Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

Electromagnet Holders / Rectifiers for Electromagnet Holders

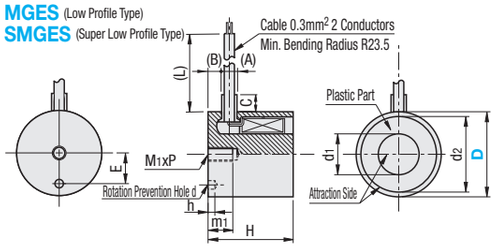
■Standard Type
■Thin Type
■Super Thin Type

■Tapped Through Hole Type

■Rectangle

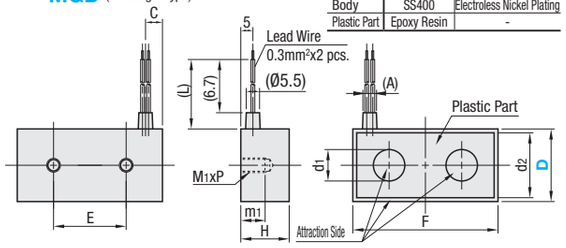
■Axial Cable Type

MGE (Standard Type)
MGES (Low Profile Type)
SMGES (Super Low Profile Type)

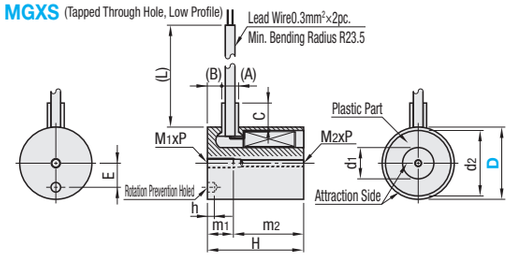


MGD (Rectangle Type)

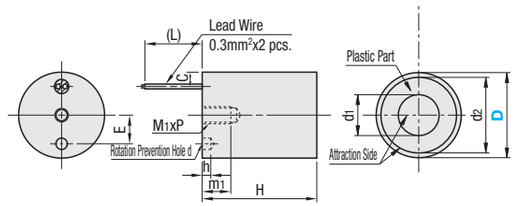
	M Material	S Surface Treatment
Body	SS400	Electroless Nickel Plating
Plastic Part	Epoxy Resin	-



MGX (Tapped Through Hole, Standard)
MGXS (Tapped Through Hole, Low Profile)



MGET (Axial Cable Type)



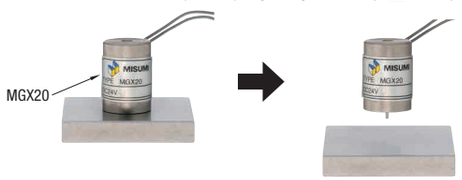
Part Number Type	D	H	d1	d2	(A)	(B)	C*	M1xP	M2xP	Effective Screw Depth m1	Effective Screw Depth m2	Rotation Prevention Hole d	Rotation Prevention Hole h	E	(L)	F	Voltage (V)	Current (A)	Max. Attraction Force N{kgf}	Mass (g)	Unit Price
MGE MGET (* only)	*20	28	8	17.4	5.5	3.25	4(3.25)	4x0.7	-	8	-	-	-	-	700	-	24	0.06	28 {2.8}	70	
	*30	40	13	27	7.2	6	10 (3.95)	6x1.0	-	12	-	4	3	10		-		0.17	180 {18}	200	
	40	40	16	35	7.2				-	12	-			15		-		0.24	300 {30}	350	
	50	50	24	44.4	7.2	4.5		8x1.25	-	15	-	5	4	18		-	90	0.11	600 {60}	700	
	60	60	31	52.7	7.2	3	15	10x1.5	-	20	-			20		-		0.20	1,200 {120}	1200	
MGES	20	20	6	17	5.5	1.5	12	4x0.7	-	5	-	-	-	-	200	-	24	0.07	10 {1}	40	
	30	20	13	27	5.5	2	15	6x1.0	-	10	-	3	2	10		-		0.08	100 {10}	80	
	40	20	17	34	5.5				-	10	-			15		-		0.09	220 {22}	150	
	50	25	24	42	5.5			8x1.25	-	12	-	3	2	18		-	90	0.10	500 {50}	300	
	60	30	32	50	5.5	3	18	10x1.5	-	16	-	4	3	20		-		0.21	1,000 {100}	500	
MGX	20	28	8	17.4	5.5	3.5	4(4.5)	4x0.7	3x0.5	8	16.3	-	-	-	700	-	24	0.06	16 {1.6}	70	
	30	40	13	27	7.2	6	10(5)	6x1.0	4x0.7	12	22.6	4	3	10		-		0.17	108 {10.8}	200	
MGXS	20	20	6	17	5.5	1.5	12	4x0.7	3x0.5	5	11.3	-	-	-	200	-	24	0.07	6 {0.6}	40	
	30	20	13	27	5.5	2	15	6x1.0	4x0.7	10	4.6	3	2	10		-		0.08	60 {6}	80	
SMGES	30	15	11.5	27.5	5.5	1.3	15	6x1.0	-	8	-	3	2	10	200	-	24	0.06	50 {5}	60	
									-		-										
MGD	20	20	6	17.6	5.5	-	5	4x0.7	-	5	-	-	-	20	700	40	24	0.13	40 {4}	100	
	30	20	13	27.6	5.5	-	7	6x1.0	-	10	-	-	-	30	700	60	24	0.17	150 {15}	200	

