



Main Feature

1. EMF Series Relays are designed for switching capacity by 25A to comply with industrial control system use.
2. Compatible fasten terminal arrangement with this kind of power relay.
3. Simple magnetic circuit to meet mass production for low cost offer.
4. Standard type contact form SPST are available for customer's selection.
5. Operating ambient temperature range covers from -40°C to 105°C.
6. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EMF (DM)	EMF (DB)
Rated Load (Resistive)	UL:25A 250VAC	VDE:16A 250VAC
	VDE:18A 250VAC	
	UL:25A 30VDC	UL:25A 30VDC
Rated Carrying Current	25A	25A
Max. Allowable Voltage	AC 250V	AC 250V
	DC 30V	DC 30V
Max. Allowable Current	25A	25A
Max. Allowable Power Force	6,250VA	4000VA
	750W	750W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

Application

General Control
Home Appliance

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 8 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Insulation Resistance 100MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.

- Temperature Range -40~105°C.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 35°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5 mm
 - Error Operation 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation 100 m/S².
- Life Expectancy:
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - Mechanical 10⁷ Operations at No load condition.
- Weight About 14 g.

Safety Standard & Its File Number

- UL & C-UL E141060
- VDE 40009648

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage(VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
EMF	3	133	22.5	Abt. 0.4	70% Maximum	DM:10% DB:5% Minimum	130%
	5	79	63				
	6	67	90				
	9	44	203				
	12	33	360				
	15	26	563				
	18	22	810				
	24	17	1,440				
	48	8	5,760				
	60	7	9,000				

Ordering Information

EMF - SH - 1 03 D M H

Terminal Type:

H: Horizontally Bring Terminal

V: Vertical Bring Terminal

Contact Material:

M: One Form A

B: One Form B

Coil Type:

D: Standard DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 18: 18V, 24: 24V, 48: 48V, 60: 60V

Number of Pole:

1: One Pole

Type of Sealing:

SS: Flow Solder Type

SH: Plastic Sealed Type

Type:

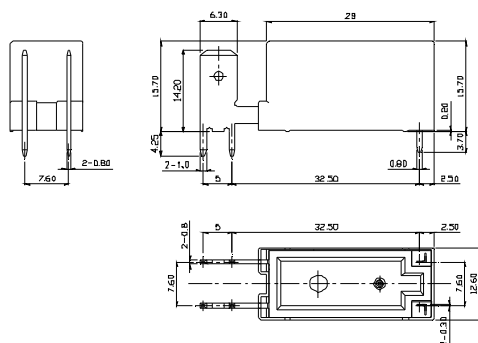
EMF

Classification

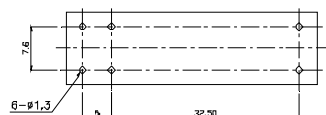
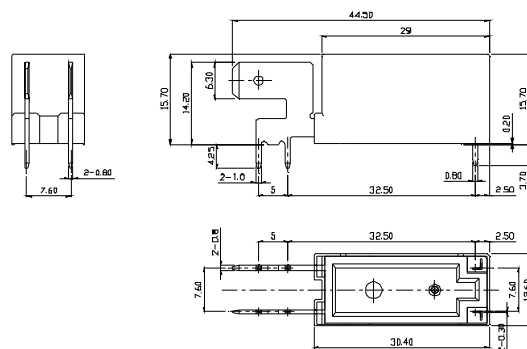
Model	EMF	
Coil Sensitivity	Standard DC Coil	
Contact Form	1A	1B
Flow Solder Type	EMF-SS-1□□DM□	EMF-SS-1□□DB□
Plastic Sealed Type	EMF-SH-1□□DM□	EMF-SH-1□□DB□

