

GS-ML51N

Sliding door model Holding force 500N M12 Connector type Standard type NPN

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

Specifications

Model		GS-ML51N
Type		For sliding door M12 Connector Standard
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') 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') 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 (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') 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 (For advanced function type only)
	Lock control input	Approx. 2.5 mA
	OSSD operation switching input	Approx. 2.5 mA (For advanced function type only)
Applicable Standards (Safety)		EN61508, IEC61508(SIL3), EN ISO13849-1:2015(PL e, Category 4), 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)

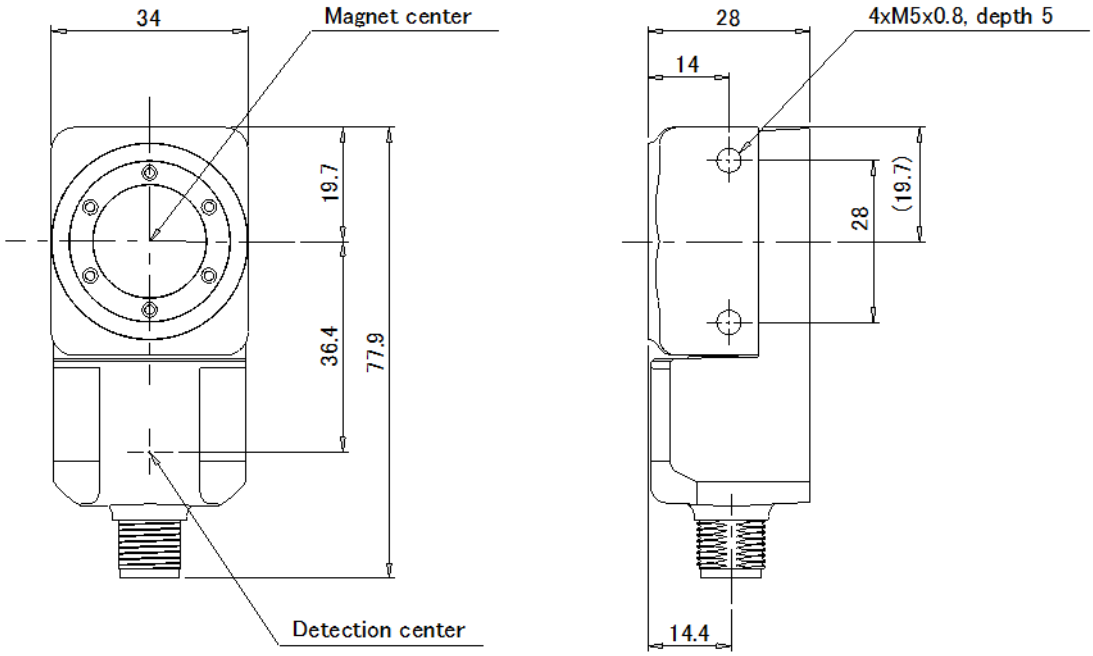
	Operating ambient temperature	-20 to 55°C -4 to 131°F (No freezing)
	Operating relative humidity	5% to 95%RH
	Storage temperature	-25 to 70°C -13 to 158°F(No freezing) *4
	Storage relative humidity	5% to 95%RH
	Vibration resistance	10 to 55 Hz, Double amplitude 2.0 mm 0.08", 5 minutes in each of the X, Y, and Z directions (IEC 60947-5-3)
	Shock resistance	30 G in X, Y, Z directions 6 times each axis (IEC 60947-5-3)
Material	Main unit	PBT, PET/PAR, TPC, PC, Nickel-plated steel
	Actuator	PBT, SUS304, Nickel-plated steel
	Mounting bracket	Aluminum, Painted steel (screw: Steel)
Weight	Main unit	Approx.240 g 8.47 oz
	Actuator	Approx.130 g 4.59 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

