

PRÄZISION - die bewegt

Betätigungs-
magnete
für
höchste
Ansprüche



Hubmagnete in offener Bauform
open frame solenoids



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indEAS

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Allgemeine Beschreibung von indEAS-Hubmagneten in offener Bauform

indEAS-Hubmagnete in offener Bauform sind Gleichstrommagnete. Sie eignen sich für **ziehende und/oder drückende Kraftwirkung**. Bei der Auswahl eines Magneten sollte eine ausreichende **Sicherheitsreserve** (ca. 1,5 fach) berücksichtigt werden. Da in der Regel die elektrischen Betriebsverhältnisse (Einschaltdauer/Spieldauer) vorgegeben sind, wird diese Sicherheitsreserve dann der erforderlichen Magnetkraft zugerechnet und damit der richtig dimensionierte Hubmagnet aus den Datenblättern ausgewählt. In den Datenblättern sind die Standardausführungen für unterschiedliche Einschaltauern enthalten. Die Einbaulage des Magneten ist beliebig, gegebenenfalls muss das Ankergewicht berücksichtigt werden. Bei der Kraftabnahme müssen jedoch seitlich, das heißt nicht in axialer Richtung wirkende Kräfte möglichst klein gehalten oder besser vermieden werden.

indEAS-Hubmagnete in offener Bauform gibt es in unterschiedlicher Größe und Leistung. Bei Erregung der Magnetspule führt der Ankerstößel eine Hubbewegung aus. Die Hubanfangslage kann einbauseitig festgelegt werden, die Hubendlage wird in der Regel durch den Magneten bestimmt. Die maximal mögliche Hubbewegung ist abhängig von der Magnetgröße und ist in den Datenblättern angegeben. In der Regel hat die Rückstellung des Ankerstößels von der Hubendlage in die Hubanfangslage durch eine extern wirkende (Feder-) Kraft zu erfolgen. Sonderausführungen mit eingebauter Rückstellfeder können in Abhängigkeit der Applikation geliefert werden. Die in den Datenblättern angegebenen Magnetkräfte verstehen sich ohne Rückstellkraft(-feder).

Anpassungen an Applikationen

Durch die enge Zusammenarbeit von Vertrieb, Entwicklung und Fertigung kann auf Kundenwünsche sehr flexibel reagiert werden. Zusatzbauteile, Änderungen am Anker können, soweit sinnvoll, angepasst werden.

Die in diesem Datenblatt enthaltenen Angaben sind jeweils typische Werte und keine Zusicherung von Eigenschaften. Änderungen sind vorbehalten.

Auf Wunsch liefern wir Ihre bestellten Hubmagnete in **Mehrwegverpackungen**. Diese können Sie zur Lagerung sowie als Transportbehälter bis an den Montageplatz verwenden.

Ihre Bestellung nehmen wir zu den „Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie“ gern entgegen.

Alle Daten für Hubmagnete in offener Form gelten für eine Umgebungstemperatur von 20°C.

Die Magnete sind in angezogenem Zustand dargestellt.

indEAS open frame solenoids General description

indEAS open frame DC solenoids are suitable for applications calling for pulling and/or pushing forces.

In the selection of a solenoid, provision should be made for an adequate **reserve of capacity** (safety factor about 1.5). Since, as a rule, the electrical parameters (duty cycle/cycle duration) are determined in advance, this reserve should be added to the required force so that a solenoid of the appropriate size can be selected from the data sheets. The data sheets give details of duty cycle for standard versions. Solenoids may be mounted in any arbitrary position but it may be necessary to take the weight of the armature into account. With the transmission of force, however, the forces acting laterally (i.e. other than in the axial direction) must be kept as low as possible or, better still, avoided altogether.

indEAS open frame solenoids can be assembled in several sizes and power. When the solenoid coil is energized, the armature plunger performs a lifting stroke. The starting position for the stroke can be set by the user, but the end position is usually determined by the solenoid. The maximum possible stroke travel (which can be found in the tables) is dependent on the size of the solenoid and the type of armature used. As a rule, the return of the armature plunger from the end position to the starting position is effected by the action of an external (spring) force. In some cases, special versions with built-in return springs can be supplied. The solenoid forces given in the data sheets are for solenoids without any return force (spring).

Adaptations for particular applications

At indEAS, our sales, R&D and production departments work closely together to ensure rapid responses to customers' wishes. A **variety of types of plunger** are possible, in so far as this is technically advisable and feasible.

The data provided in the data sheet are typical values in each case and do not provide any assurance of particular characteristics. We reserve the right to alter specifications without notice.

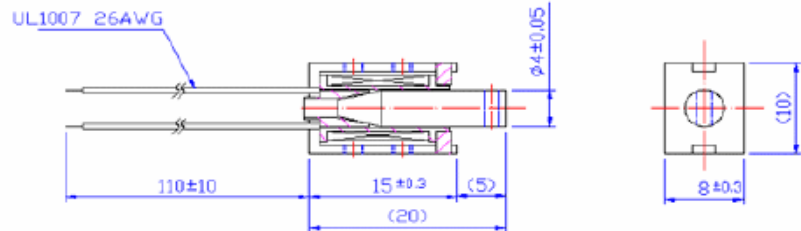
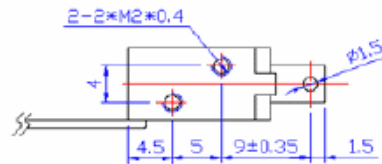
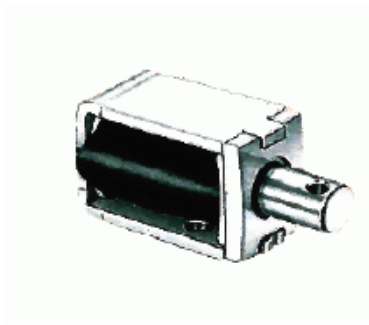
If desired, we will supply your solenoids in **multi-trip packs** which you can then use for storage purposes or as transit containers at the assembly point.

Your orders will be accepted on the basis of the „General Terms and Conditions for the Supply of Goods and Services by the Electrical Industry“.

All data for open frame solenoids show the values at ambient temperature 20°C.

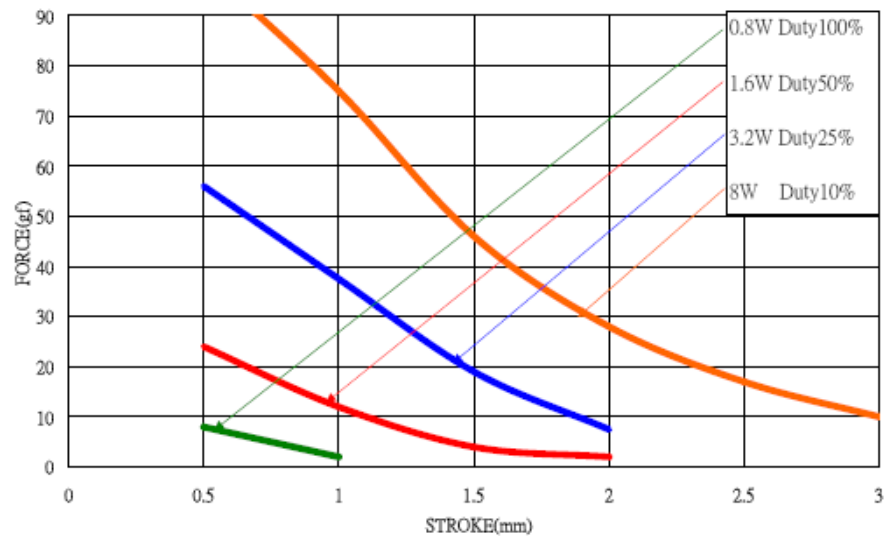
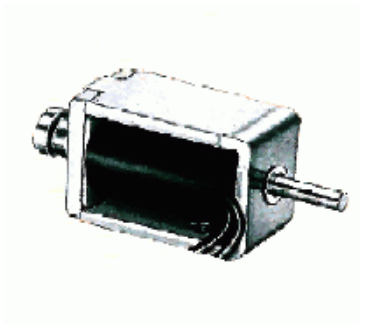
The solenoids are shown energized.

SH-0415L PULL TYPE



Total Weight : 5.4 g

SH-0415S PUSH TYPE

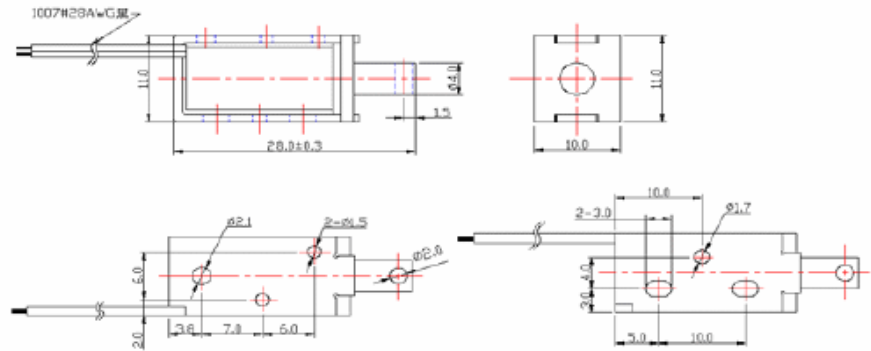
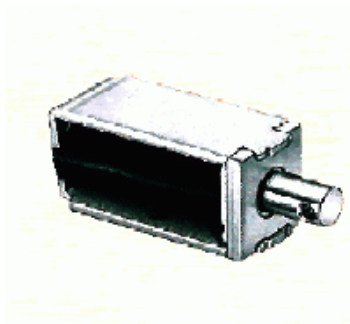


Total Weight : 5.4 g

COIL DATA

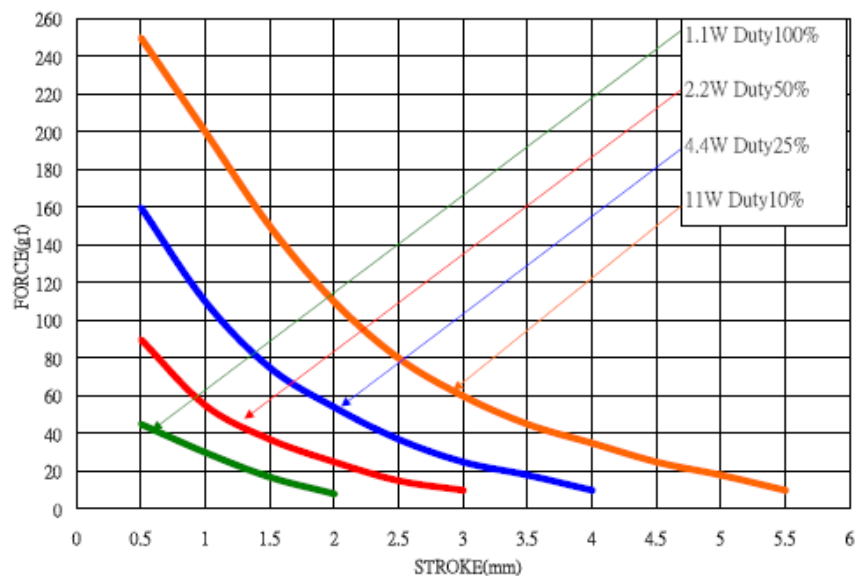
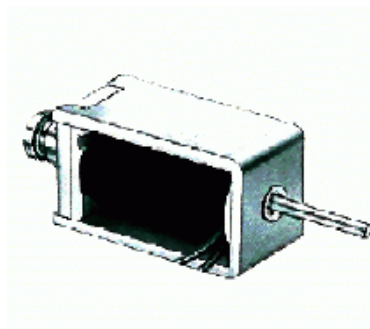
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		0.8	1.6	3.2	8
MAX. "ON" time in seconds		∞	50	18	3
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0415L-03V	11.2	3	4.2	6	9.5
SH-0415L-06V	45	6	8.5	12	19
SH-0415L-12V	180	12	17	24	38
SH-0415L-24V	720	24	34	48	76
SH-0415S-03V	11.2	3	4.2	6	9.5
SH-0415S-06V	45	6	8.5	12	19
SH-0415S-12V	180	12	17	24	38
SH-0415S-24V	720	24	34	48	76

SH-0421L PULL TYPE



Total Weight : 10 g

SH-0421S PUSH TYPE

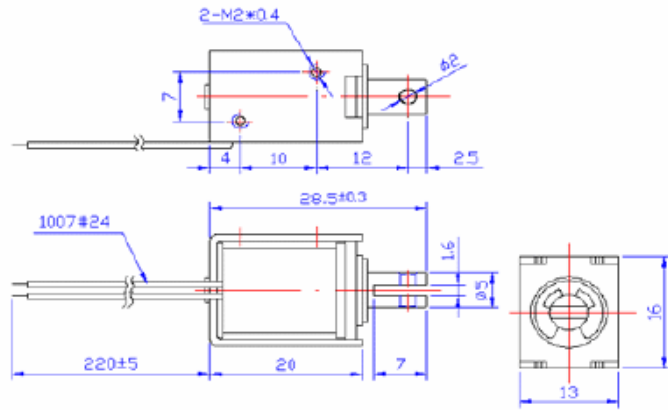
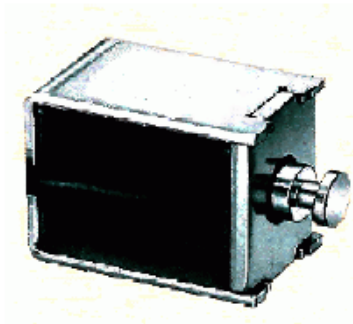


Total Weight : 10 g

COIL DATA

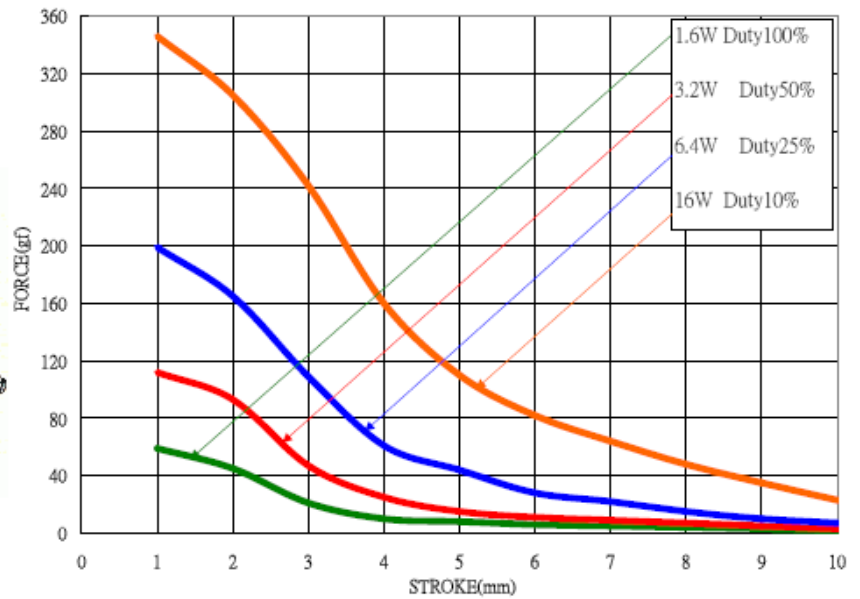
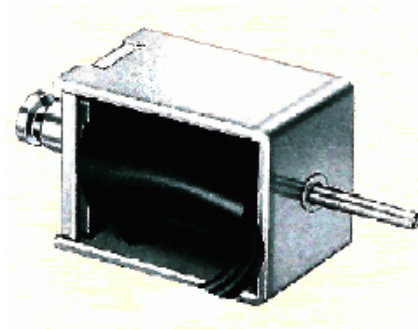
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		1.1	2.2	4.4	11
MAX. "ON" time in seconds		∞	50	18	2
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0421L-03V	8.2	3	4.2	6	9.5
SH-0421L-06V	33	6	8.5	12	19
SH-0421L-12V	130	12	17	24	38
SH-0421L-24V	520	24	34	48	76
SH-0421S-03V	8.2	3	4.2	6	9.5
SH-0421S-06V	33	6	8.5	12	19
SH-0421S-12V	130	12	17	24	38
SH-0421S-24V	520	24	34	48	76

SH-0520L PULL TYPE



Total Weight : 18 g

SH-0520S PUSH TYPE

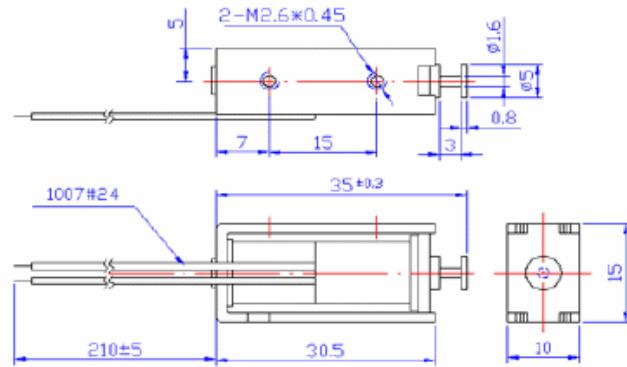
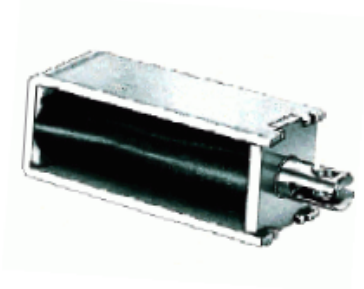


Total Weight : 18 g

COIL DATA

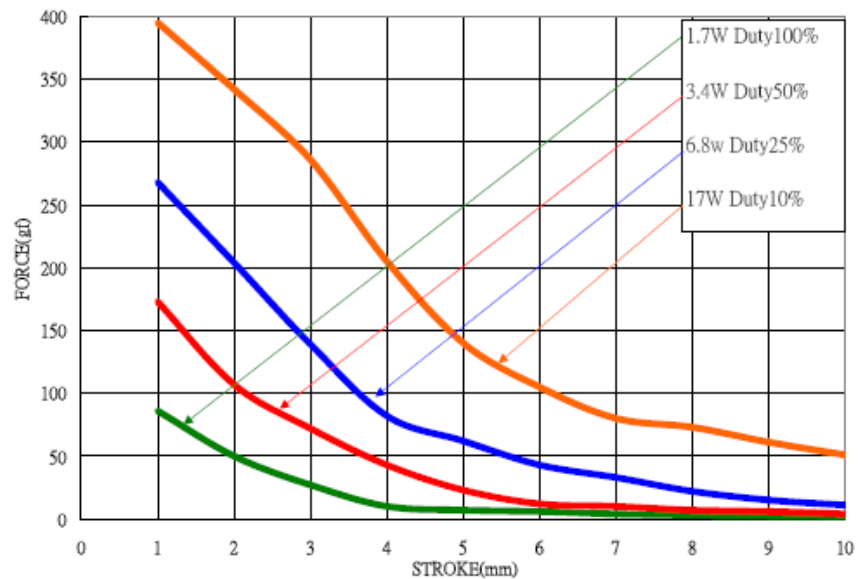
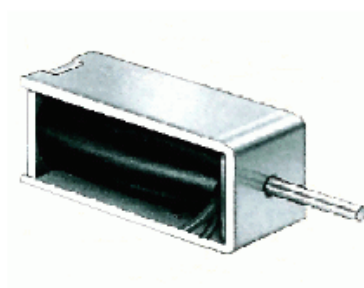
"ON" time Duty cycle(%)= "ON" time+"OFF" time X100%		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		1.6	3.2	6.4	16
MAX. "ON" time in seconds		∞	55	19	3
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0520L-06V	23	6	8.5	12	19
SH-0520L-12V	90	12	17	24	38
SH-0520L-24V	360	24	34	48	76
SH-0520L-48V	1440	48	68	96	152
SH-0520S-06V	23	6	8.5	12	19
SH-0520S-12V	90	12	17	24	38
SH-0520S-24V	360	24	34	48	76
SH-0520S-48V	1440	48	68	96	152