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

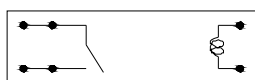
EMF-SS/SH-V



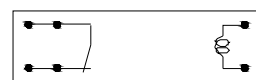
EMF-SS/SH-H



P.C.B. Layout

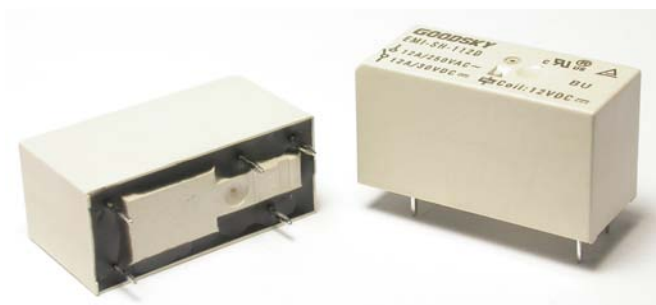


(1A)



(1B)

BOTTOM VIEW



Main Feature

1. EMI-1P Series Relays are designed for switching capacity by 12A to comply with industrial control system use.
2. Slim type and low profile (29.0 x 12.6 x 15.6) is developed to provide end users with more flexibility in PC Board design.
3. Low power consumption and both AC and DC coil available.
4. Proper insulation distance is equipped to ensure EMI will has a 5000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy resin sealed type is available for washing procedure.
6. Halogen free.
7. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EMI-1P (DM/DB)	EMI-1P (D)	EMI-1P (AM/AB)	EMI-1P (A)
Rated Load (Resistive)	12A 250VAC	12A 250VAC	12A 250VAC	12A 250VAC
	12A 30VDC	12A 30VDC	12A 30VDC	12A 30VDC
Rated Carrying Current	12A	12A	12A	12A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 300V	DC: 300V	DC: 300V	DC: 300V
Max. Allowable Current	12A	12A	12A	12A
Max. Allowable Power Force	3,000VA	3,000VA	3,000VA	3,000VA
	360W	360W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

Application

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment, etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 8 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Strength 100MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -40~85 °C.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 30 °C Max.

- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5 mm
 - Error Operation 10 to 55 Hz dual amplitude width 1.5 mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation 100 m/S².
- Life Expectancy:
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - Mechanical 10⁷ Operations at No load condition.
- Weight About 12.5 g.

Accessories & Sockets

- PI-35BE See Page 177
- PI-35BE/3 See Page 177
- PI-35-0 See Page 179

Safety Standard & Its File Number

- UL & C-UL E141060
- TÜV R3-50006688
- VDE 40009648
- CQC 02001002511

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)		Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (DC:W;AC:VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ		50HZ	60HZ			
EMI DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202					
	12	33.3		360					
	15	26.6		560					
	18	22.3		810					
	24	16.7		1,440					
	48	8.7		5,520					
	60	8.2		7,340					
EMI AC Coil	110	4.1		26,530					
	24	29.75	25.35	350	0.71	0.61	30% Minimum		
	115	7.65	6.3	8,100	0.88	0.73			
	230	3.42	2.72	32,500	0.79	0.63			

Ordering Information

EMI - SS - 1 12 D M - G

Contact Material

Nil: AgNi
G: AgNi Gilded
O: AgNi Plated
N: AgSnO₂
S: AgSnO₂ Gilded
C: AgCdO

Contact Form:

Nil: One Form C
M: One Form A
B: One Form B

Coil Type:

D: DC Coil
A: AC Coil

Coil Voltage:

VDC (06:6V, 09:9V, 12:12V, 15:15V, 18:18V, 24:24V, 48:48V, 60:60V, 110:110V)
VAC (24: 24V, 115: 115V, 230: 230V)