Maximum attraction force is for subject material of SS400 (polished surface, 50mm thick plate). * Dimensions in ( ) are for MGET.

Ordering Example — Part Number: MGD20

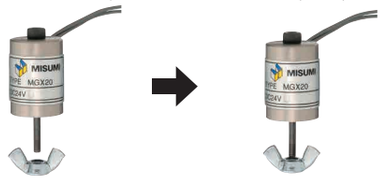
Example

■Countermeasure for residual magnetism
Installation Example of Spring Plungers NPJS (P.1-1771)



Spring force separates objects from the magnet stuck by residual magnetism.

■More Options
Installation Example of Screw with Nose FCBBG (P.214)



A screw can be magnetized to pick up workpieces.

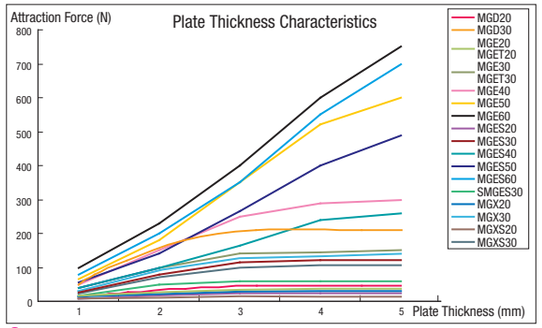
See the page on the right for features, use conditions and cautions on Electromagnet Holders.

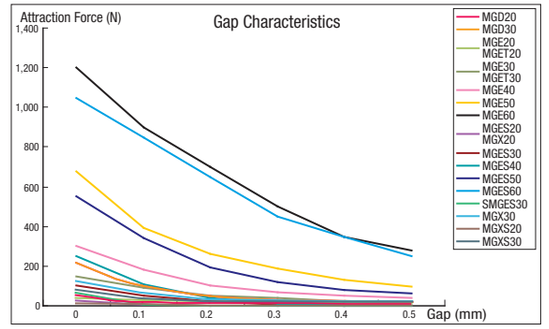
Features, Operating Conditions and Precautions for Use for Electromagnet Holders

■Features
- Electromagnet holder with a coil wound around the attraction body. (Polarity Reversible)
- Can be used on end effectors of robots to carry small workpieces.
- Electrical control can be utilized for turning ON / OFF and remote controlling of the magnet.
- For power supply, a rectifier is necessary. Select a rectifier for relevant voltage. (Applicable Rectifier: MGEC)

■Condition of Use
- Installation Location: Indoor (Ambient temperature: -10 ~ 40°C)
- Applicable Metal Subject Surface: flat (no protrusions, holes, etc.)
  * Use entire holder surface for attraction.
- Duty Ratio: Continuous (100% ED)

■Precautions for Use
- Attraction force of electromagnet holder may decrease considerably depending on condition of use.
  ① Plate Thickness : Attraction force decreases as plate thickness decreases.
  ② Gap : Attraction force decreases as gap increases between the attraction side of magnet and the object.
  ③ Material : Attraction force shown is based on SS400.
  ④ Attraction force decreases as the object surface is rougher.
  ⑤ Coil Heating : Attraction force decreases as the excited electromagnet coil temperature rises. Decrease rate is 10 to 20% (approx.).
- Maximum attraction force is for subject material of SS400 (polished surface, 50mm thick plate).
- There will be some residual magnetism after the power is turned OFF.