SH-0530L PULL TYPE



Total Weight : 23 g

SH-0530S PUSH TYPE

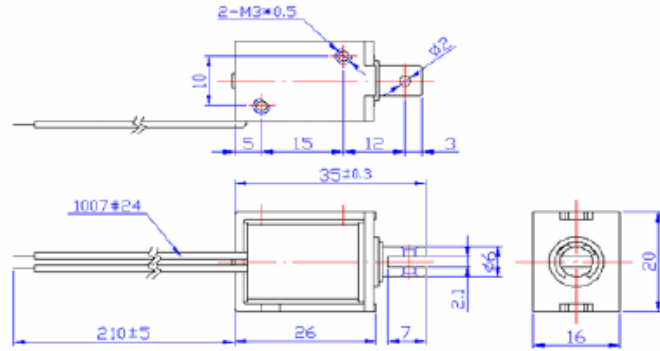
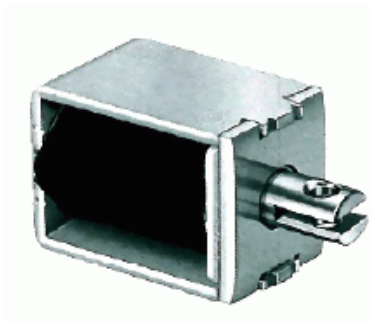


Total Weight : 23 g

COIL DATA

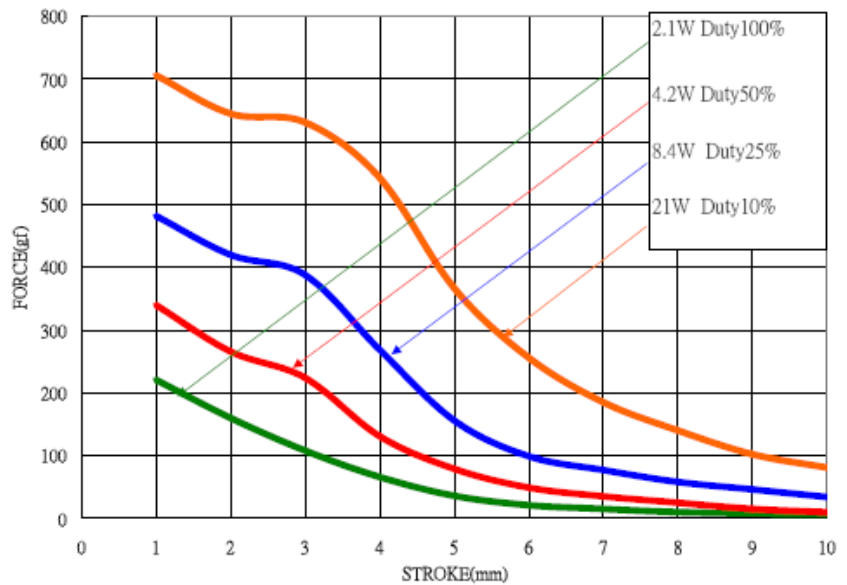
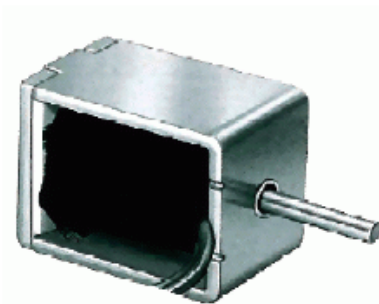
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	1.7	3.4	6.8	17
MAX. "ON" time in seconds		∞	50	18	2
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0530L-06V	21.2	6	8.5	12	19
SH-0530L-12V	84.7	12	17	24	38
SH-0530L-24V	339	24	34	48	76
SH-0530L-48V	1355	48	68	96	152
SH-0530S-06V	11.2	6	8.5	12	19
SH-0530S-12V	45	12	17	24	38
SH-0530S-24V	180	24	34	48	76
SH-0530S-48V	1355	48	68	96	152

SH-0626L PULL TYPE



Total Weight : 43 g

SH-0626S PUSH TYPE

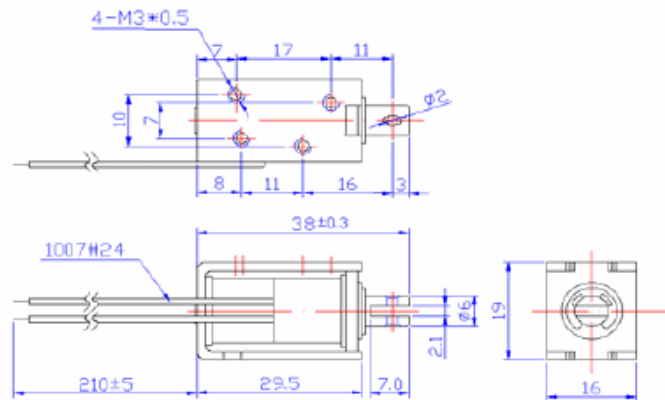
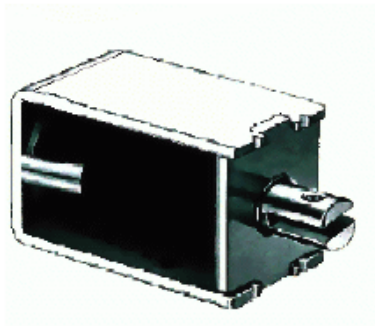


Total Weight : 43 g

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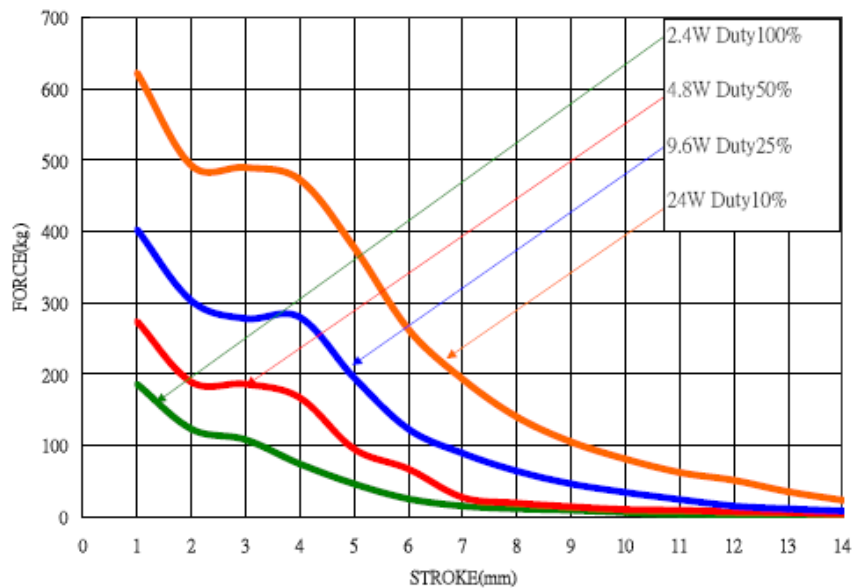
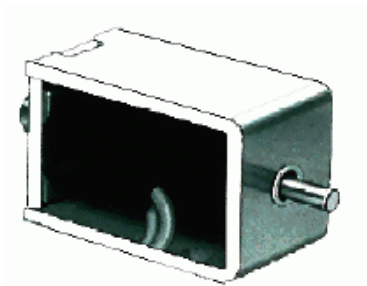
"ON" time		Continuous	Intermittent	Intermittent	Intermittent
Duty cycle(%)= "ON" time + "OFF" time X100%		(100%)	(50%)	(25%)	(10%)
20°C Watts at 20°C		2.1	4.2	8.4	21
MAX. "ON" time in seconds		∞	55	19	3
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0626L-06V	17.1	6	8.5	12	19
SH-0626L-12V	69	12	17	24	38
SH-0626L-24V	275	24	34	48	76
SH-0626L-48V	1095	48	68	96	152
SH-0626S-06V	17.1	6	8.5	12	19
SH-0626S-12V	69	12	17	24	38
SH-0626S-24V	275	24	34	48	76
SH-0626S-48V	1095	48	68	96	152

SH-0630L PULL TYPE



Total Weight : 42 g

SH-0630S PUSH TYPE

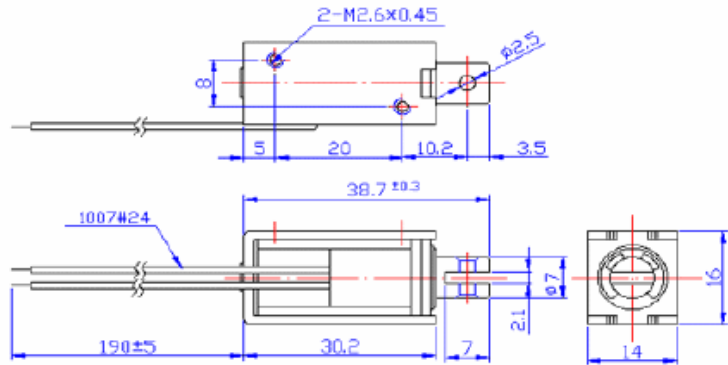
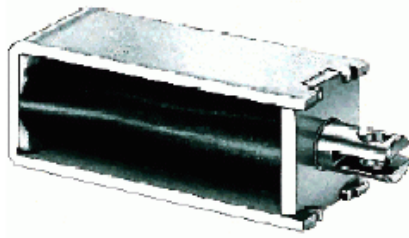


Total Weight : 42 g

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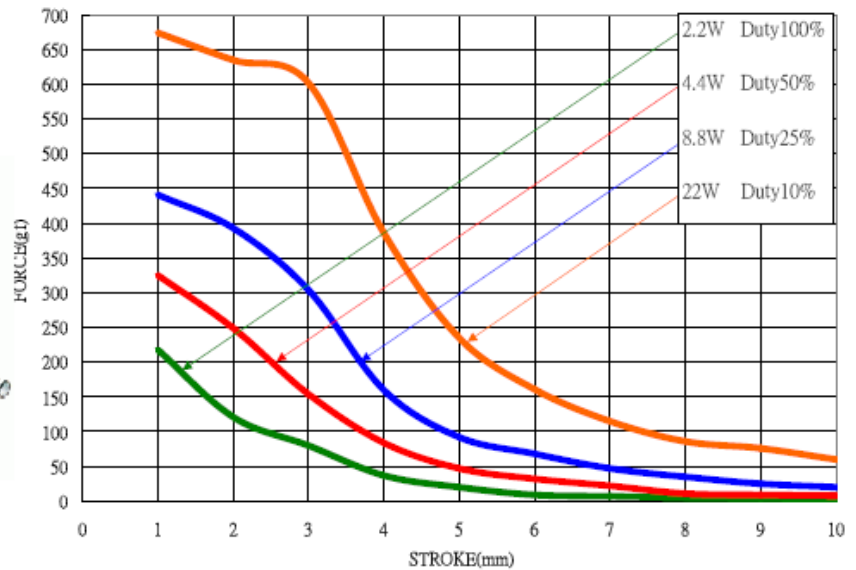
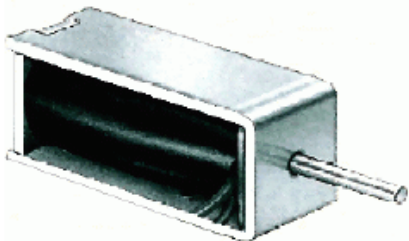
"ON" time Duty cycle(%)= "ON" time+"OFF" time X100%		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		2.4	4.8	9.6	24
MAX. "ON" time in seconds		∞	55	19	3
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0630L-06V	15	6	8.5	12	19
SH-0630L-12V	60	12	17	24	38
SH-0630L-24V	240	24	34	48	76
SH-0630L-48V	960	48	68	96	152
SH-0630S-06V	15	6	8.5	12	19
SH-0630S-12V	60	12	17	24	38
SH-0630S-24V	240	24	34	48	76
SH-0630S-48V	960	48	68	96	152

SH-0730L PULL TYPE



Total Weight : 33 g

SH-0730S PUSH TYPE

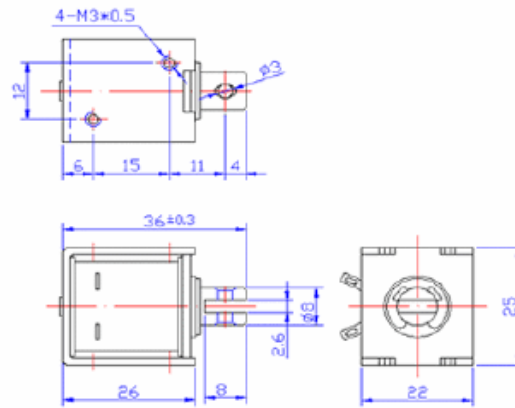
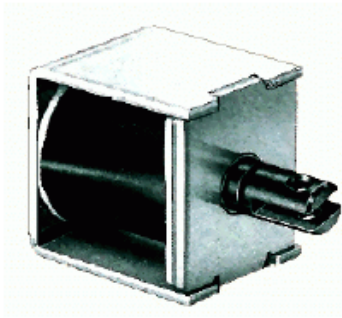


Total Weight : 33 g

COIL DATA

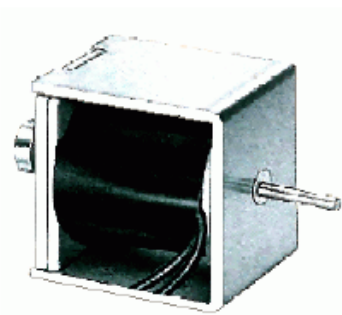
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C時の功率 Watts at 20°C		2.2	4.4	8.8	22
MAX. "ON" time in seconds		∞	55	19	3
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0730L-06V	16.4	6	8.5	12	19
SH-0730L-12V	65.5	12	17	24	38
SH-0730L-24V	262	24	34	48	76
SH-0730L-48V	1047	48	68	96	152
SH-0730S-06V	16.4	6	8.5	12	19
SH-0730S-12V	65.5	12	17	24	38
SH-0730S-24V	262	24	34	48	76
SH-0730S-48V	1047	48	68	96	152

SH-0826L PULL TYPE

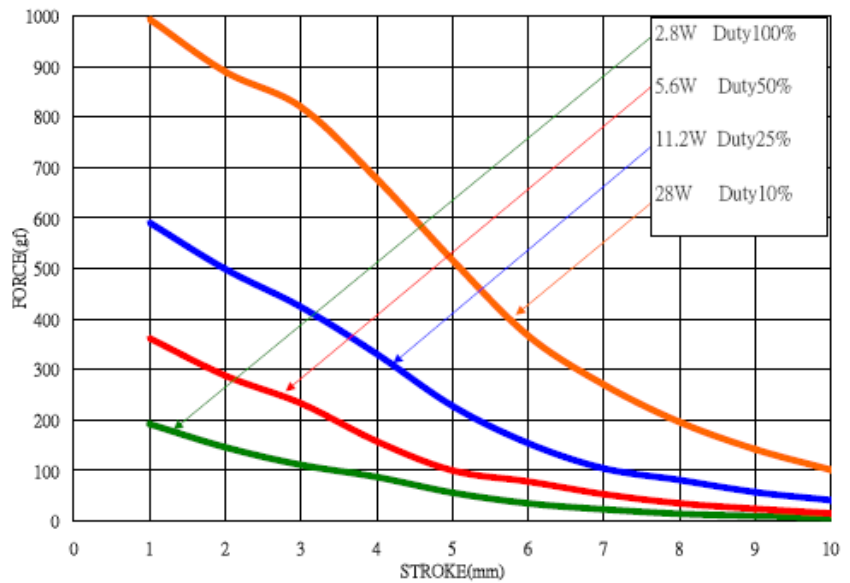


Total Weight : 66 g

SH-0826S PUSH TYPE



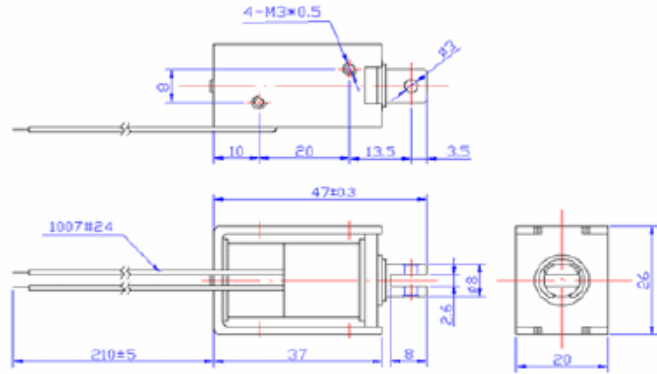
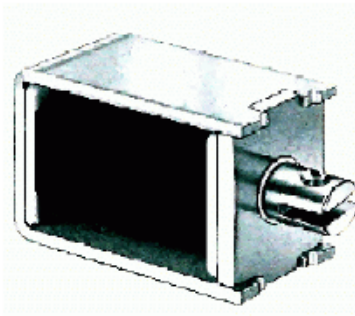
Total Weight : 66 g