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

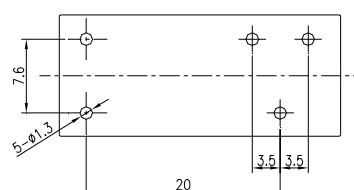
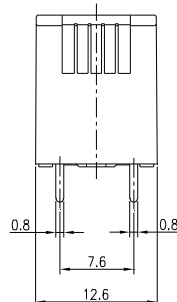
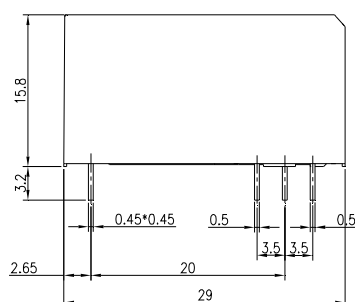
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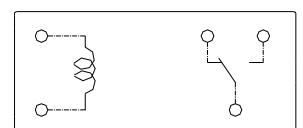
Classification

Model	EMI - 1P					
Coil Sensitivity	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	EMI-SS-1□□□D	EMI-SS-1□□□DM	EMI-SS-1□□□DB	EMI-SS-1□□□A	EMI-SS-1□□□AM	EMI-SS-1□□□AB
Wash Tight Relay	EMI-SH-1□□□D	EMI-SH-1□□□DM	EMI-SH-1□□□DB	EMI-SH-1□□□A	EMI-SH-1□□□AM	EMI-SH-1□□□AB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

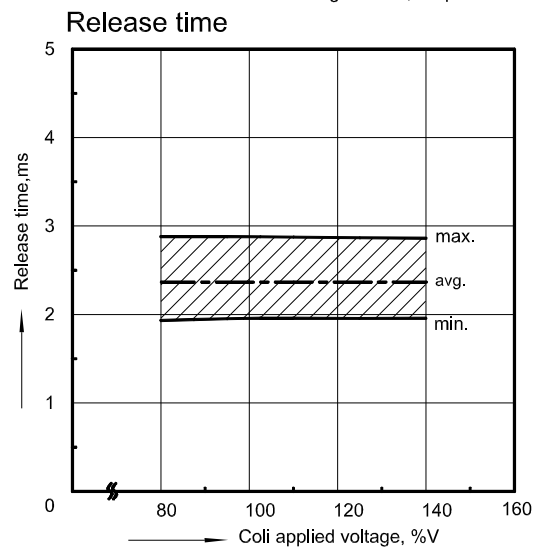
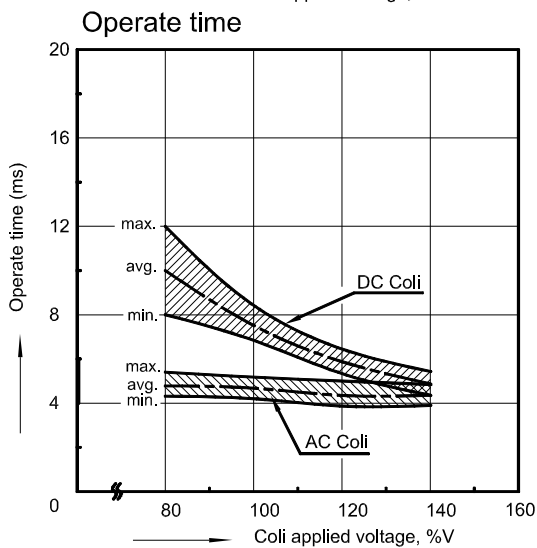
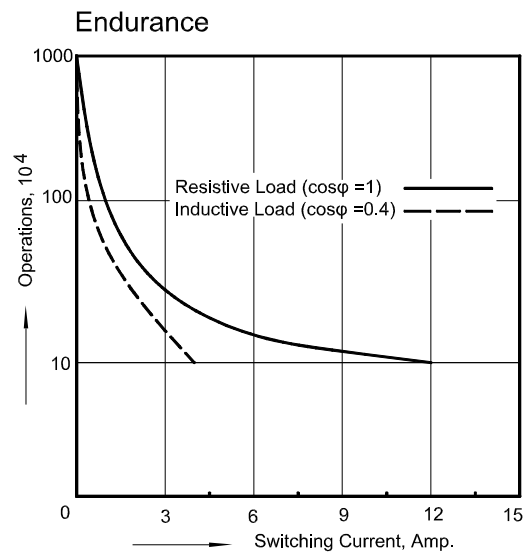
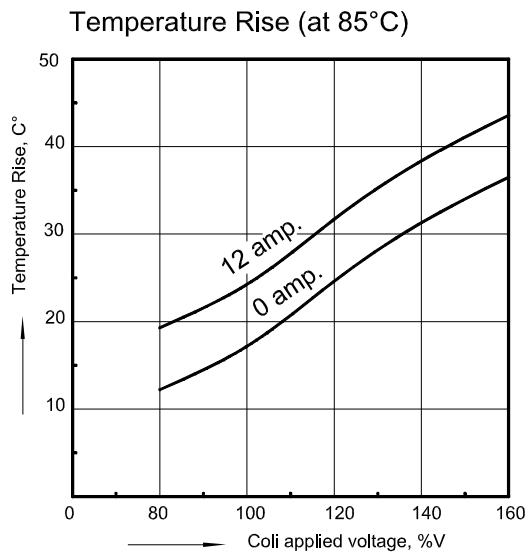


