Power consumption | 5 W |
| Environmental resistance | Enclosure rating | IP65/67 (IEC60529) |

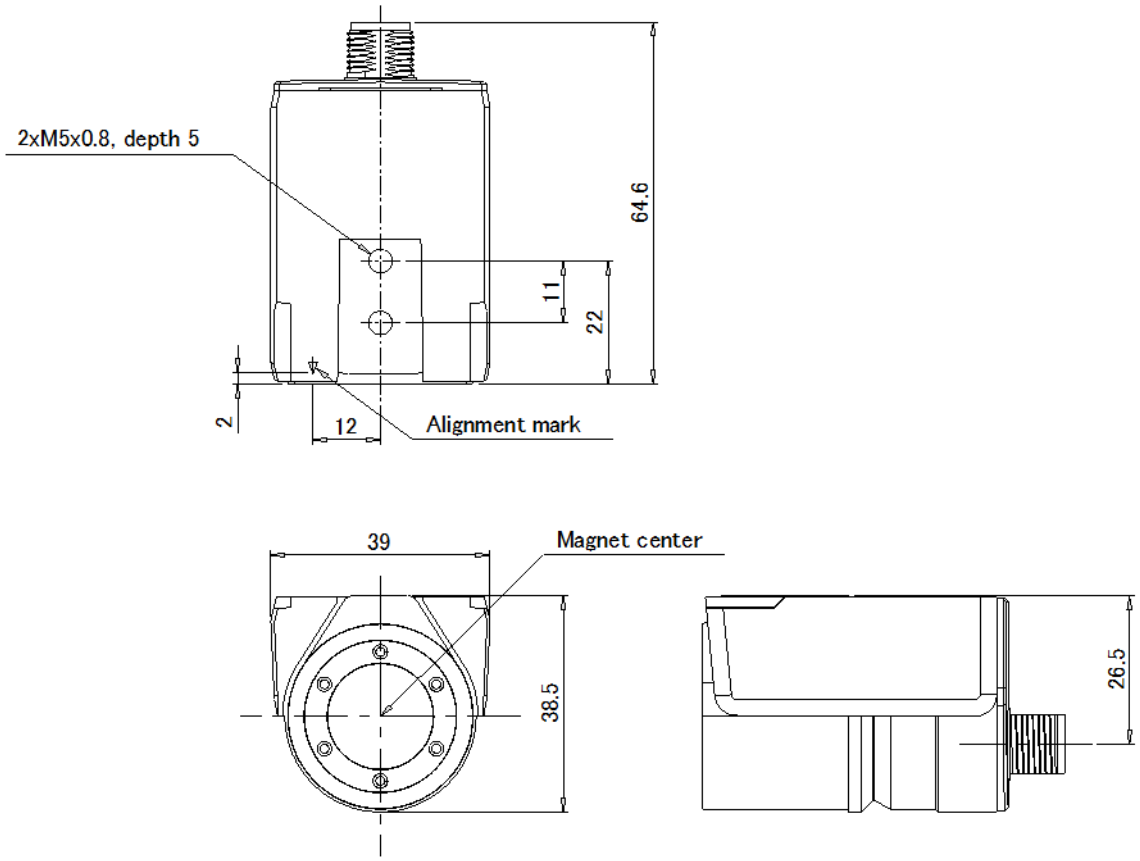
| | | |
|---|---|---|
| | Operating ambient temperature | -20 to 55°C -4 to 131°F (No freezing) |
| | Operating relative humidity | 5% to 95%RH |
| | Storage temperature | -25 to 70°C -13 to 158°F(No freezing) *4 |
| | Storage relative humidity | 5% to 95%RH |
| | Vibration resistance | 10 to 55 Hz, Double amplitude 2.0 mm 0.08",<br>5 minutes in each of the X, Y, and Z directions<br>(IEC 60947-5-3) |
| | Shock resistance | 30 G in X, Y, Z directions 6 times each axis<br>(IEC 60947-5-3) |
| Material | Main unit | PBT, PET/PAR, TPC, PC, Nickel-plated steel |
| | Actuator | PBT, SUS304, Nickel-plated steel |
| | Mounting bracket | Aluminum (Plate and screw: Steel) |
| Weight | Main unit | Approx.250 g<br>8.82 oz |
| | Actuator | Approx.160 g 5.64 oz |