COIL DATA

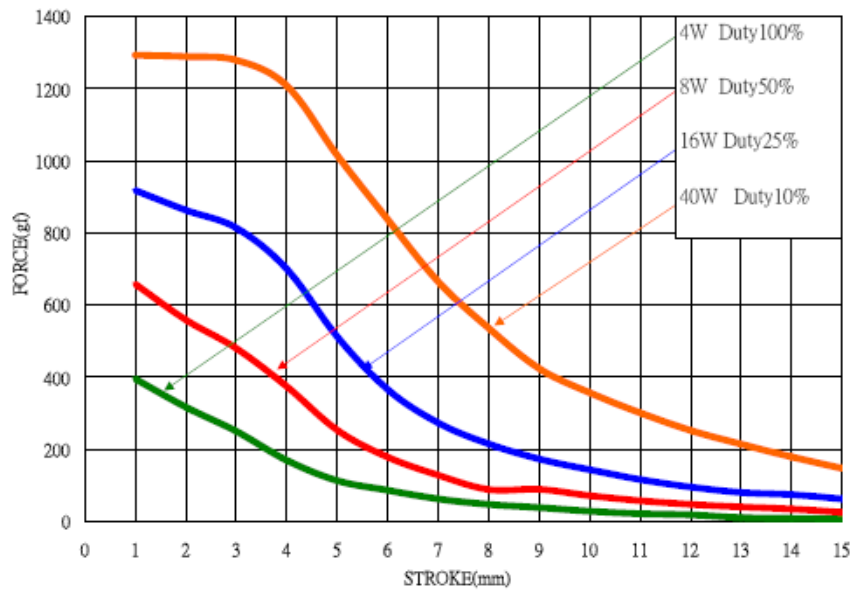
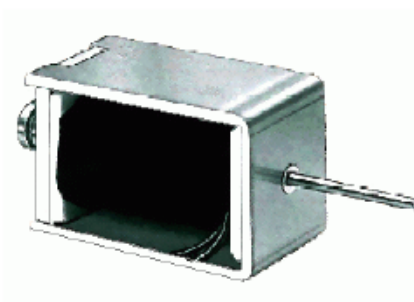
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	2.8	5.6	11.2	28
MAX. "ON" time in seconds		∞	100	36	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0826L-06V	12.9	6	8.5	12	19
SH-0826L-12V	51.4	12	17	24	38
SH-0826L-24V	206	24	34	48	76
SH-0826L-48V	823	48	68	96	152
SH-0826S-06V	12.9	6	8.5	12	19
SH-0826S-12V	51.4	12	17	24	38
SH-0826S-24V	206	24	34	48	76
SH-0826S-48V	823	48	68	96	152

SH-0837L PULL TYPE



Total Weight : 96 g

SH-0837S PUSH TYPE

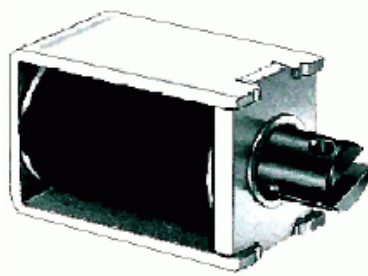


Total Weight : 96 g

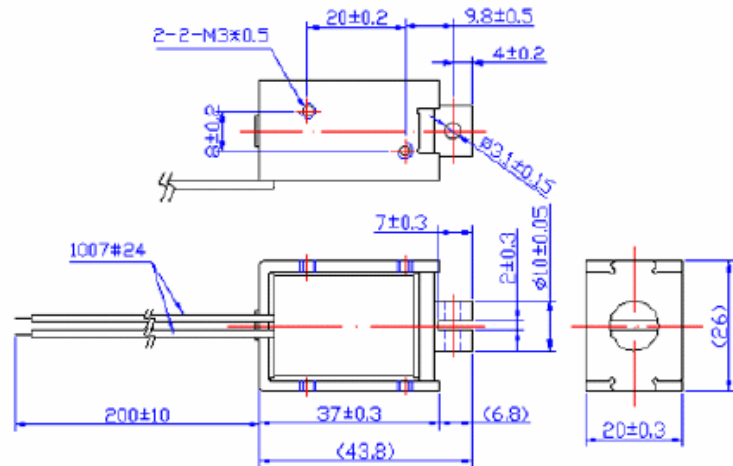
COIL DATA

"ON" time		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
Duty cycle(%)= "ON" time+"OFF" time X100%					
20°C Watts at 20°C		4	8	16	40
MAX. "ON" time in seconds		∞	100	36	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-0837L-06V	9	6	8.5	12	19
SH-0837L-12V	36	12	17	24	38
SH-0837L-24V	144	24	34	48	76
SH-0837L-48V	576	48	68	96	152
SH-0837S-06V	9	6	8.5	12	19
SH-0837S-12V	36	12	17	24	38
SH-0837S-24V	144	24	34	48	76
SH-0837S-48V	576	48	68	96	152

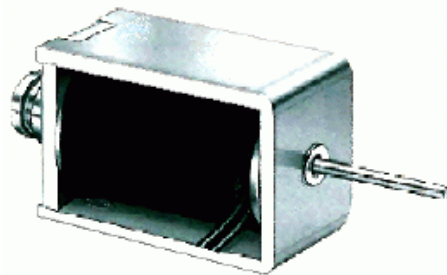
SH-1037L PULL TYPE



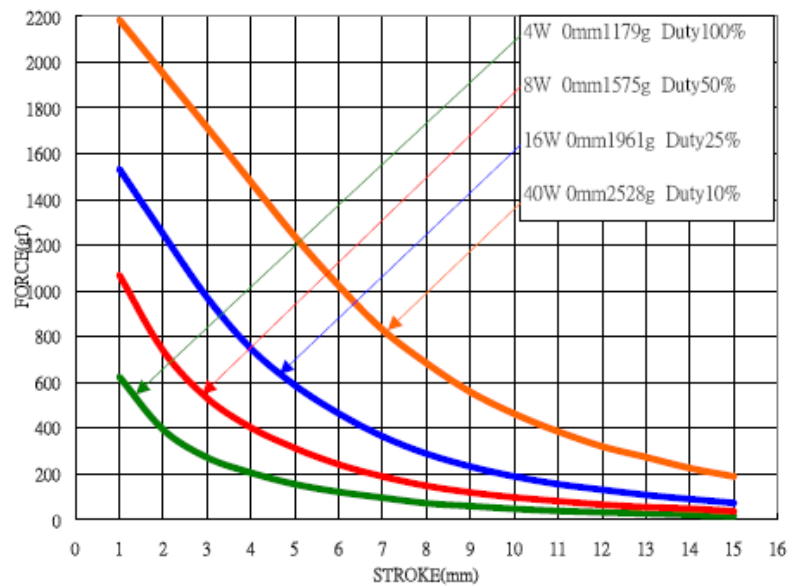
Total Weight : 96 g



SH-1037S PUSH TYPE



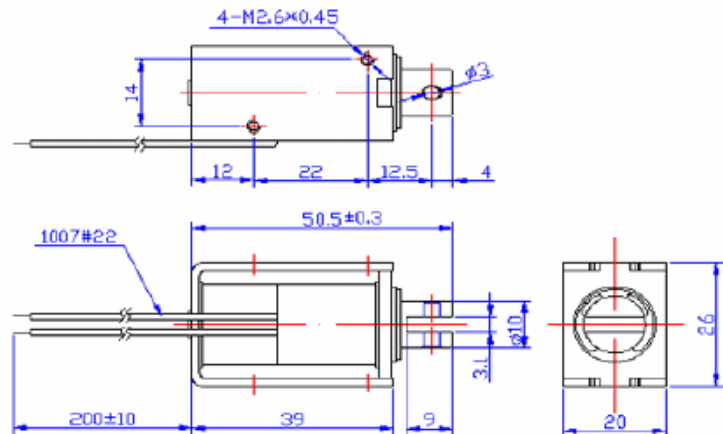
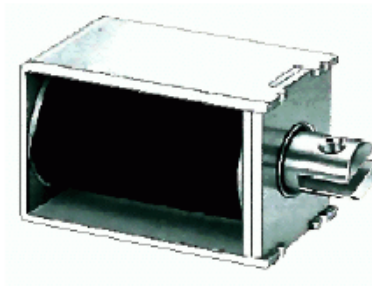
Total Weight : 96 g



COIL DATA

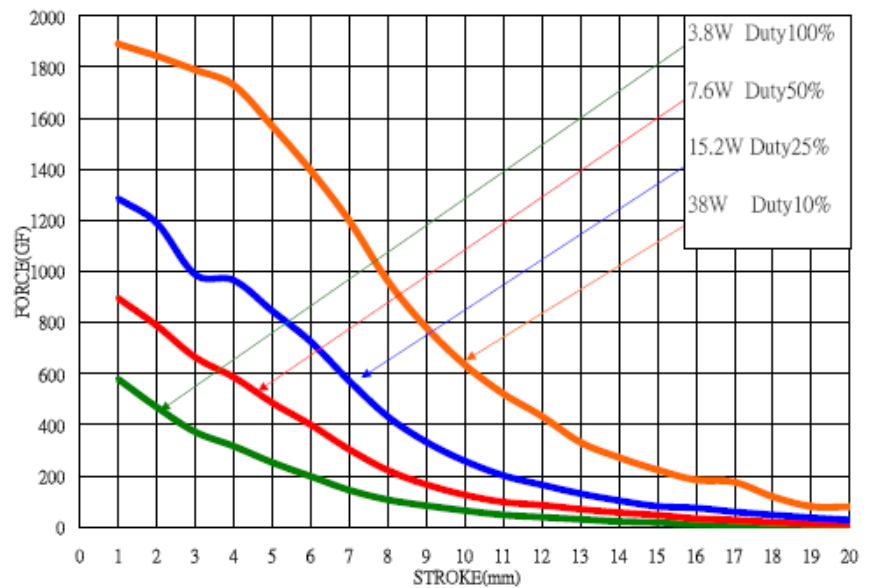
"ON" time Duty cycle(%)= "ON" time+"OFF" time X100%		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		4	8	16	40
MAX. "ON" time in seconds		∞	100	36	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1037L-06V	9	6	8.5	12	19
SH-1037L-12V	36	12	17	24	38
SH-1037L-24V	144	24	34	48	76
SH-1037L-48V	576	48	68	96	152
SH-1037S-06V	9	6	8.5	12	19
SH-1037S-12V	36	12	17	24	38
SH-1037S-24V	144	24	34	48	76
SH-1037S-48V	576	48	68	96	152

SH-1039L PULL TYPE



Total Weight : 110 g

SH-1039S PUSH TYPE

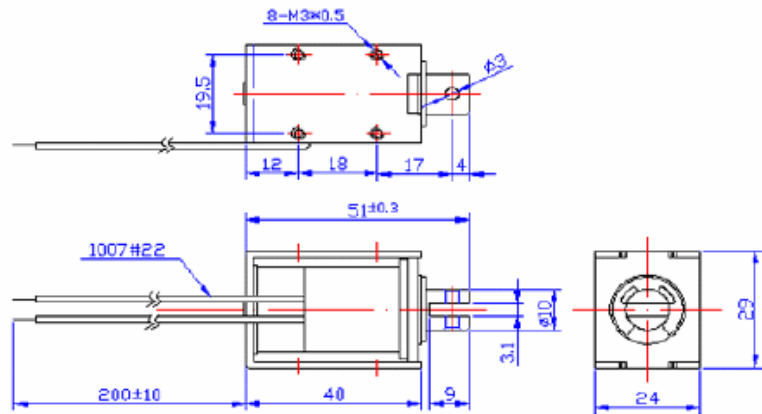
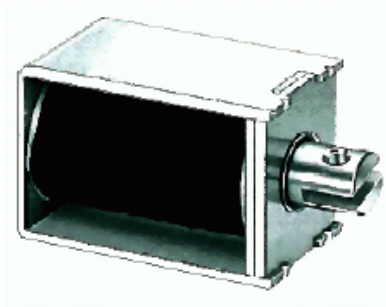


Total Weight : 110 g

COIL DATA

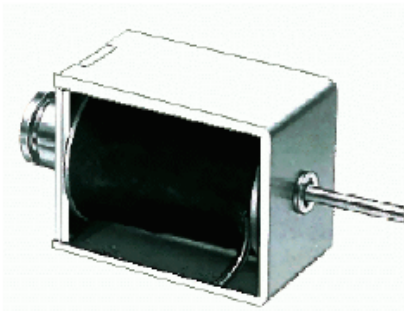
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		3.8	7.6	15.2	38
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1039L-06V	9.5	6	8.5	12	19
SH-1039L-12V	38	12	17	24	38
SH-1039L-24V	152	24	34	48	76
SH-1039L-48V	606	48	68	96	152
SH-1039S-06V	9.5	6	8.5	12	19
SH-1039S-12V	38	12	17	24	38
SH-1039S-24V	152	24	34	48	76
SH-1039S-48V	606	48	68	96	152

SH-1040L PULL TYPE

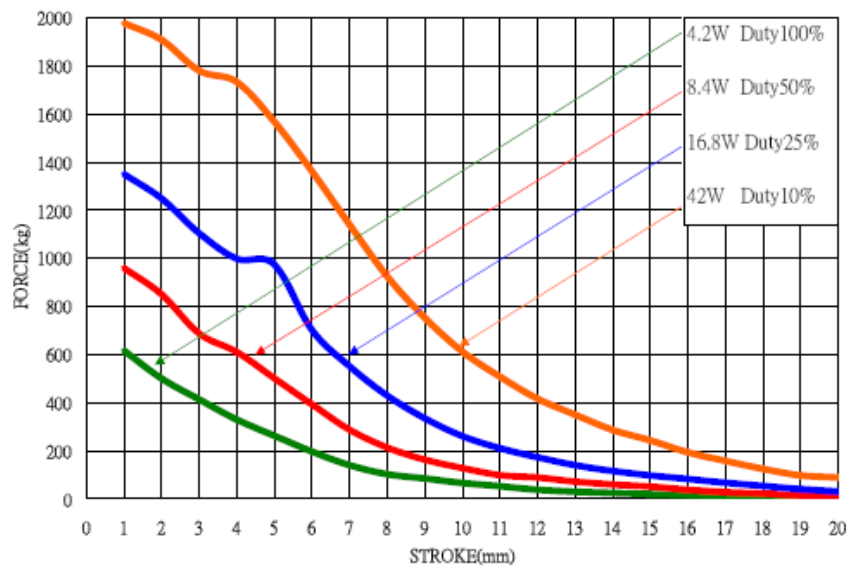


Total Weight : 122 g

SH-1040S PUSH TYPE



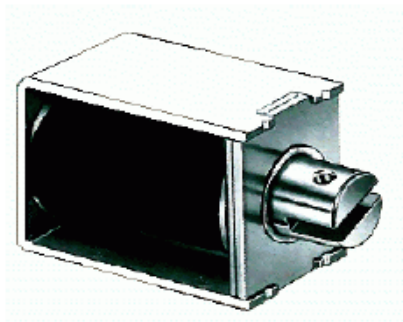
Total Weight : 122 g



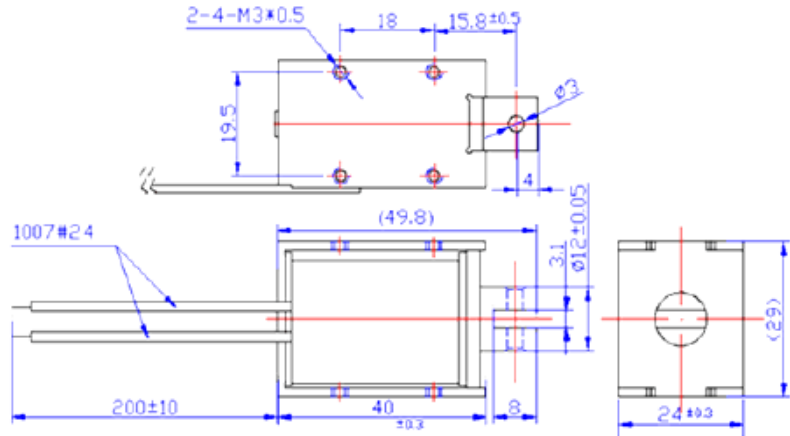
COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		4.2	8.4	16.8	42
MAX. "ON" time in seconds		∞	100	36	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1040L-06V	9	6	8.5	12	19
SH-1040L-12V	34	12	17	24	38
SH-1040L-24V	137	24	34	48	76
SH-1040L-48V	549	48	68	96	152
SH-1040S-06V	9	6	8.5	12	19
SH-1040S-12V	34	12	17	24	38
SH-1040S-24V	137	24	34	48	76
SH-1040S-48V	549	48	68	96	152

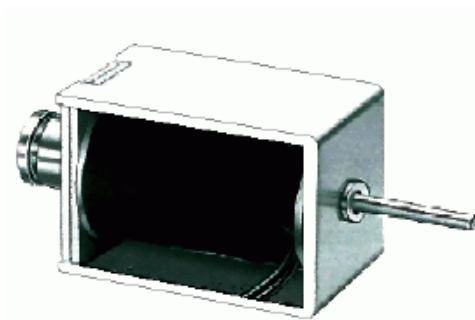
SH-1240L PULL TYPE



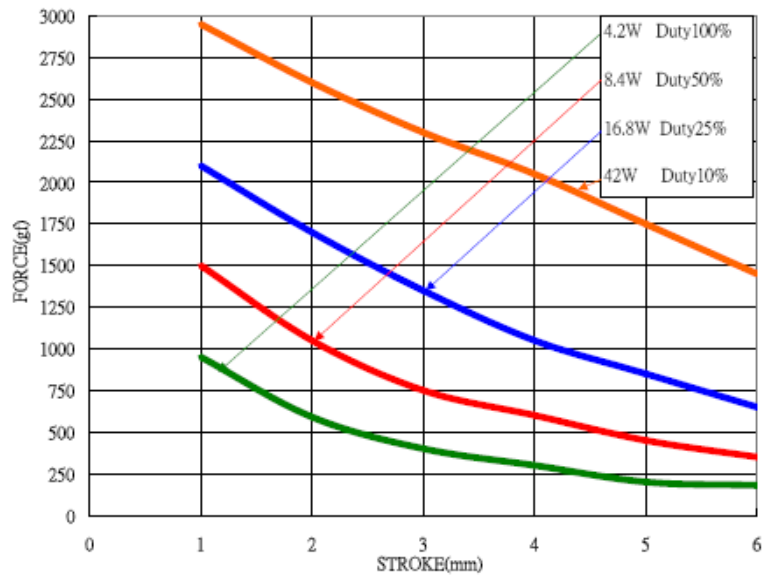
Total Weight : 147 g



SH-1240S PUSH TYPE



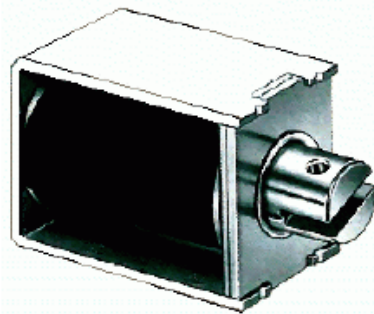
Total Weight : 147 g



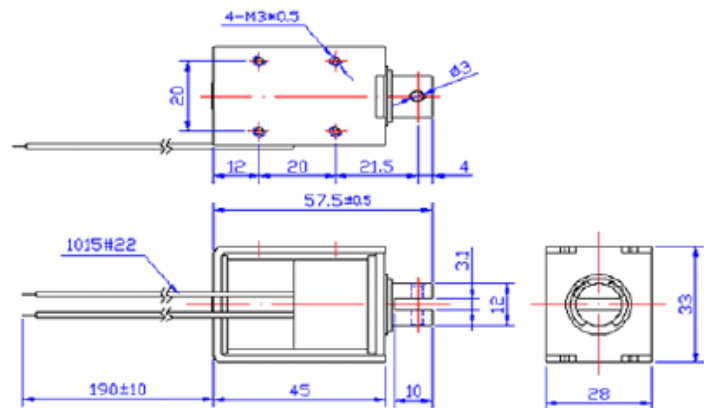
COIL DATA

"ON" time		Continuous	Intermittent	Intermittent	Intermittent
Duty cycle(%)= "ON" time + "OFF" time X100%		(100%)	(50%)	(25%)	(10%)
20°C Watts at 20°C		4.2	8.4	16.8	42
MAX. "ON" time in seconds		∞	100	36	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1240L-06V	8.6	6	8.5	12	19
SH-1240L-12V	34	12	17	24	38
SH-1240L-24V	137	24	34	48	76
SH-1240L-48V	548	48	68	96	152
SH-1240S-06V	8.6	6	8.5	12	19
SH-1240S-12V	34	12	17	24	38
SH-1240S-24V	137	24	34	48	76
SH-1240S-48V	548	48	68	96	152