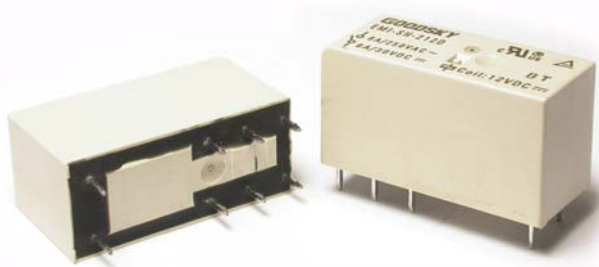
P.C.B. Layout



Bottom View

Reference Data





Main Feature

1. EMI-2P Series Relays are designed for switching capacity by 8A to comply with industrial control system use.
2. Slim type and low profile (29.0 x 12.6 x 15.6) is developed to provide end users with more flexibility in PC Board design.
3. Low power consumption and both AC and DC coil available.
4. Proper insulation distance is equipped to ensure EMI will has a 5000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy resin sealed type is available for washing procedure.
6. Halogen free.
7. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EMI (DM/DB)	EMI (D)	EMI (AM/AB)	EMI (A)
Rated Load (Resistive)	8A 250VAC	8A 250VAC	8A 250VAC	8A 250VAC
	8A 30VDC	8A 30VDC	8A 30VDC	8A 30VDC
Rated Carrying Current	8A	8A	8A	8A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC:300V	DC:300V	DC:300V	DC:300V
Max. Allowable Current	8A	8A	8A	8A
Max. Allowable Power Force	2,000VA	2,000VA	2,000VA	2,000VA
	240W	240W	240W	240W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	DPST	DPDT	DPST	DPDT

Max Allowable Voltage: 300VDC@0.2A

Application

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 8 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength: 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100MΩ Min at 500VDC.
- Max. On/Off Switching:
 - Electrical 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -40~85 °C.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 30 °C Max.

- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5 mm.
 - Error Operation 10 to 55 Hz dual amplitude width 1.5 mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation 100 m/S².
- Life Expectancy:
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - Mechanical 10⁷ Operations at No load condition.
- Weight About 12.5 g.

Accessories & Sockets

- PI-50BE See Page 177
- PI-50BE/3 See Page 177
- PI-50-0 See Page 179

Safety Standard & Its File Number

- UL & C-UL E141060
- TÜV R-3-5000895
- VDE 40009648
- CQC 02001002512

EMI-2P

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)		Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (DC:W;AC:VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ		50HZ	60HZ			
EMI DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202					
	12	33.3		360					
	15	26.6		560					
	18	22.3		810					
	24	16.7		1,440					
	48	8.7		5,520					
	60	8.2		7,340					
	110	4.1		26,530					
EMI AC Coil	24	29.75	25.35	350	0.71	0.61	30% Minimum		
	115	7.65	6.3	8,100	0.88	0.73			
	230	3.42	2.72	32,500	0.79	0.63			