*1 When the actuator is pulled first after unlocked, the holding force increases.
*2 Due to the flexible structure of the actuator, the guard can open 3.8 mm 0.15" larger than the "Sar". The clearance between the actuator and the main unit may be narrowed by a maximum of 2.3 mm 0.09" due to the magnet power built into the actuator.
*3 Risk time according to IEC60947-5-3 is 150 ms + 2 ms × (number of cascaded units -1).
*4 When stored for a long period of time, please store it at temperature of 55°C 131°F or lower.

# Dimensions

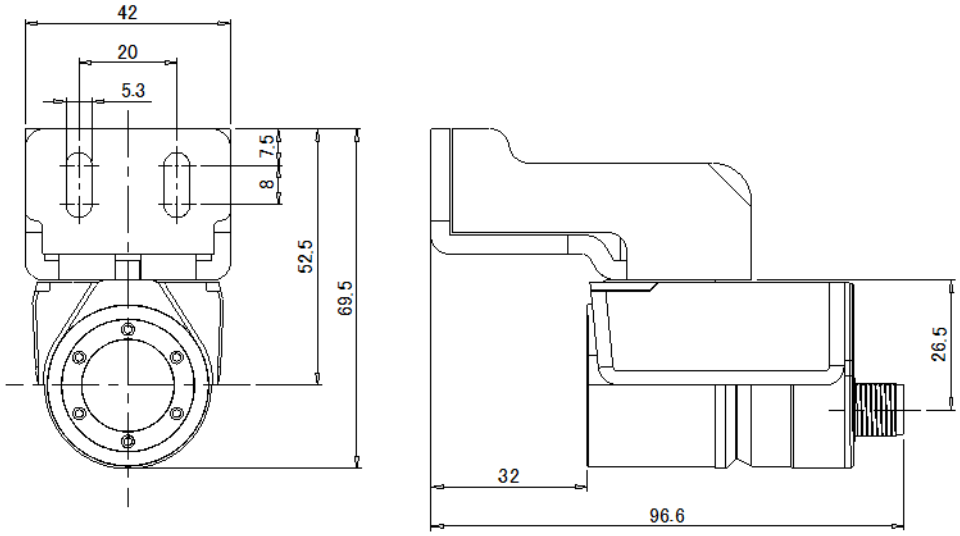
* Download CAD file or product manual for larger image/text and more detail.