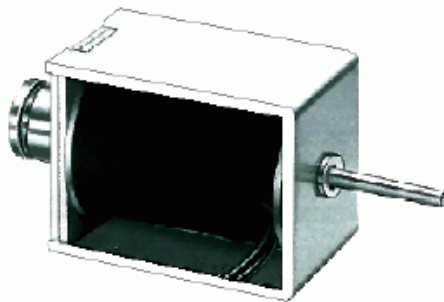
SH-1245L PULL TYPE



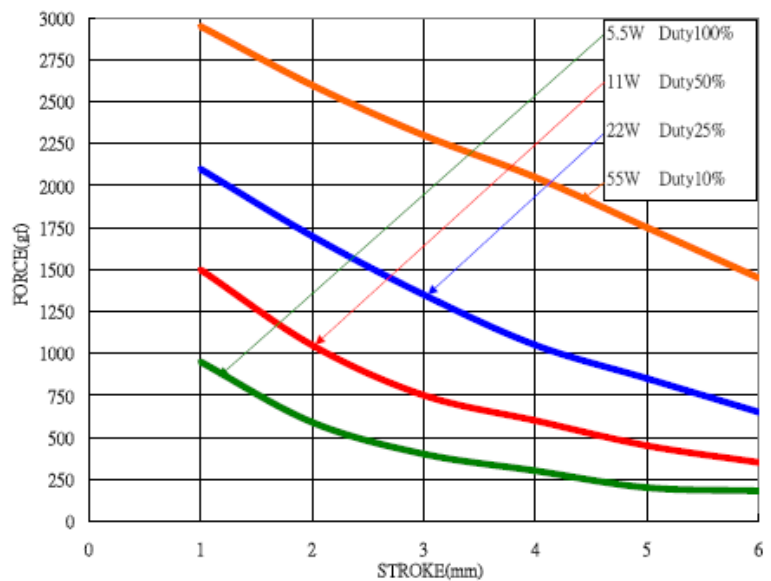
Total Weight : 205 g



SH-1245S PUSH TYPE



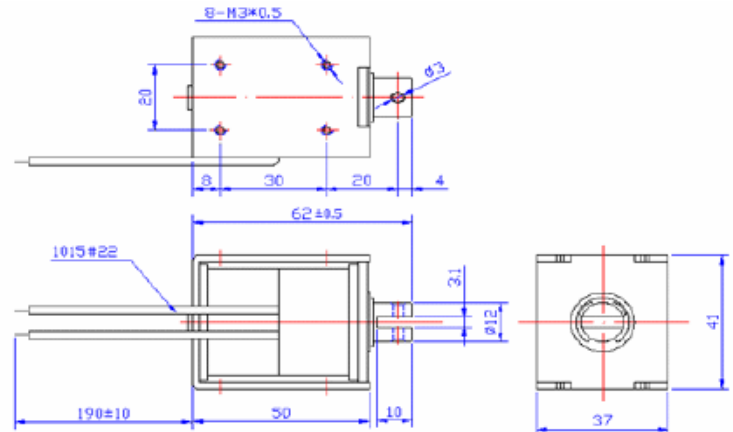
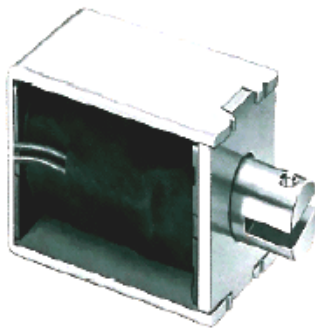
Total Weight : 205 g



COIL DATA

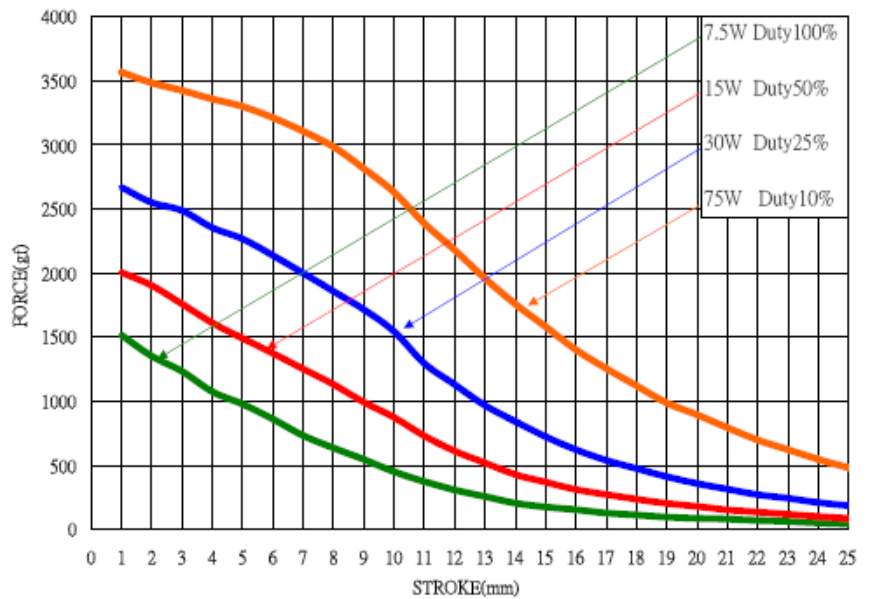
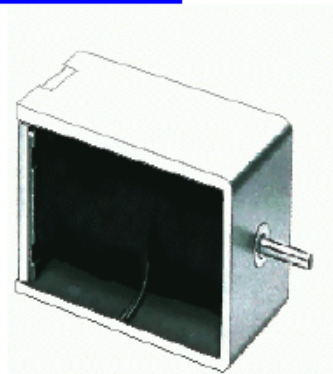
"ON" time		Continuous	Intermittent	Intermittent	Intermittent
Duty cycle(%)= "ON" time + "OFF" time X100%		(100%)	(50%)	(25%)	(10%)
20°C Watts at 20°C		5.5	11	22	55
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1245L-06V	6.5	6	8.5	12	19
SH-1245L-12V	26.2	12	17	24	38
SH-1245L-24V	104.5	24	34	48	76
SH-1245L-48V	419	48	68	96	152
SH-1245S-06V	6.5	6	8.5	12	19
SH-1245S-12V	26.2	12	17	24	38
SH-1245S-24V	104.5	24	34	48	76
SH-1245S-48V	419	48	68	96	152

SH-1250L PULL TYPE



Total Weight : 315 g

SH-1250S PUSH TYPE

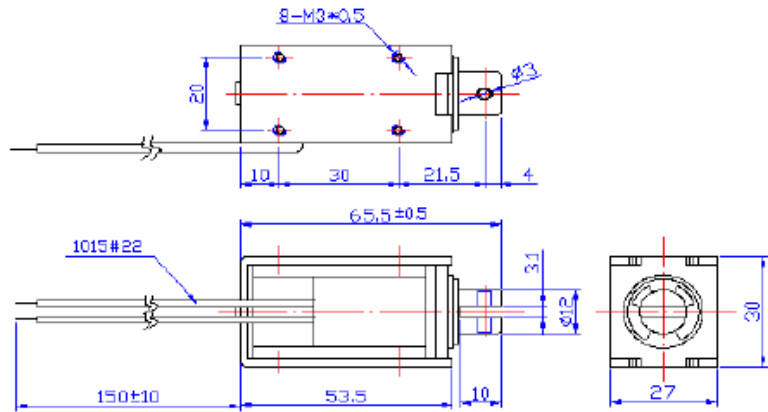
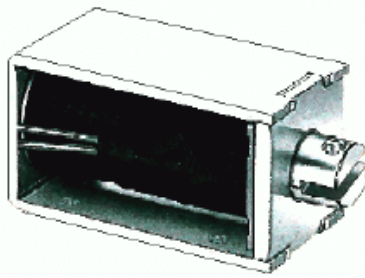


Total Weight : 315 g

COIL DATA

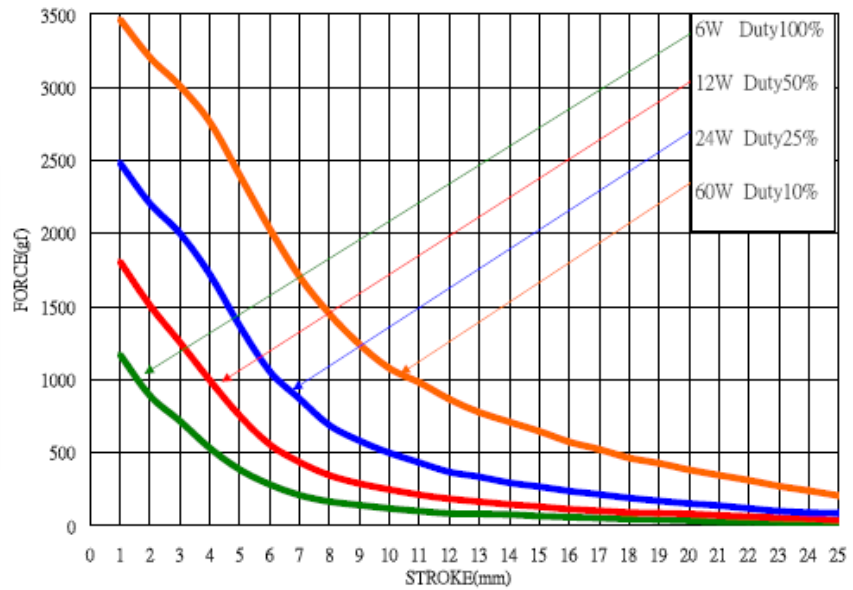
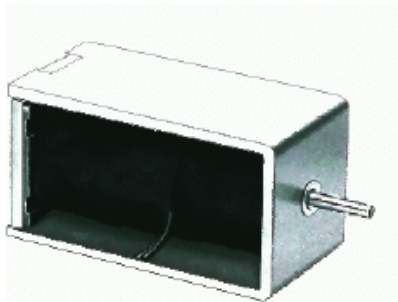
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		7.5	15	30	75
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1250L-06V	4.8	6	8.5	12	19
SH-1250L-12V	19.2	12	17	24	38
SH-1250L-24V	76.8	24	34	48	76
SH-1250L-48V	307.2	48	68	96	152
SH-1250S-06V	4.8	6	8.5	12	19
SH-1250S-12V	19.2	12	17	24	38
SH-1250S-24V	76.8	24	34	48	76
SH-1250S-48V	307.2	48	68	96	152

SH-1253L PULL TYPE



Total Weight : 205 g

SH-1253S PUSH TYPE

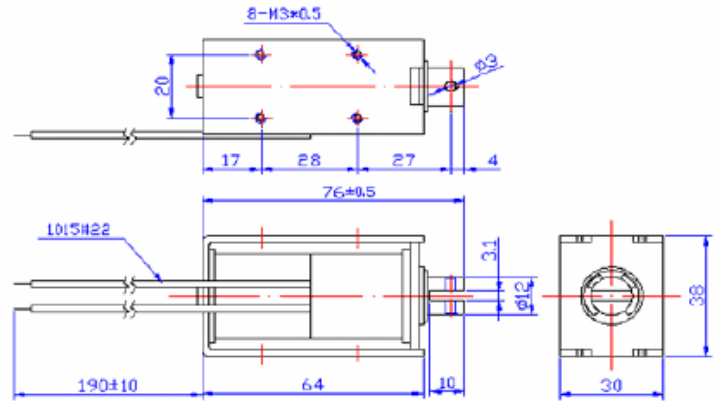
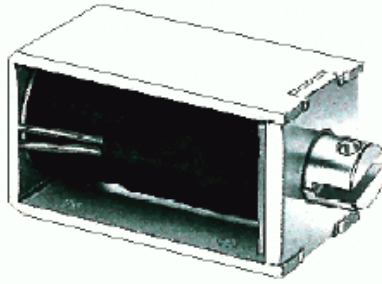


Total Weight : 205 g

COIL DATA

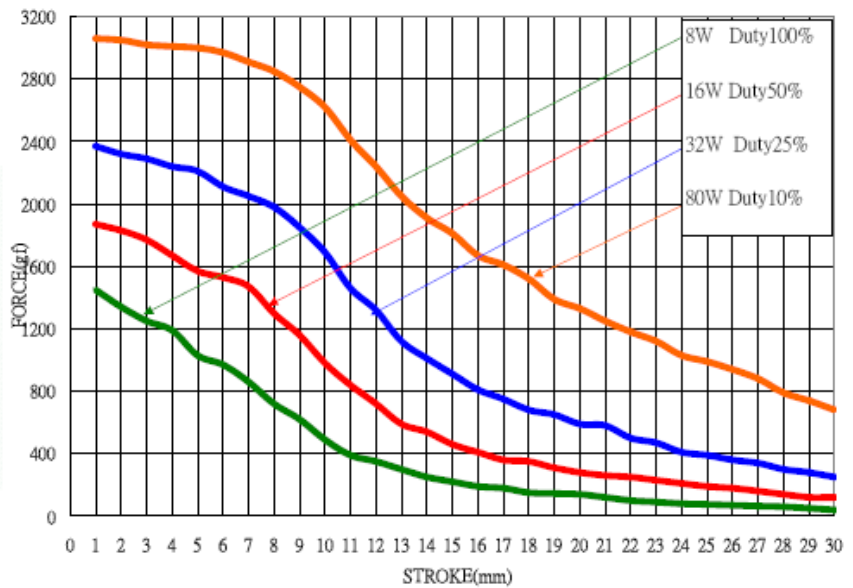
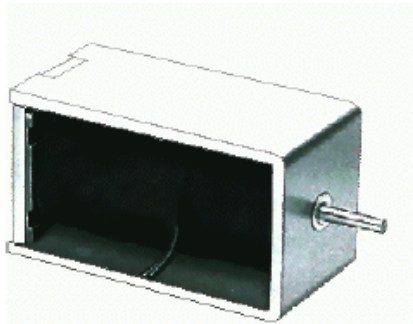
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		6	12	24	60
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1253L-06V	6	6	8.5	12	19
SH-1253L-12V	24	12	17	24	38
SH-1253L-24V	96	24	34	48	76
SH-1253L-48V	384	48	68	96	152
SH-1253S-06V	6	6	8.5	12	19
SH-1253S-12V	24	12	17	24	38
SH-1253S-24V	96	24	34	48	76
SH-1253S-48V	384	48	68	96	152

SH-1264L PULL TYPE



Total Weight : 178 g

SH-1264S PUSH TYPE

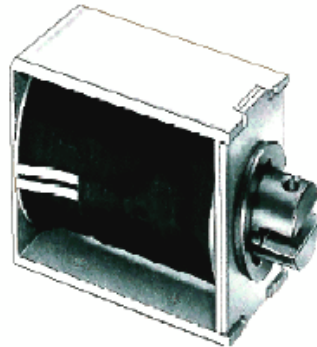


Total Weight : 178 g

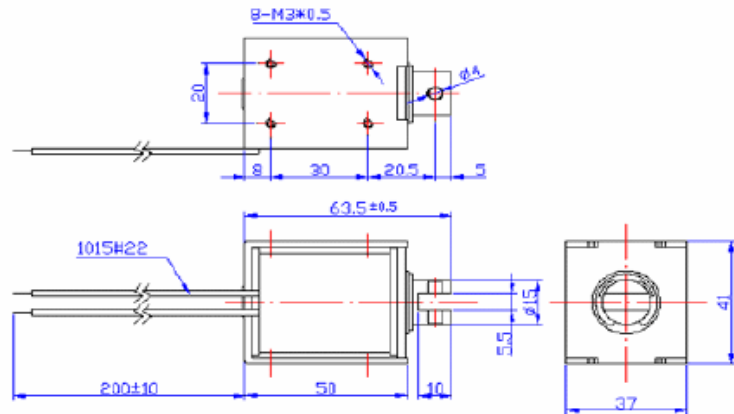
COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		8	16	32	80
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1264L-06V	4.5	6	8.5	12	19
SH-1264L-12V	18	12	17	24	38
SH-1264L-24V	72	24	34	48	76
SH-1264L-48V	288	48	68	96	152
SH-1264S-06V	4.5	6	8.5	12	19
SH-1264S-12V	18	12	17	24	38
SH-1264S-24V	72	24	34	48	76
SH-1264S-48V	288	48	68	96	152