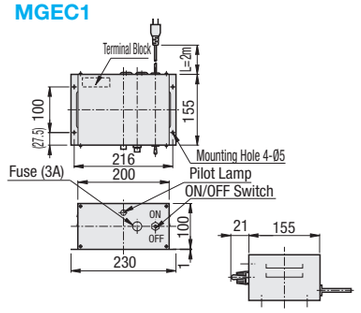




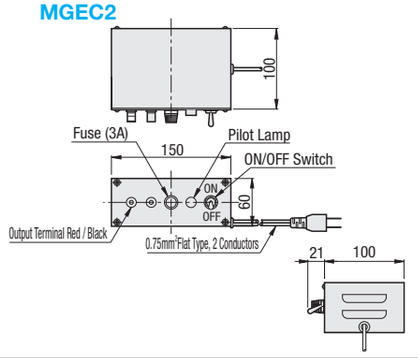
Reference graph indicating attraction force saturation. Usable up to "Maximum Attraction Force (N)".
"Plate Thickness Characteristics" graph shows the relationship of attraction force vs. subject metal thickness (polished SS400), and "Gap Characteristics" graph shows the gap distance of attraction surface vs. subject metal.

■Rectifiers for Electromagnet Holders

MGEC1



MGEC2



Part Number Type	No.	Input Voltage	Output Voltage DC(V)	Max. Allowable Current (A)	Weight (kg)	Unit Price
MGEC	1	Single Phase AC100V	24	3	3.5	
	2		90		1	

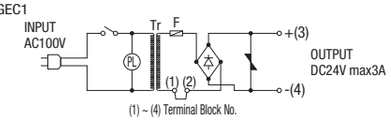
Part Number: MGEC2

Work in parallel connections using with terminal blocks, etc. when multiple electromagnet holders used in one rectifier. Max. allowable electromagnet holders for one rectifier = Max. allowable current of the rectifier (3A) / Operating current of electromagnet holders (Since electromagnet holders operating current may vary with its models and sizes, refer to "Current (A)" in the table on the left-hand page.)

■Features
- **Rectifies input AC source into DC. Used as a power supply for the electromagnet holder.**

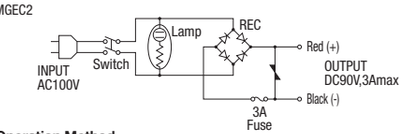
■Circuit

•MGEC1



(1) ~ (4) Terminal Block No.

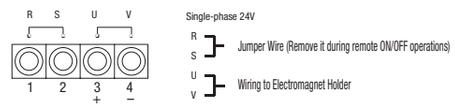
•MGEC2



■Operation Method
1. ON/OFF operated with the switch on the front side of the rectifier unit.
   • Pilot lamp turns ON / OFF.
   • Electromagnet holder will be excited, and the workpiece will be attracted / released.
2-1. Turn the ON/OFF switch to ON when operating it remotely.
   (Pilot lamp is always on.)
2-2. ON/OFF is operated remotely.
   [ON Operation]
   • Terminal 1 and 2 on terminal block are closed. (Electromagnet holder will be excited, and the workpiece will be attracted.)
   [OFF Operation]
   • Terminal 1 and 2 on terminal block are closed. (Excitation of an electromagnet holder stops, and the work will be released.)

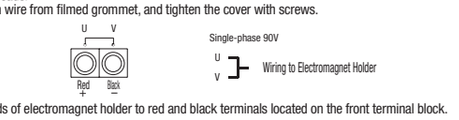
■Interconnection

•MGEC1



1. Before wiring, remove the rear cover.
2. Connect leads from electromagnet holder to terminals 3 and 4 of the rectifier unit. For remote ON / OFF operations, remove the jumper wire from terminals 1 and 2, and replace with signal input leads.
3. Pull out each wire from filmed grommet, and tighten the cover with screws.

•MGEC2



1. Connect leads of electromagnet holder to red and black terminals located on the front terminal block.

Provide proper GFCI devices to avoid fire and smoke that may be caused by short circuited electromagnet holders.
Electromagnet will not operate properly unless correctly wired.