GS-M51N/M51P/M53P

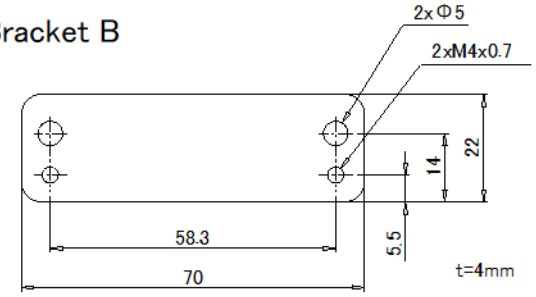


## GS-M51N/M51P/M53P+GS-MB11

### Main unit + Bracket A + Screw C



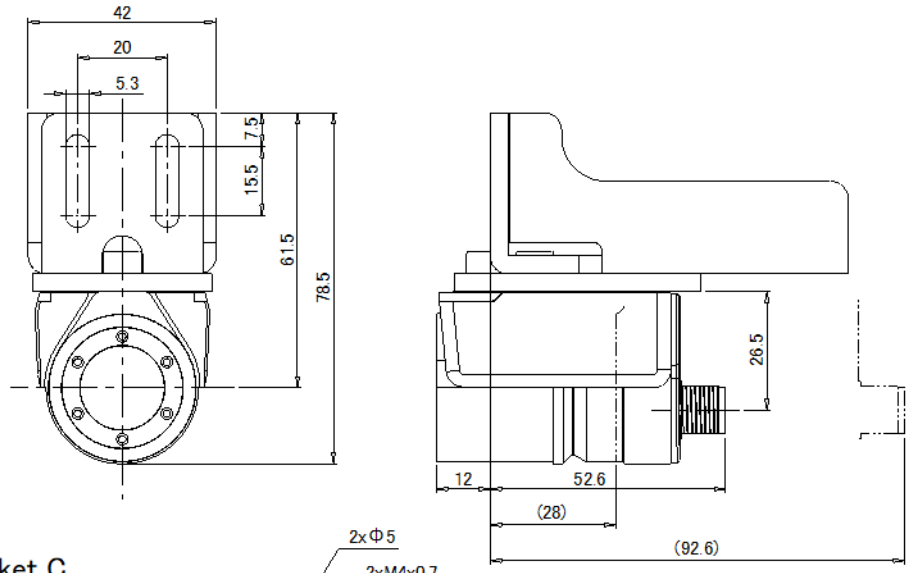

### Bracket B



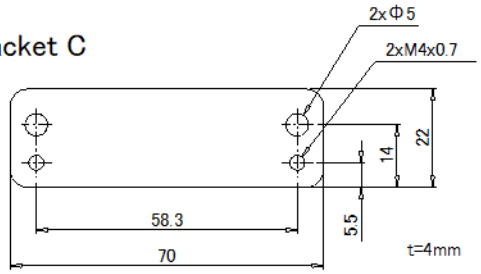

Screw C
M5 hexagon socket head cap screw x 2
across-flats=4mm, L=8mm

## GS-M51N/M51P/M53P+GS-MB12

Main unit + Bracket A + Bracket B + Screw D



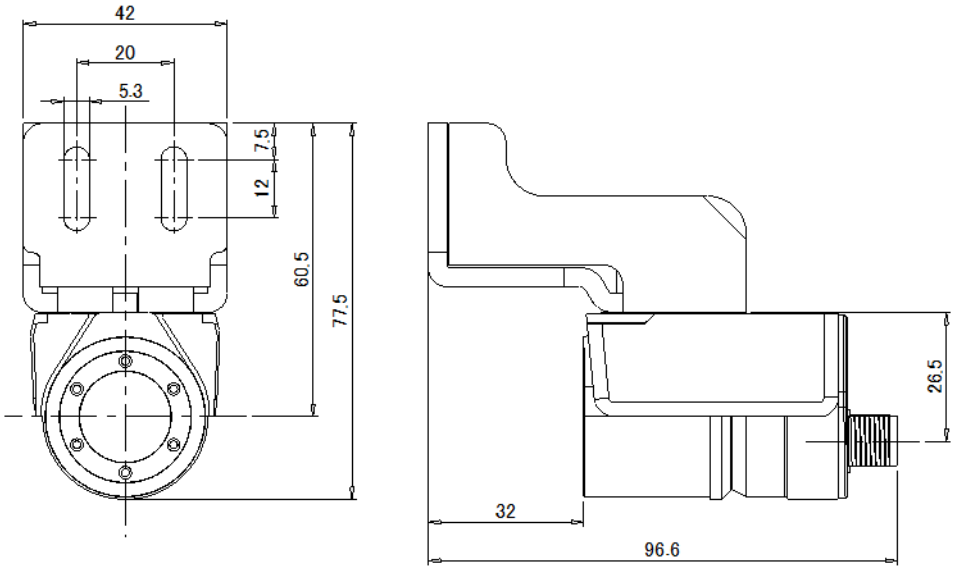

Bracket C



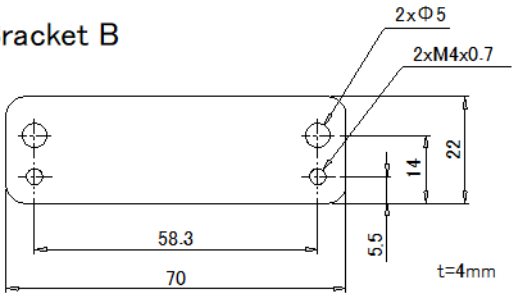

Screw D
M5 hexagon socket head cap screw x 4
across-flats=4mm, L=8mm

## GS-M51N/M51P/M53P+GS-MB13

### Main unit + Bracket A + Screw C




### Bracket B




Screw C
M5 hexagon socket head cap screw x 2
across-flats=4mm, L=8mm