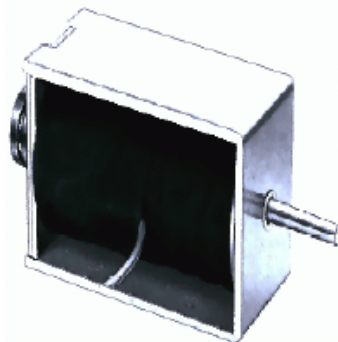
SH-1550L PULL TYPE



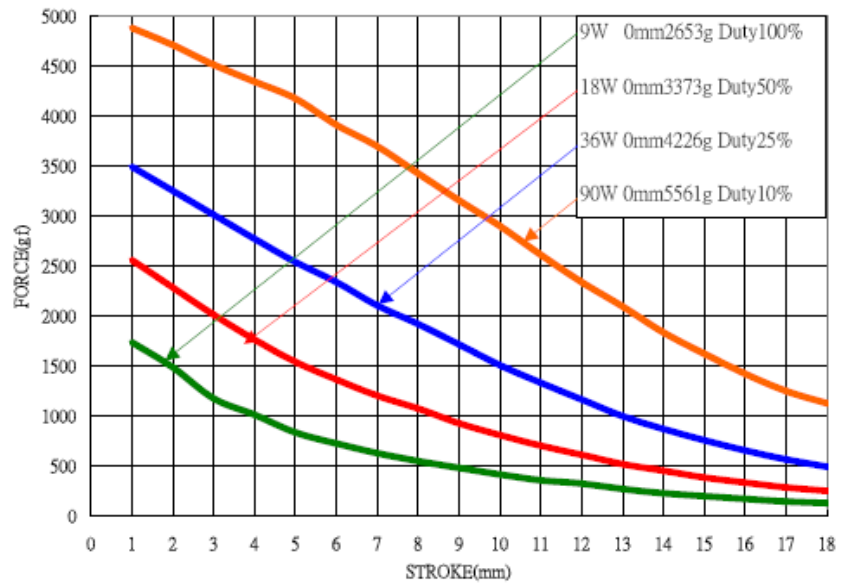
Total Weight : 320 g



SH-1550S PUSH TYPE

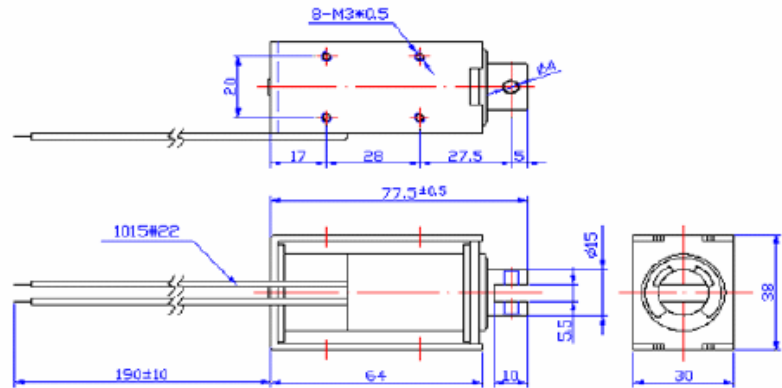
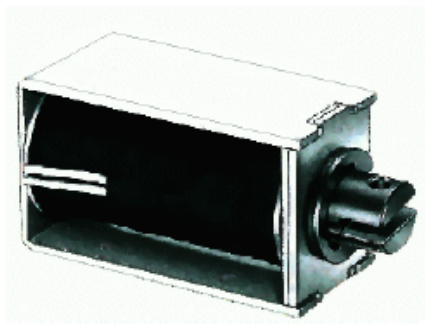


Total Weight : 320 g

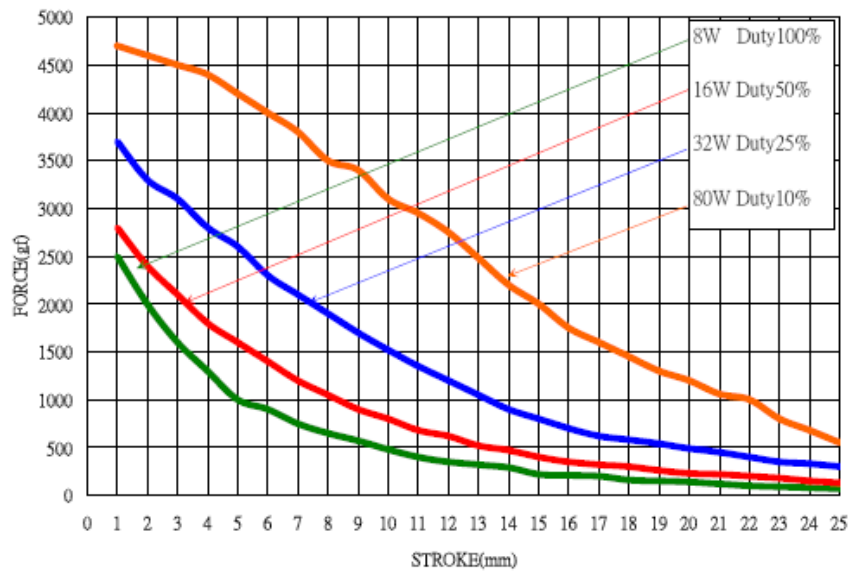
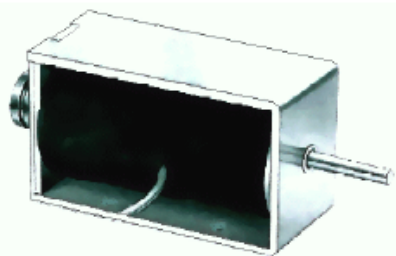


COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		9	18	36	90
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1550L-06V	4	6	8.5	12	19
SH-1550L-12V	16	12	17	24	38
SH-1550L-24V	64	24	34	48	76
SH-1550L-48V	256	48	68	96	152
SH-1550S-06V	4	6	8.5	12	19
SH-1550S-12V	16	12	17	24	38
SH-1550S-24V	64	24	34	48	76
SH-1550S-48V	256	48	68	96	152

SH-1564L PULL TYPE


Total Weight : 363 g

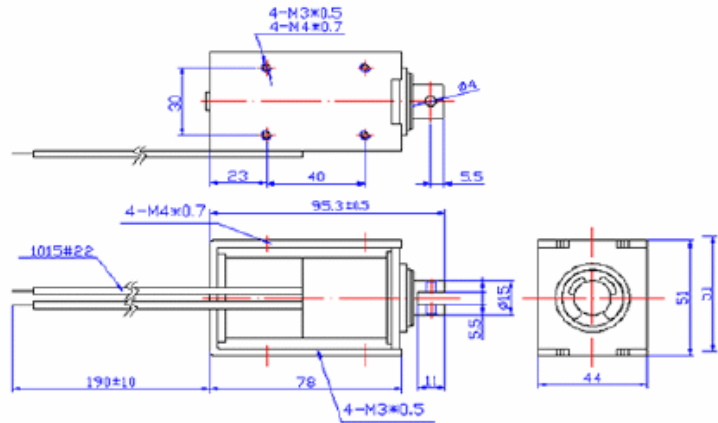
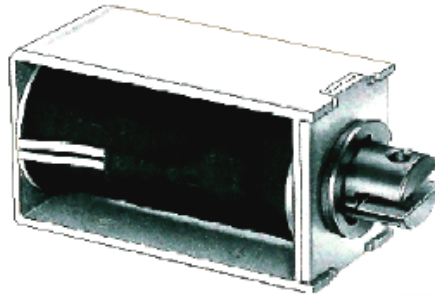
SH-1564S PUSH TYPE


Total Weight : 363 g

COIL DATA

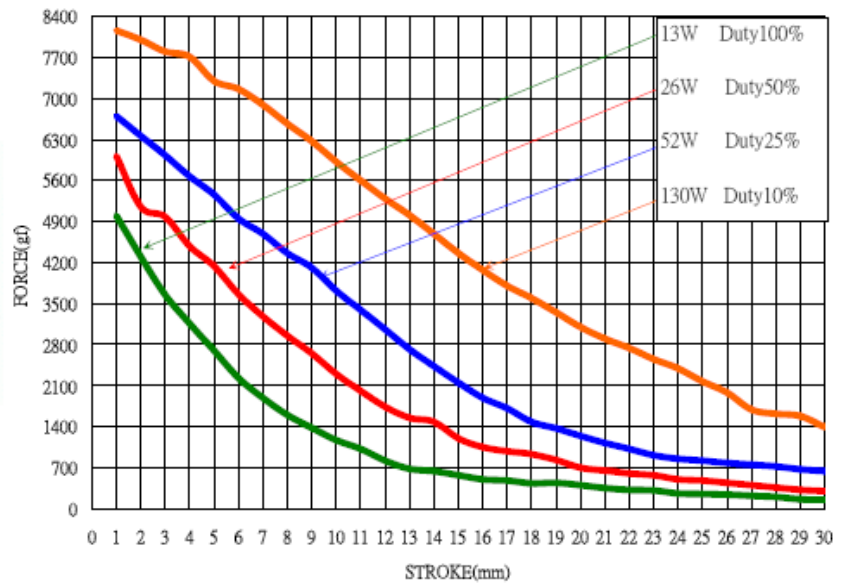
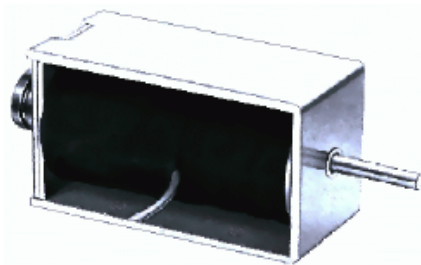
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	8	16	32	80
MAX. "ON" time in seconds		∞	140	50	9
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1564L-06V	4.5	6	8.5	12	19
SH-1564L-12V	18	12	17	24	38
SH-1564L-24V	72	24	34	48	76
SH-1564L-48V	288	48	68	96	152
SH-1564S-06V	4.5	6	8.5	12	19
SH-1564S-12V	18	12	17	24	38
SH-1564S-24V	72	24	34	48	76
SH-1564S-48V	288	48	68	96	152

SH-1578L PULL TYPE



Total Weight : 800 g

SH-1578S PUSH TYPE

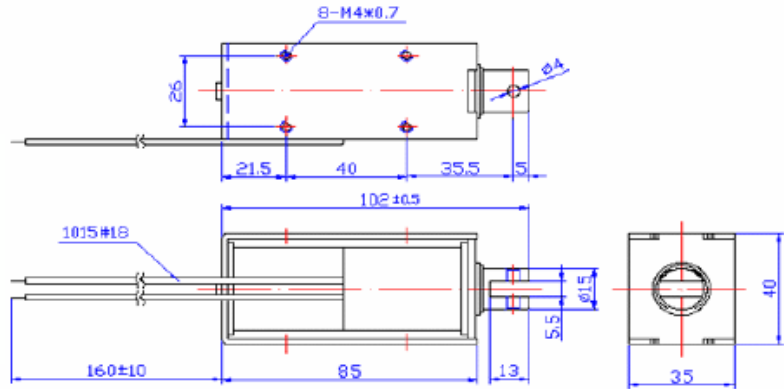
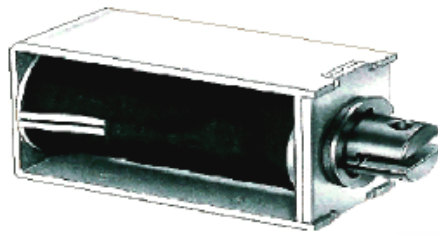


Total Weight : 800 g

COIL DATA

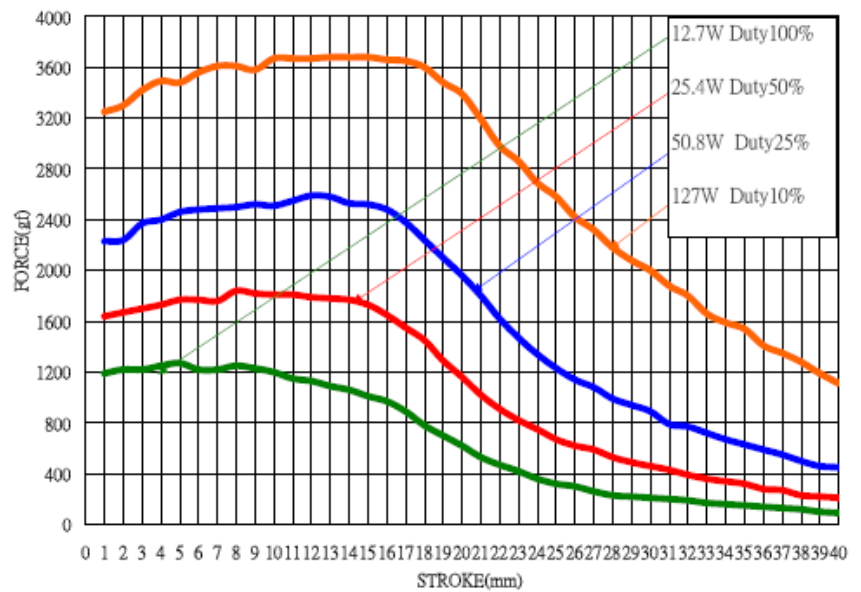
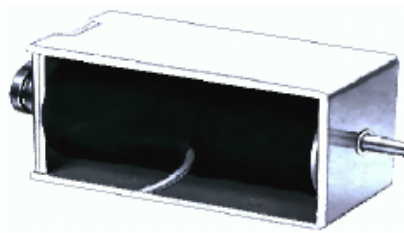
"ON" time Duty cycle(%)= "ON" time+"OFF" time X100%		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		13	26	52	130
MAX. "ON" time in seconds		∞	160	80	32
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1578L-06V	2.8	6	8.5	12	19
SH-1578L-12V	11.1	12	17	24	38
SH-1578L-24V	44.3	24	34	48	76
SH-1578L-48V	177	48	68	96	152
SH-1578S-06V	2.8	6	8.5	12	19
SH-1578S-12V	11.1	12	17	24	38
SH-1578LS24V	44.3	24	34	48	76
SH-1578S-48V	177	48	68	96	152

SH-1585L PULL TYPE



Total Weight : 530 g

SH-1585S PUSH TYPE

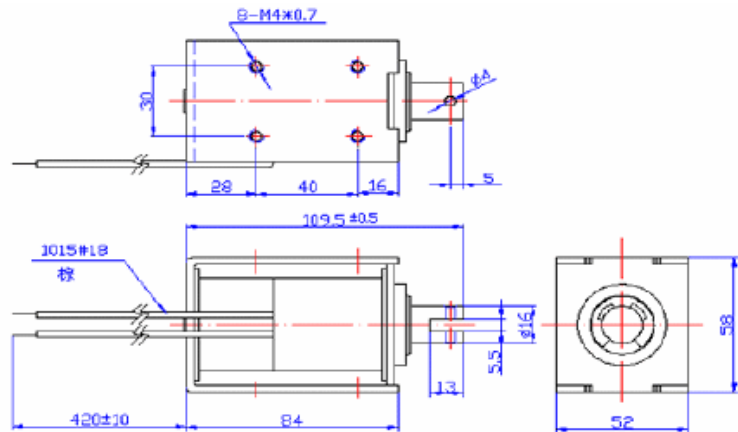
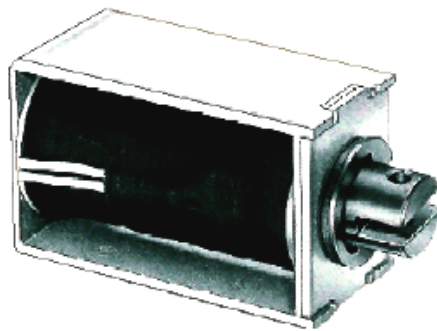


Total Weight : 530 g

COIL DATA

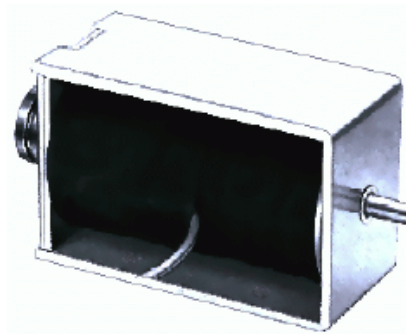
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		12.7	25.4	50.8	127
MAX. "ON" time in seconds		∞	160	80	32
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1585L-06V	2.8	6	8.5	12	19
SH-1585L-12V	11.3	12	17	24	38
SH-1585L-24V	45.3	24	34	48	76
SH-1585L-48V	181	48	68	96	152
SH-1585S-06V	2.8	6	8.5	12	19
SH-1585S-12V	11.3	12	17	24	38
SH-1585S-24V	45.3	24	34	48	76
SH-1585S-48V	181	48	68	96	152

SH-1683L PULL TYPE

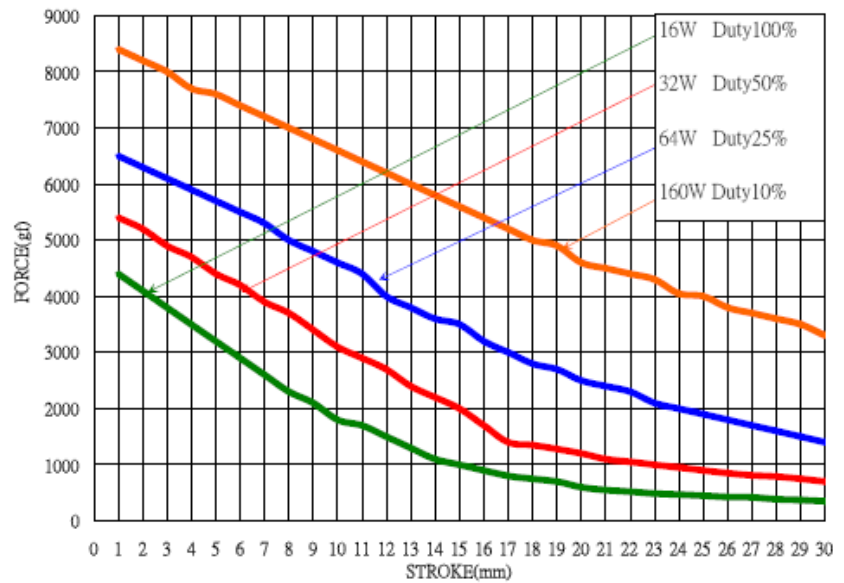


Total Weight : 1090 g

SH-1683S PUSH TYPE



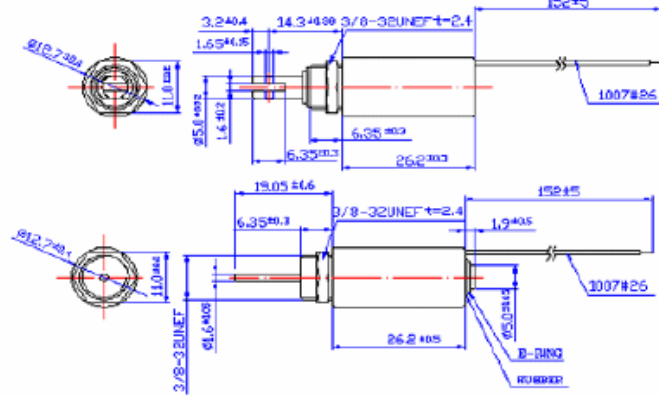
Total Weight : 1090 g



COIL DATA

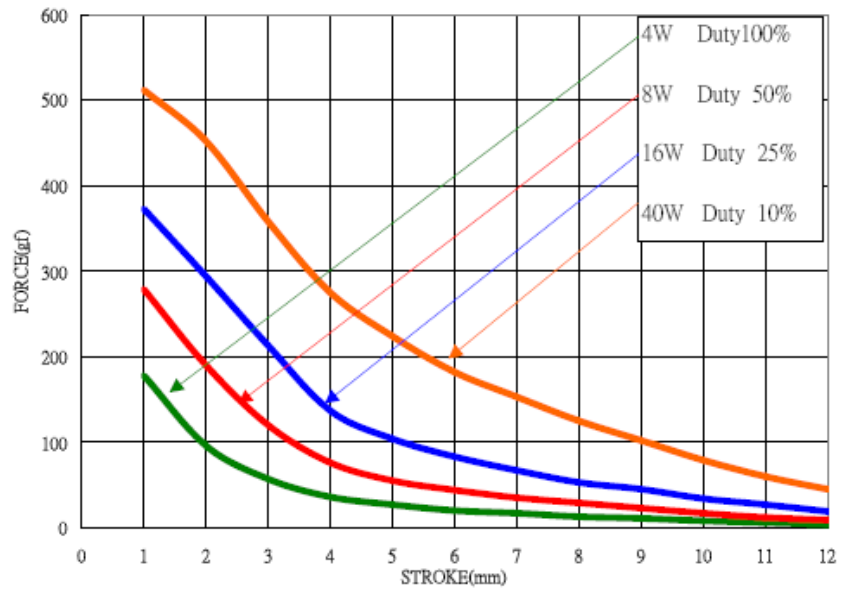
"ON" time		Continuous	Intermittent	Intermittent	Intermittent
Duty cycle(%)= "ON" time + "OFF" time X100%		(100%)	(50%)	(25%)	(10%)
20°C Watts at 20°C		16	32	64	160
MAX. "ON" time in seconds		∞	250	120	40
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-1683L-06V	2.3	6	8.5	12	19
SH-1683L-12V	9	12	17	24	38
SH-1683L-24V	36	24	34	48	76
SH-1683L-48V	144	48	68	96	152
SH-1683S-06V	2.3	6	8.5	12	19
SH-1683S-12V	9	12	17	24	38
SH-1683S-24V	36	24	34	48	76
SH-1683S-48V	144	48	68	96	152