Ordering Information

EMI - SS - 2 12 D M - G

Contact Material

Nil: AgNi
G: AgNi Gilded
O: AgNi Plated
N: AgSnO₂
S: AgSnO₂ Gilded
C: AgCdO

Contact Form:

Nil: Form C

M: Form A

B: Form B

Coil Type:

D: DC Coil

A: AC Coil

Coil Voltage: VDC (06: 6V, 09: 9V, 12: 12V, 15: 15V, 18: 18V, 24: 24V, 48: 48V, 60: 60V, 110: 110V)
VAC (24: 24V, 115: 115V, 230: 230V)

Number of Pole:

2: Two Poles

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

Type:

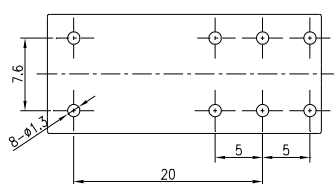
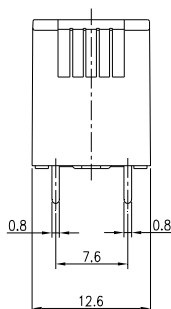
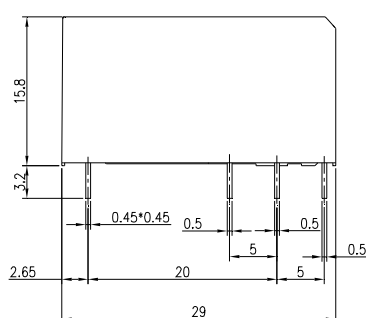
EMI

Classification

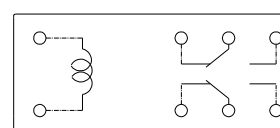
Model	EMI - 2P					
Coil Sensitivity	DC Coil			AC Coil		
Contact Form	2C	2A	2B	2C	2A	2B
Flux Proofed Relay	EMI-SS-2□□□D	EMI-SS-2□□□DM	EMI-SS-2□□□DB	EMI-SS-2□□□A	EMI-SS-2□□□AM	EMI-SS-2□□□AB
Wash Tight Relay	EMI-SH-2□□□D	EMI-SH-2□□□DM	EMI-SH-2□□□DB	EMI-SH-2□□□A	EMI-SH-2□□□AM	EMI-SH-2□□□AB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