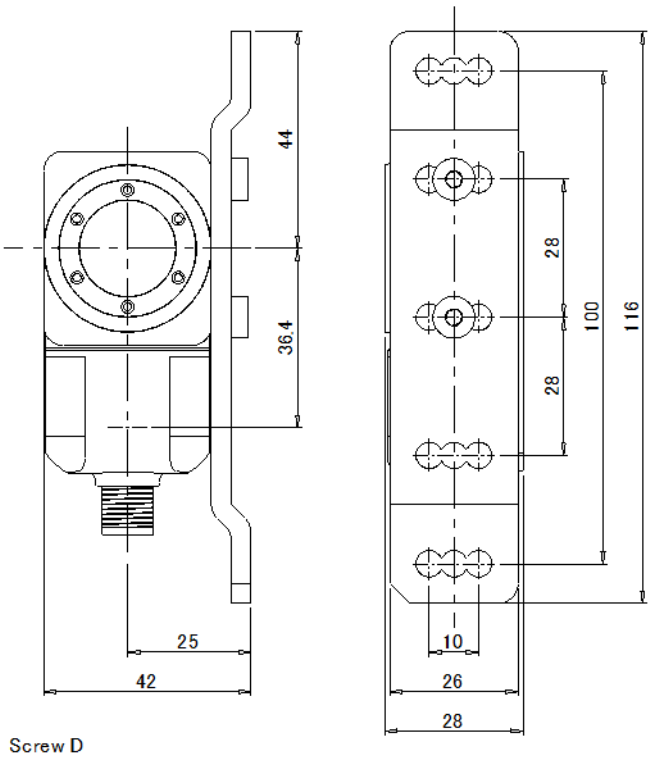
* Download CAD file or product manual for larger image/text and more detail.

GS-ML51N/ML51P/ML53P



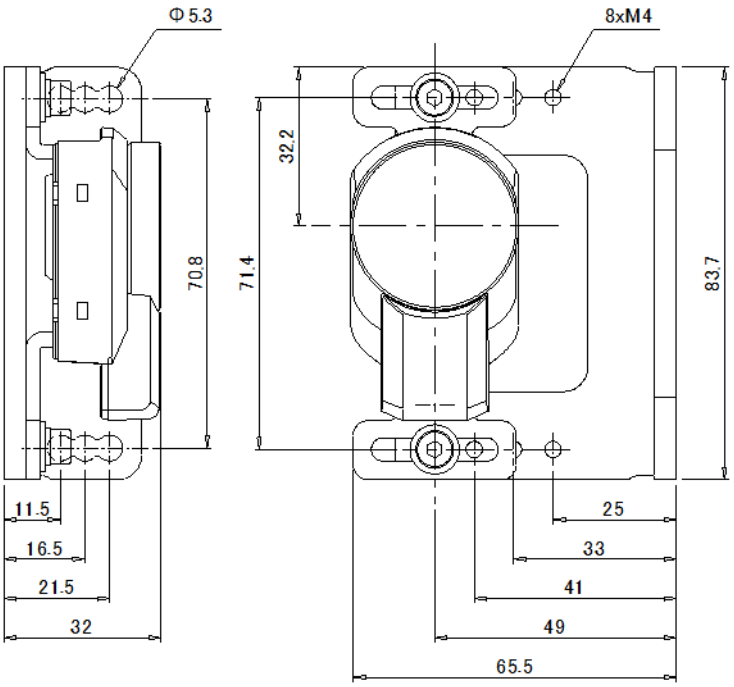
GS-ML51N/ML51P/ML53P+GS-MB31

Main unit + Bracket A + Screw D

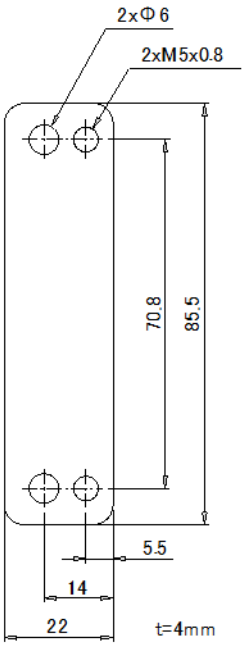


Screw D
M5 hexagon socket head cap screw x 2
across-flats=4mm, L=8mm

Actuator + Bracket B + Screw E



Bracket C



Screw E
M4 hexagon socket head cap screw x 2
across-flats=3mm, L=7mm