SH-T1325L PULL TYPE



Total Weight : 23 g

SH-T1325S PUSH TYPE

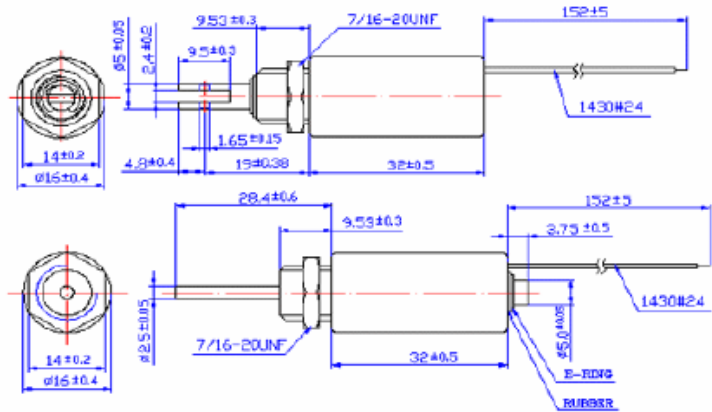


Total Weight : 23 g

COIL DATA

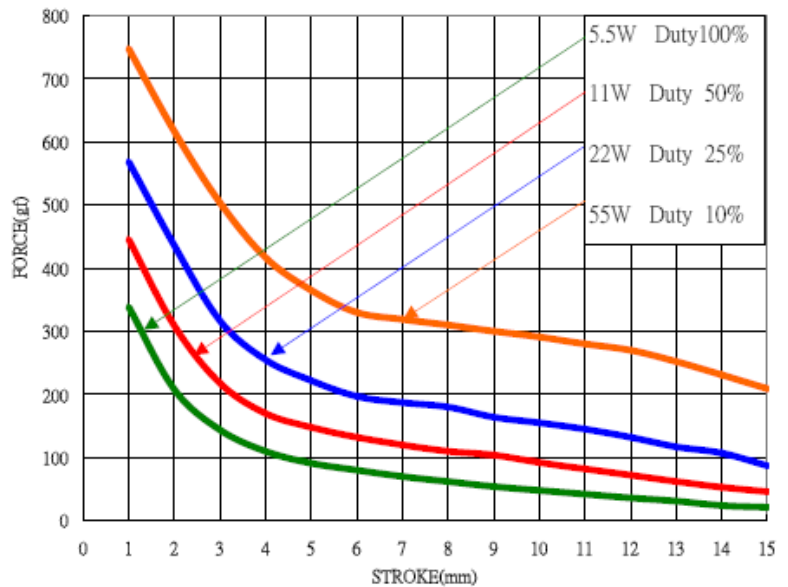
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		4	8	16	40
MAX. "ON" time in seconds		∞	50	5	2
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-T1325L-06V	9	6	8.5	12	19
SH-T1325L-12V	36	12	17	24	38
SH-T1325L-24V	144	24	34	48	76
SH-T1325L-48V	576	48	68	96	152
SH-T1325S-06V	9	6	8.5	12	19
SH-T1325S-12V	36	12	17	24	38
SH-T1325S-24V	144	24	34	48	76
SH-T1325S-48V	576	48	68	96	152

SH-T1632L PULL TYPE



Total Weight : 47 g

SH-T1632S PUSH TYPE

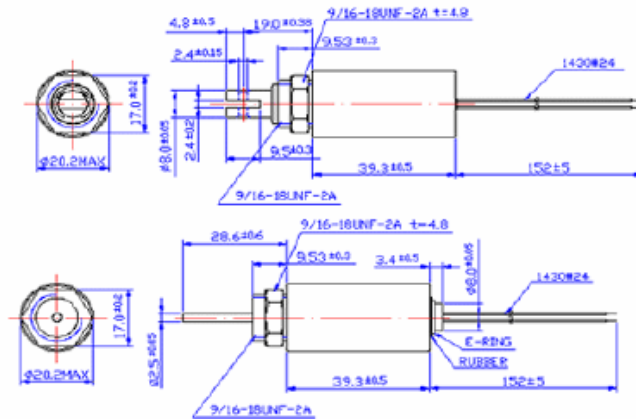


Total Weight : 47 g

COIL DATA

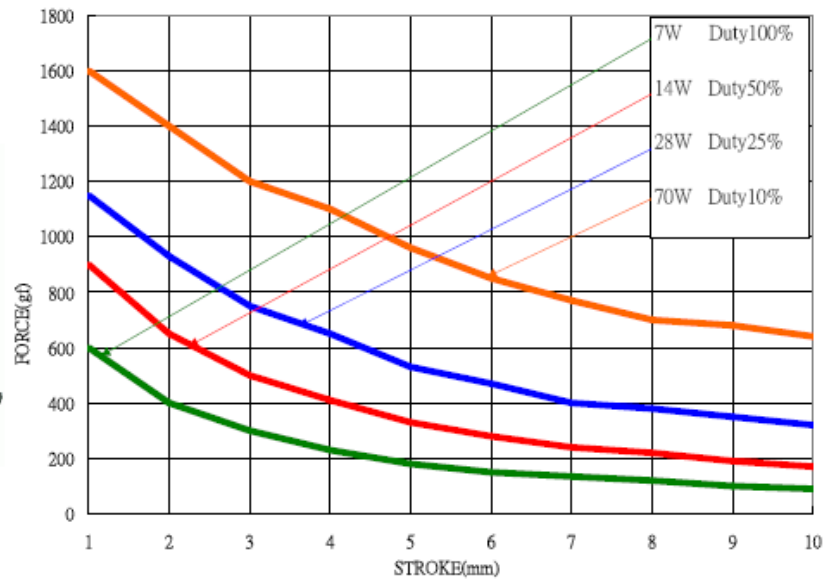
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	5.5	11	22	55
MAX. "ON" time in seconds		∞	230	25	6
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-T1632L-06V	6.5	6	8.5	12	19
SH-T1632L-12V	26.2	12	17	24	38
SH-T1632L-24V	104.7	24	34	48	76
SH-T1632L-48V	419	48	68	96	152
SH-T1632S-06V	6.5	6	8.5	12	19
SH-T1632S-12V	26.2	12	17	24	38
SH-T1632S-24V	104.7	24	34	48	76
SH-T1632S-48V	419	48	68	96	152

SH-T1939L PULL TYPE



Total Weight : 82 g

SH-T1939S PUSH TYPE

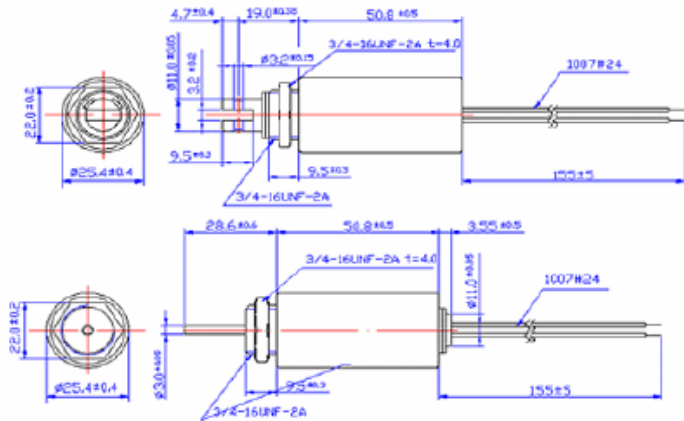


Total Weight : 81 g

COIL DATA

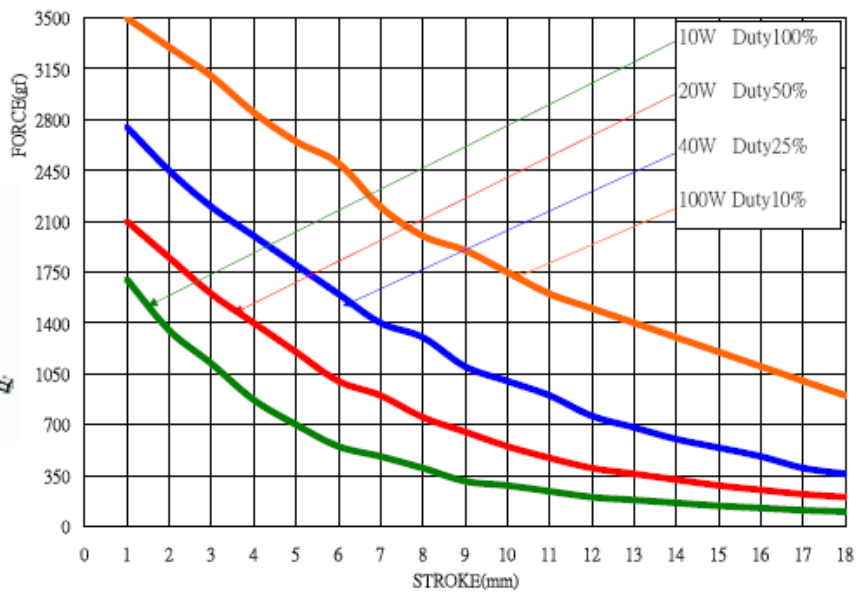
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		7	14	28	70
MAX. "ON" time in seconds		∞	230	25	6
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-T1939L-06V	5.14	6	8.5	12	19
SH-T1939L-12V	20.6	12	17	24	38
SH-T1939L-24V	82.3	24	34	48	76
SH-T1939L-48V	329	48	68	96	152
SH-T1939S-06V	5.14	6	8.5	12	19
SH-T1939S-12V	20.6	12	17	24	38
SH-T1939S-24V	82.3	24	34	48	76
SH-T1939S-48V	329	48	68	96	152

SH-T2551L PULL TYPE



Total Weight : 178 g

SH-T2551S PUSH TYPE

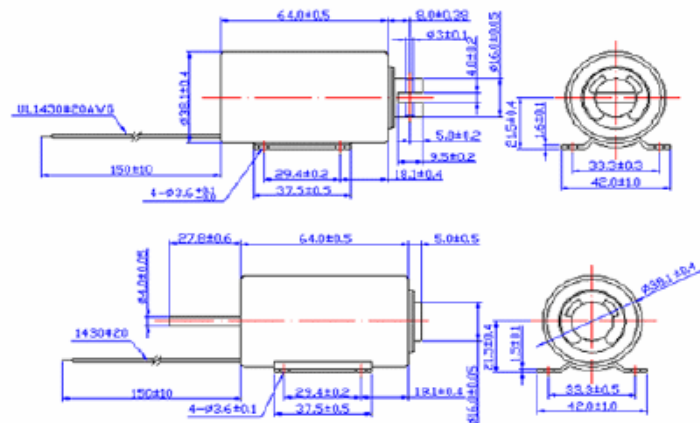
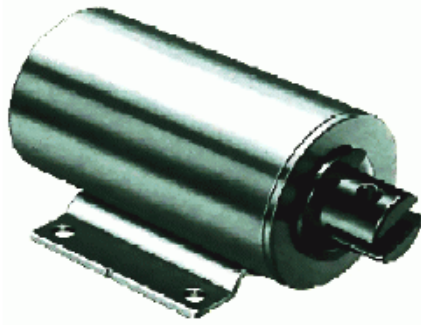


Total Weight : 178 g

COIL DATA

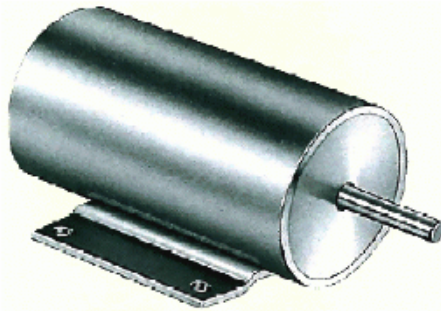
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	10	20	40	100
MAX. "ON" time in seconds		∞	360	32	8
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-T2551L-06V	3.6	6	8.5	12	19
SH-T2551L-12V	14.4	12	17	24	38
SH-T2551L-24V	57.6	24	34	48	76
SH-T2551L-48V	230.4	48	68	96	152
SH-T2551S-06V	3.6	6	8.5	12	19
SH-T2551S-12V	14.4	12	17	24	38
SH-T2551S-24V	57.6	24	34	48	76
SH-T2551S-48V	230.4	48	68	96	152

SH-T3864L PULL TYPE

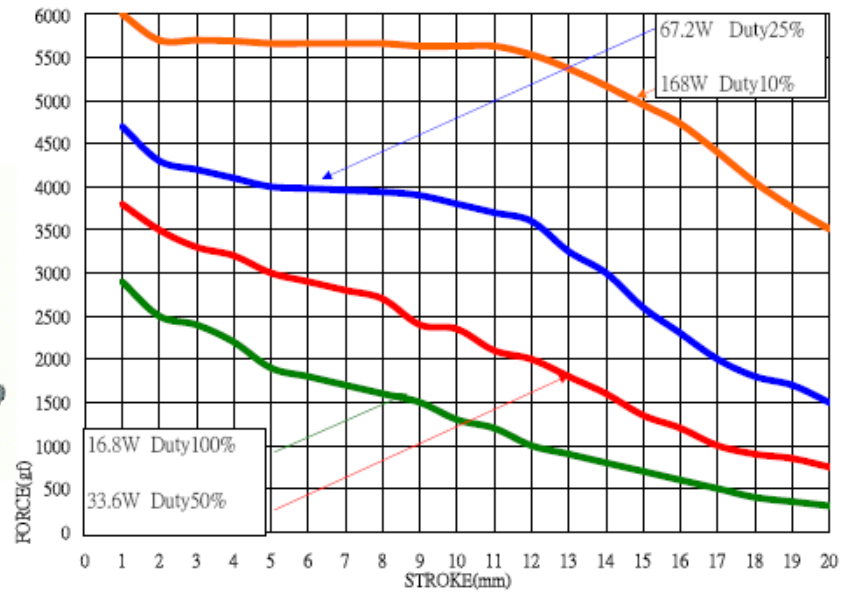


Total Weight : 497 g

SH-T3864S PUSH TYPE



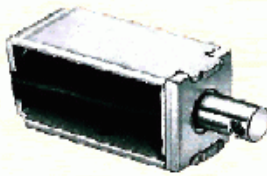
Total Weight : 497 g



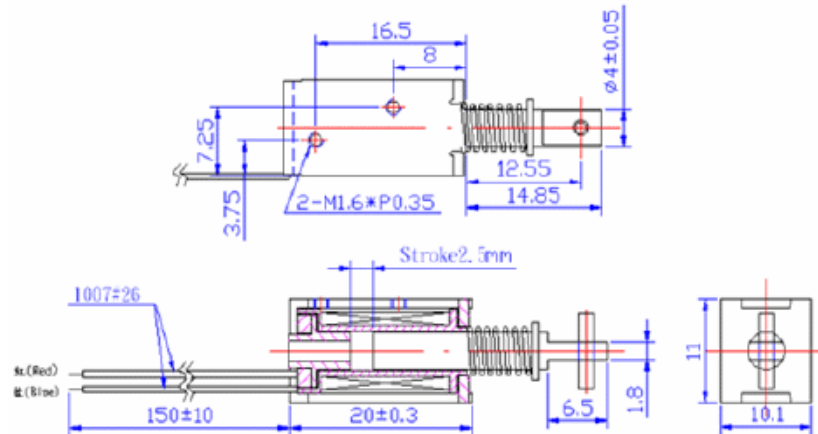
COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C	Watts at 20°C	16.8	33.6	67.2	168
MAX. "ON" time in seconds		∞	420	100	25
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-T3864L-06V	2.1	6	8.5	12	19
SH-T3864L-12V	8.5	12	17	24	38
SH-T3864L-24V	34	24	34	48	76
SH-T3864L-48V	136	48	68	96	152
SH-T3864S-06V	2.1	6	8.5	12	19
SH-T3864S-12V	8.5	12	17	24	38
SH-T3864S-24V	34	24	34	48	76
SH-T3864S-48V	136	48	68	96	152

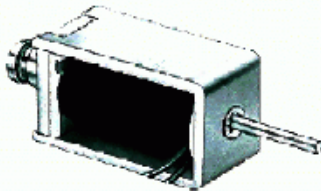
SH-K0420L PULL TYPE



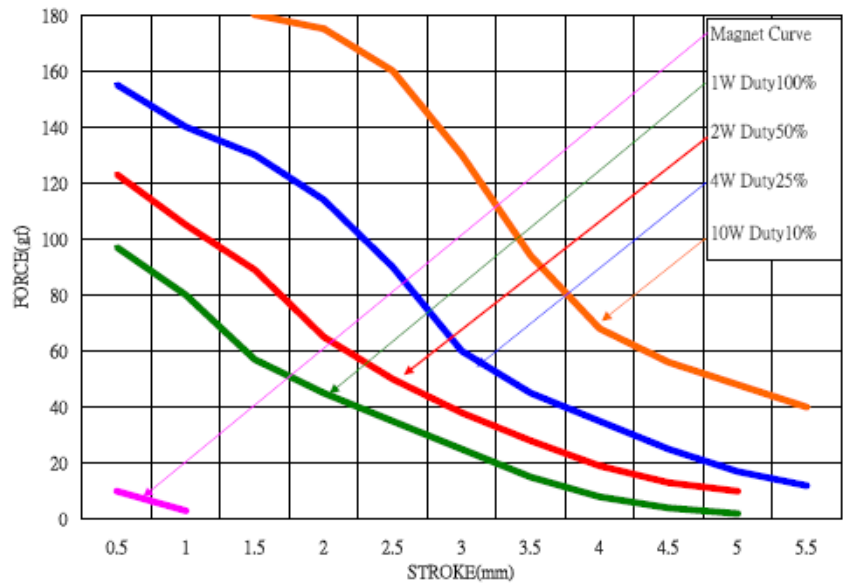
Total Weight : 10g



SH-K0420S PUSH TYPE



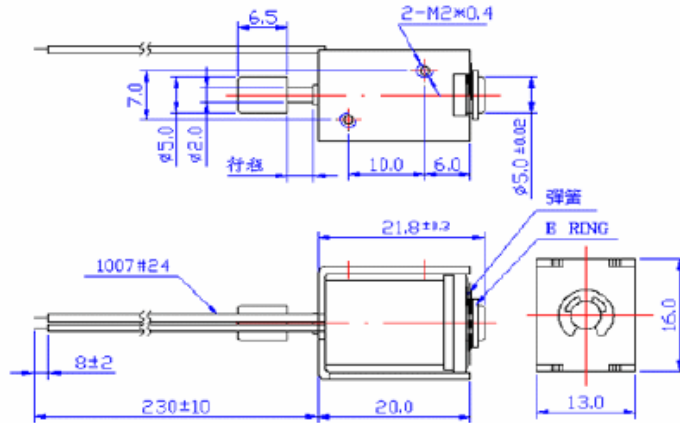
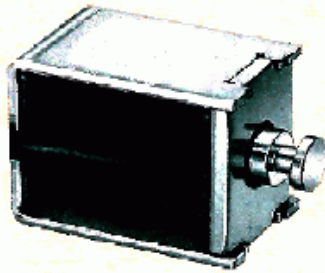
Total Weight : 10g



COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		1	2	4	10
MAX. "ON" time in seconds		∞	18	12	4
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-K0420L-06V	36	6	8.5	12	19
SH-K0420L-12V	144	12	17	24	38
SH-K0420L-24V	576	24	34	48	76
SH-K0420S-06V	36	6	8.5	12	19
SH-K0420S-12V	144	12	17	24	38
SH-K0420S-24V	576	24	34	48	76

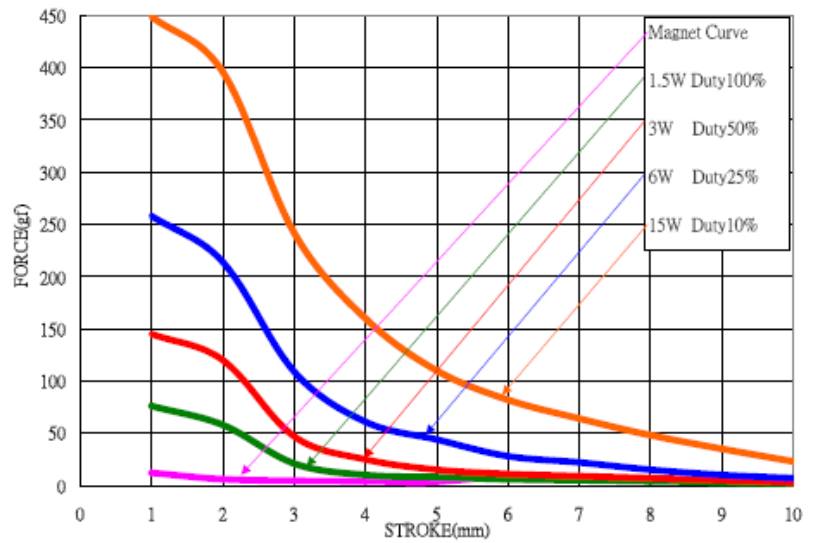
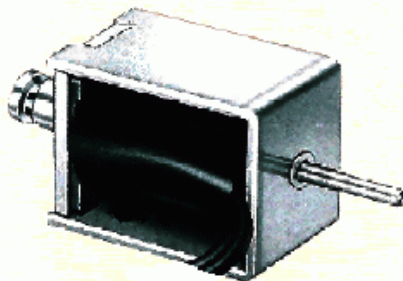
SH-K0520L PULL TYPE



Total Weight : 20g

保持力 Holding Force : 200 g

SH-K0520S PUSH TYPE

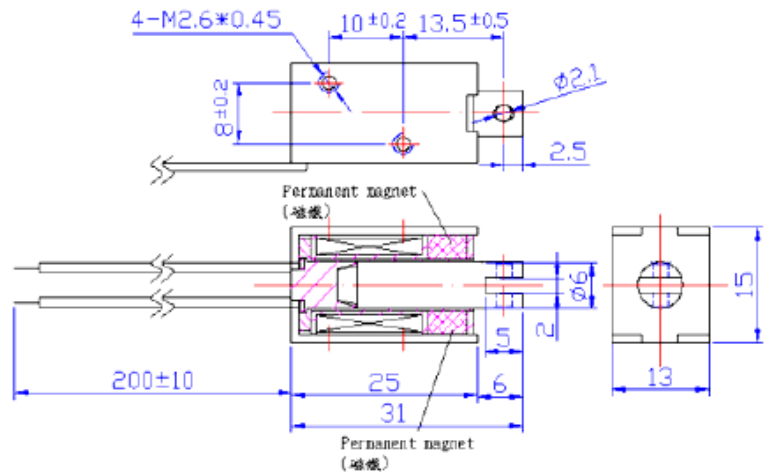
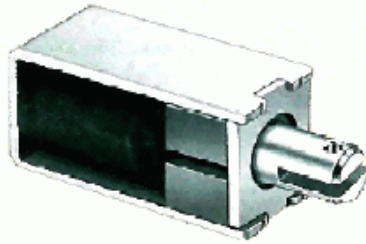


Total Weight : 20g

COIL DATA

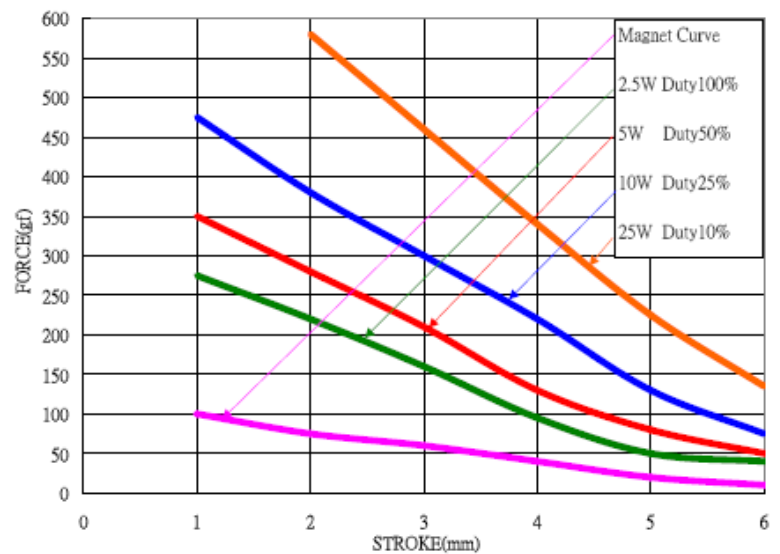
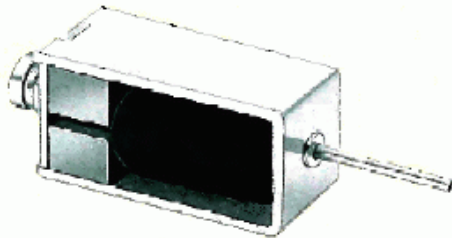
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		1.5	3	6	15
MAX. "ON" time in seconds		∞	18	12	4
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-K0520L-06V	12	4.2	6	8.5	13.4
SH-K0520L-12V	48	8.5	12	17	26.8
SH-K0520L-24V	192	17	24	34	53.6
SH-K0520L-48V	768	34	48	67.8	107.2
SH-K0520S-06V	12	4.2	6	8.5	13.4
SH-K0520S-12V	48	8.5	12	17	26.8
SH-K0520S-24V	192	17	24	34	53.6
SH-K0520S-48V	768	34	48	67.8	107.2

SH-K0625L PULL TYPE



Total Weight : 26g

SH-K0625S PUSH TYPE

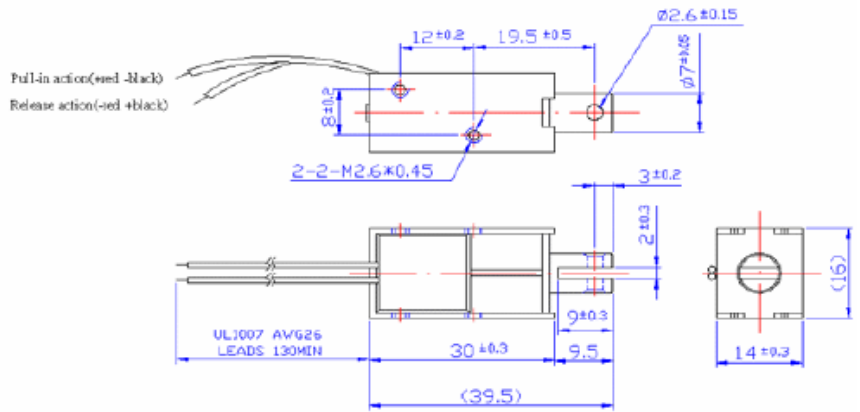
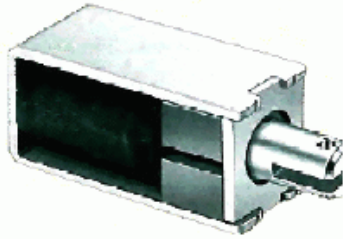


Total Weight : 26g

COIL DATA

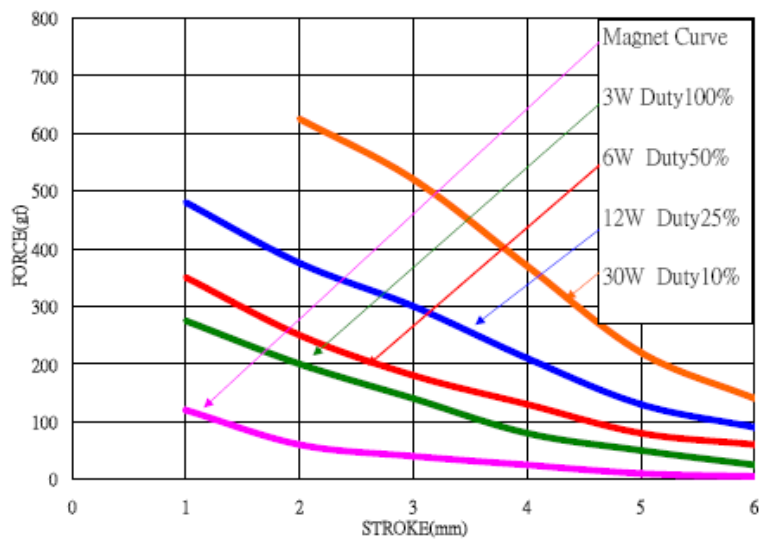
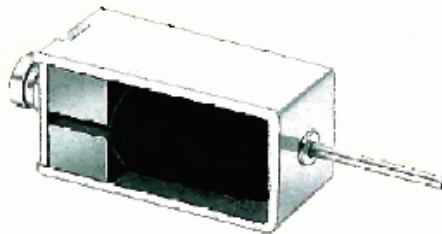
Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		2.5	5	10	25
MAX. "ON" time in seconds		∞	60	34	7
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-K0625L-06V	7.2	4.2	6	8.5	13.4
SH-K0625L-12V	28.8	8.5	12	17	26.8
SH-K0625L-24V	115	17	24	34	53.6
SH-K0625L-48V	460	34	48	67.8	107.2
SH-K0625S-06V	7.2	4.2	6	8.5	13.4
SH-K0625S-12V	28.8	8.5	12	17	26.8
SH-K0625S-24V	115	17	24	34	53.6
SH-K0625S-48V	460	34	48	67.8	107.2

SH-K0730L PULL TYPE



Total Weight : 35g

SH-K0730S PUSH TYPE

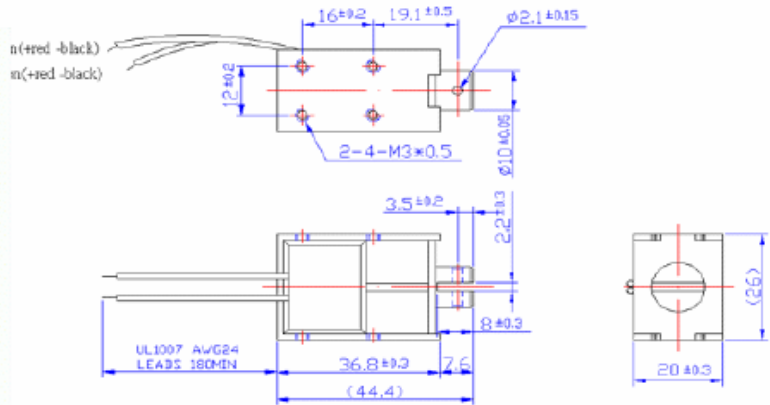
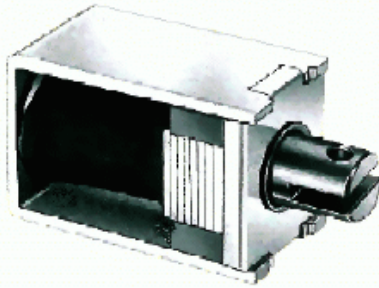


Total Weight : 35g

COIL DATA

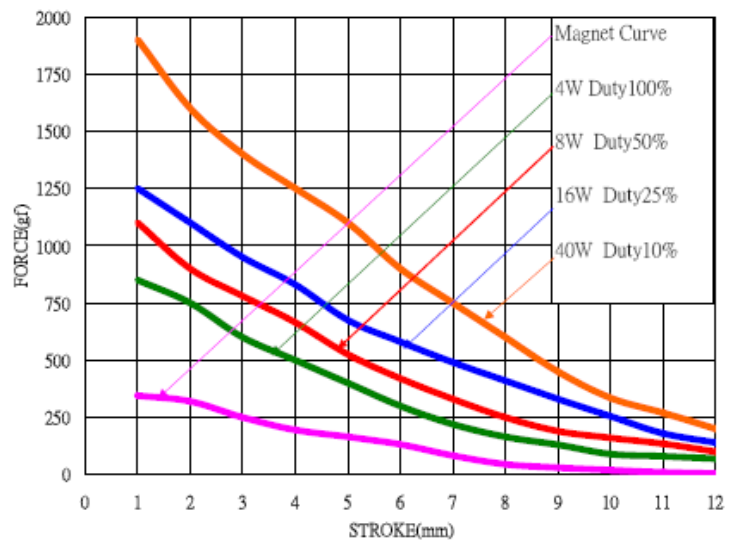
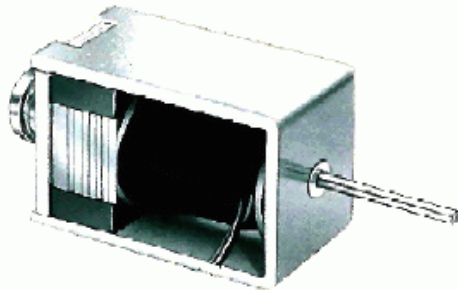
Duty cycle(%)=	"ON" time	X100%	Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
	"ON" time+"OFF" time					
20°C	Watts at 20°C		3	6	12	30
MAX. "ON" time in seconds			∞	50	25	8
Type no.	20°C Resistance(20°C)±10%		DC Volts			
SH-K0730L-06V	6		4.2	6	8.5	13.4
SH-K0730L-12V	24		8.5	12	17	26.8
SH-K0730L-24V	96		17	24	34	53.7
SH-K0730L-48V	384		34	48	67.9	107.3
SH-K0730S-06V	7.5		4.2	6	8.5	13.4
SH-K0730S-12V	30		8.5	12	17	26.8
SH-K0730S-24V	120		17	24	34	53.7
SH-K0730S-48V	480		34	48	67.9	107.3

SH-K1037L PULL TYPE



Total Weight : 95g

SH-K1037S PUSH TYPE

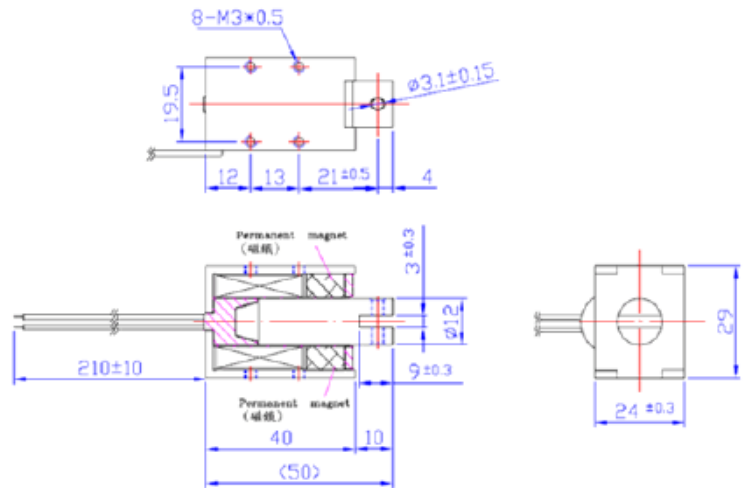
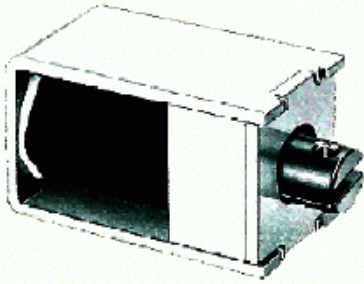


Total Weight : 95g

COIL DATA

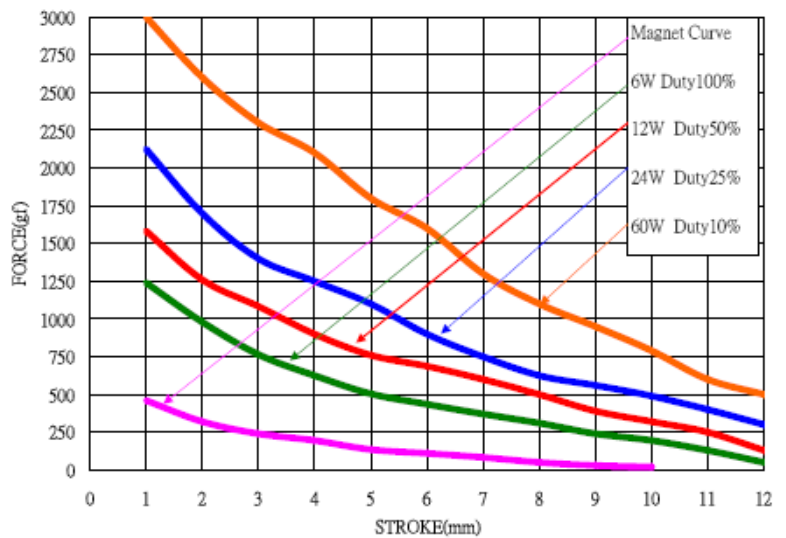
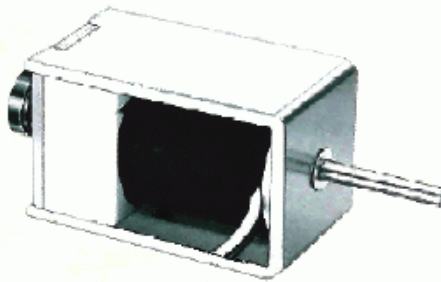
Duty cycle(%)=	"ON" time	X100%	Continuous	Intermittent	Intermittent	Intermittent
	"ON" time+"OFF" time		(100%)	(50%)	(25%)	(10%)
20°C	Watts at 20°C		4	8	16	40
	MAX. "ON" time in seconds		∞	160	90	30
Type no.	20°C Resistance(20°C)±10%		DC Volts			
SH-K1037L-06V	4.5		4.2	6	8.5	13.4
SH-K1037L-12V	18		8.5	12	17	26.8
SH-K1037L-24V	72		17	24	34	53.7
SH-K1037L-48V	288		34	48	67.9	107.3
SH-K1037S-06V	4.5		4.2	6	8.5	13.4
SH-K1037S-12V	18		8.5	12	17	26.8
SH-K1037S-24V	72		17	24	34	53.7
SH-K1037S-48V	288		34	48	67.9	107.3

SH-K1240L PULL TYPE



Total Weight : 145g

SH-K1240S PUSH TYPE

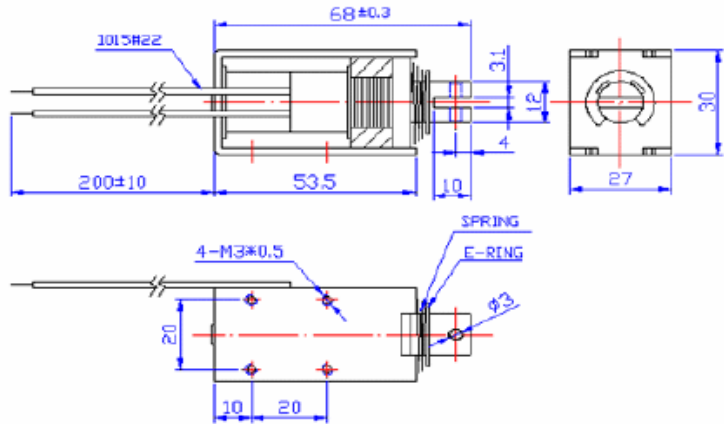
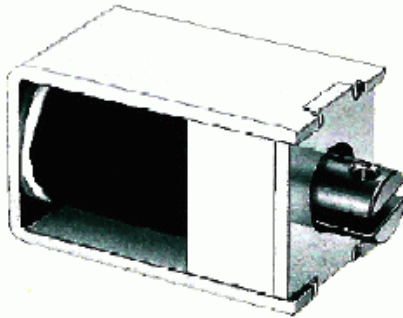


Total Weight : 145g

COIL DATA

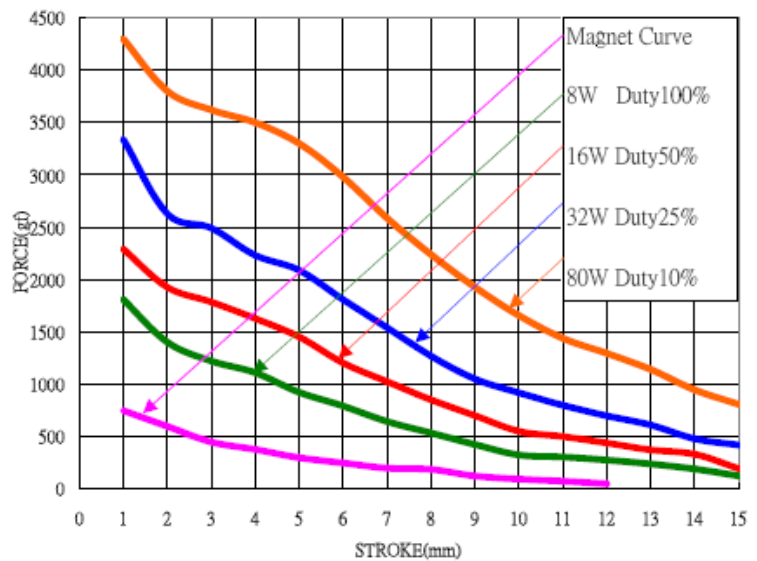
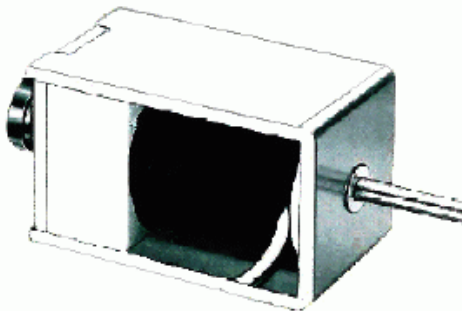
Duty cycle(%)=	"ON" time	X100%	Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
	"ON" time+"OFF" time					
20°C	Watts at 20°C		6	12	24	60
	MAX. "ON" time in seconds		∞	60	30	10
Type no.	20°C Resistance(20°C)±10%		DC Volts			
SH-K1240L-06V	3		4.2	6	8.5	13.4
SH-K1240L-12V	12		8.5	12	17	26.8
SH-K1240L-24V	48		17	24	33.9	53.7
SH-K1240L-48V	192		33.9	48	67.8	107.3
SH-K1240L-06V	3		4.2	6	8.5	13.4
SH-K1240L-12V	12		8.5	12	17	26.8
SH-K1240L-24V	48		17	24	33.9	53.7
SH-K1240L-48V	192		33.9	48	67.8	107.3

SH-K1253L PULL TYPE



Total Weight : 225g

SH-K1253S PUSH TYPE

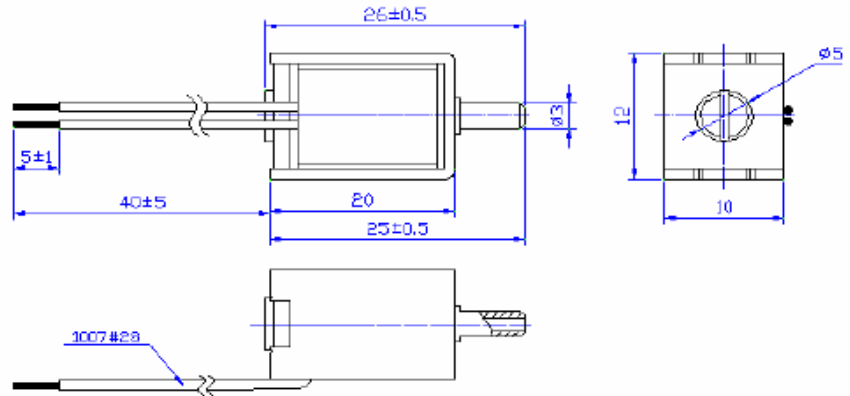


Total Weight : 225g

COIL DATA

Duty cycle(%)= $\frac{\text{"ON" time}}{\text{"ON" time} + \text{"OFF" time}} \times 100\%$		Continuous (100%)	Intermittent (50%)	Intermittent (25%)	Intermittent (10%)
20°C Watts at 20°C		8	16	32	80
MAX. "ON" time in seconds		∞	100	50	15
Type no.	20°C Resistance(20°C)±10%	DC Volts			
SH-K1253L-06V	4.5	6	8.5	12	19
SH-K1253L-12V	18	12	17	24	38
SH-K1253L-24V	72	24	33.9	48	75.9
SH-K1253L-48V	288	48	67.9	96	151.8
SH-K1253S-06V	4.5	6	8.5	12	19
SH-K1253S-12V	18	12	17	24	38
SH-K1253S-24V	72	24	33.9	48	75.9
SH-K1253S-48V	288	48	67.9	96	151.8

SH-V0520A



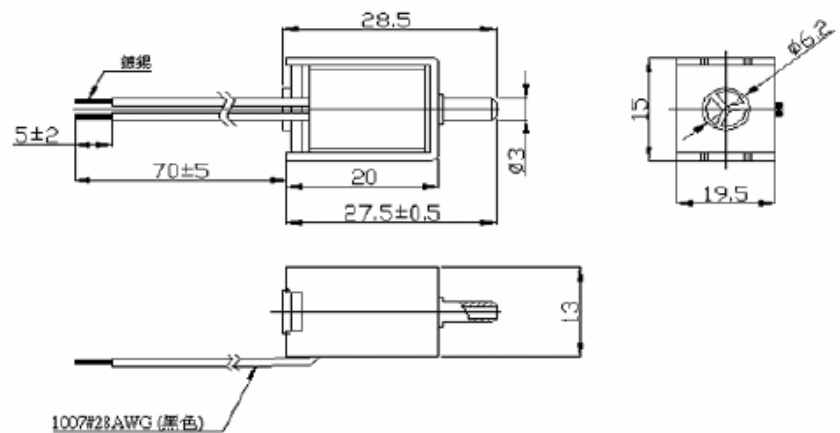
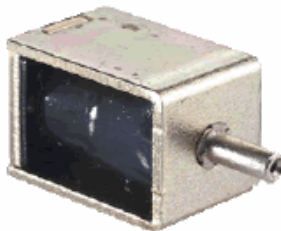
- Normal-Open solenoid valve
- Use Fluid : AIR
- Voltage : DC3.0V~12V
- Air Leakage : 2.5 sec. max. from 300 mmHg to 15 mmHg
- Pressure : MAX 300 mmHg
- Insulation Class : A
- DC3.0V~12V
- 2.5 sec. max. from 300 mmHg to 15 mmHg
- 300mmHg
- A



SH-V0520B

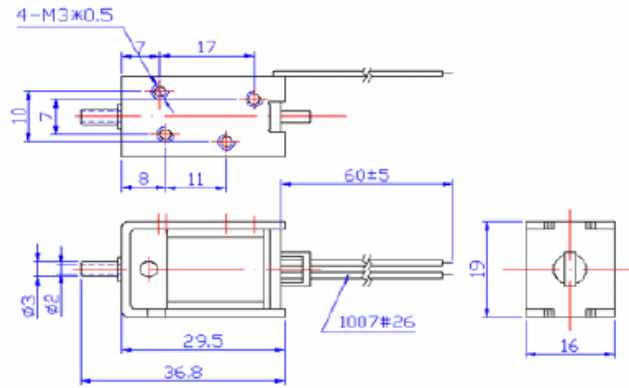
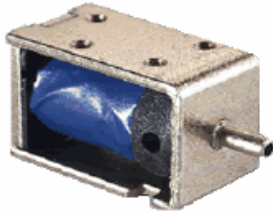
Solenoid Valve

SH-V0520B



- Normal-Open solenoid valve
- Use Fluid : AIR
- Voltage : DC3.0V~12V
- Air Leakage : 5.0 sec. max. from 300 mmHg to 15 mmHg
- Pressure : MAX 300 mmHg
- Insulation Class : A
- DC3.0V~12V
- 5.0 sec. max. from 300 mmHg to 15 mmHg
- 300mmHg
- A

SH-V0630



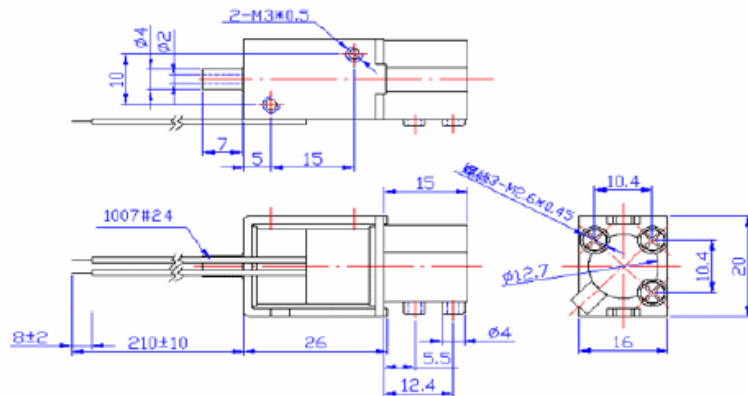
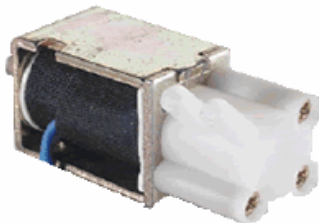
- Normal-Open solenoid valve
- Use Fluid : AIR
- Voltage : DC6.0V~24V
- Air Leakage : 10 sec. max. from 360 mmHg to 15 mmHg
- Pressure : MAX 360mmHg
- Insulation Class : A
- DC6.0V~24V
- 10 sec. max. from 360 mmHg to 15 mmHg
- 360mmHg
- A



SH-V0626

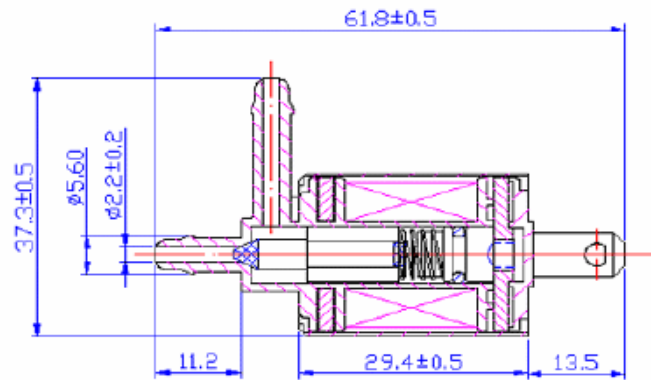
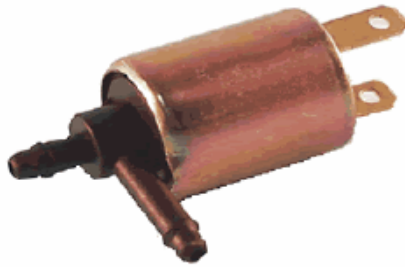
Solenoid Valve

SH-V0626



- Two plug & three electronic path
- Use Fluid : AIR
- Voltage : DC6.0V~24V
- Air Leakage : 15 sec. max. from 350 mmHg to 15 mmHg
- Pressure : MAX 380mmHg
- Insulation Class : A
- DC6.0V~24V
- 15 sec. max. from 350 mmHg to 15 mmHg
- 380mmHg
- A

SH-V0829



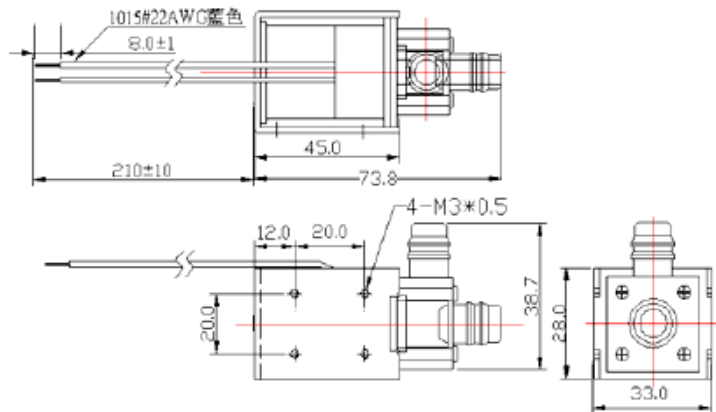
- Normal-close solenoid valve
- Use Fluid : AIR
- Voltage : DC12V
- Current : 100mA & 350mA
- Air Leakage : 1 c.c. max / min 220mmHg
- Pressure : MAX 7 PSI
- Insulation Class : A
- DC12V
- 100mA & 350mA
- 1 c.c. max / min 220mmHg
- 7 PSI
- A



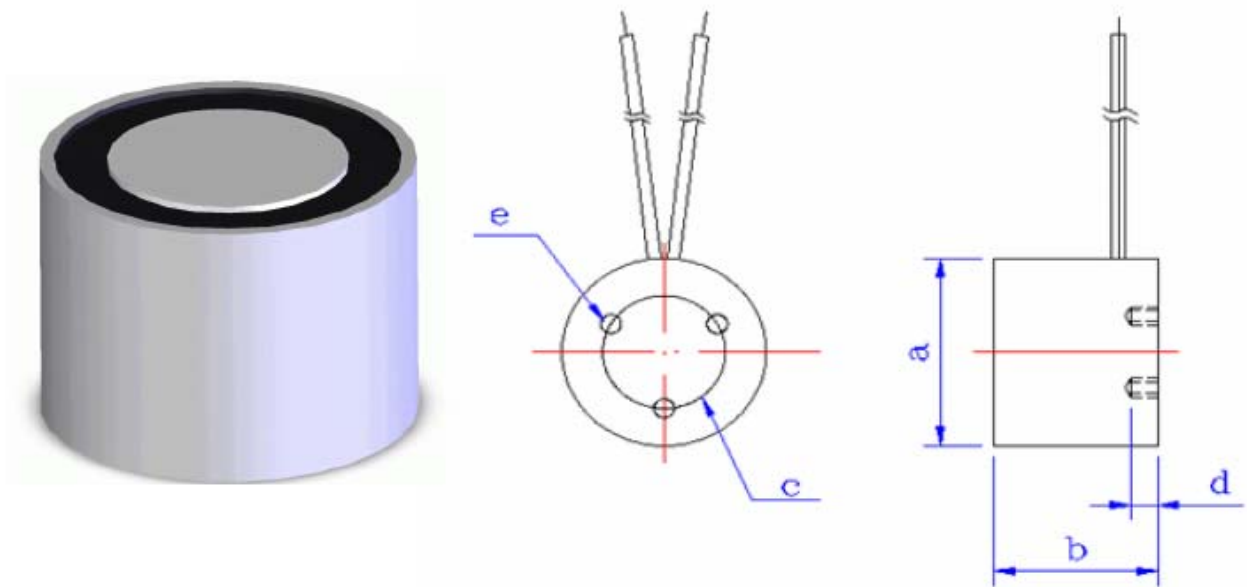
SH-V1245

Solenoid Valve

SH-V1245



- Two plug & three electronic path
- Use Fluid : AIR
- Voltage : DC6.0V~24V
- Air Leakage : 30 sec. max. from 260 mmHg to 15 mmHg
- Pressure : MAX 260mmHg
- Insulation Class : A
- DC6.0V~24V
- 30 sec. max. from 350 mmHg to 15 mmHg
- 260mmHg
- A



- Insulation Class B(max permissible temperature 130°)
- Hi-pot Test 600V r.m.s.
- Duty Cycle 100% ED

Type No.	Dimensions and Weight						Technical Date	
	a	b	c	d	e	weight	Nominal Rating	Holding Force
	mm						g	w
SH-ET2015	20	15	10	3	M3	25	2.0	2
SH-ET2520	25	20	18.5	3	M3	50	4.0	6
SH-ET3025	30	25	22.8	5	M3	130	3.8	20
SH-ET4027	40	27	26	6	M5	230	6.0	40
SH-ET5030	50	30	34	5	M4	350	8.0	60
SH-ET5537	55	37	34	5	M4	550	10	80
SH-ET7040	70	40	56	8	M4	800	24	150