EMI-2P-SS/SH

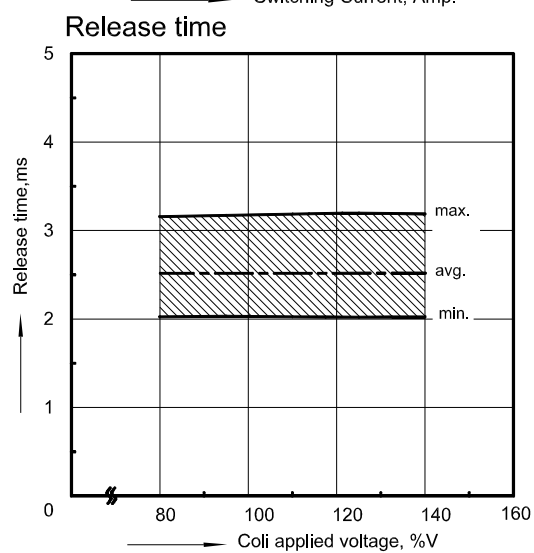
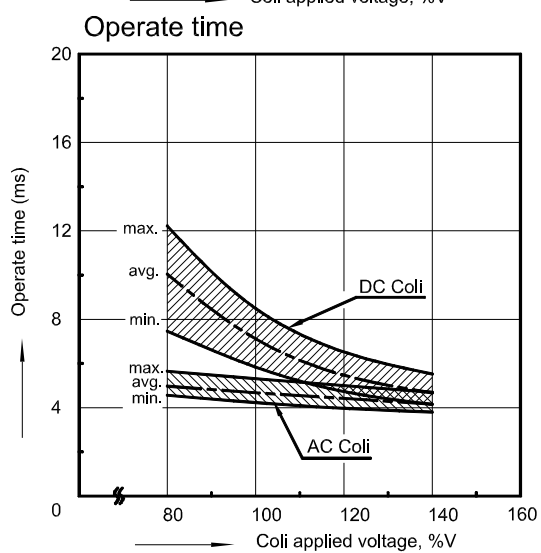
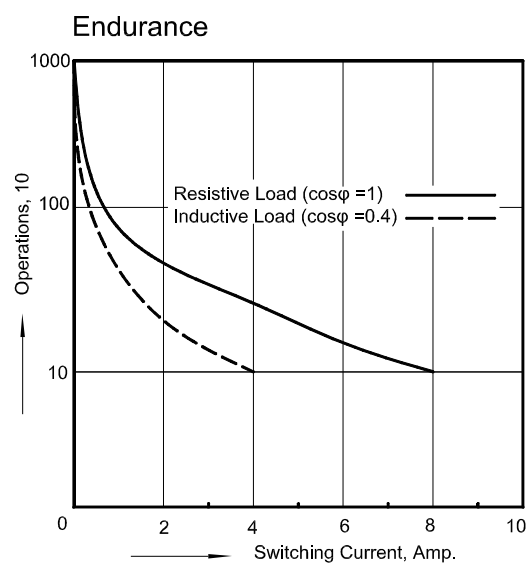
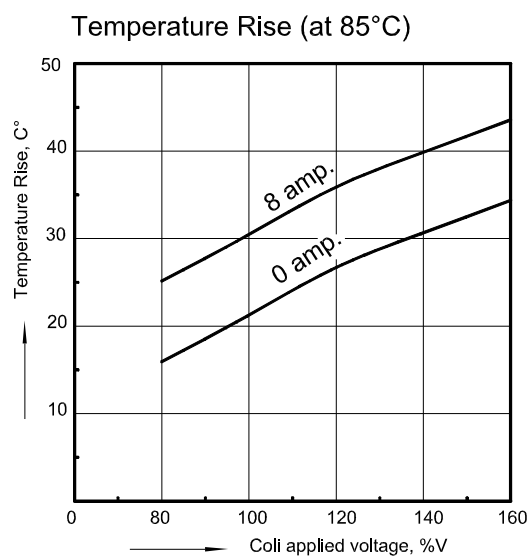


P.C.B. Layout



Bottom View

Reference Data





Main Feature

1. EML Series Relays are designed for switching capacity by 16A to comply with industrial control system use.
2. Slim type and low profile (29.0 x 12.6x 15.7mm) is developed to provide end users with more flexibility in PC Board design.
3. 1 N/O contact with a tungsten pre-make contact.
4. Proper insulation distance is equipped to ensure EML will have a 5,000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy
6. 1 pole 16 A, 1 NO contact (W pre-make contact + AgSnO₂). 165 A / 20 ms inrush peak current.

Contact Rating

Load Type	EML (DM)
Rated Load (Resistive)	16A 250VAC
Rated Carrying Current	16A
Max. Allowable Voltage	AC 400V
Max. Allowable Current	16A
Max. Allowable Power Force	4000VA
Contact Material	R: Ag Alloy, L: W
Contact Capacity	Tungsten Load : 3000W/230VAC
	inrush peak current(20ms):165A
	16A.250VAC,capacitive load 140 μf
	TV-5 120VAC
Contact Form	SPST

Application

Lamp Control, Audio Equipment, Domestic Appliance and Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Contact Rating(resistive load)
- Operate Time 8 mSec. Max.
- Release Time 3 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60Hz for one minute.
 - Between Contacts 1,000VAC at 50/60Hz for one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50uSec.)
- Insulation Resistance 100MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Vibration:
 - Endurance 10 to 55Hz dual amplitude width 1.5mm.
 - Error Operation.....10 to 55Hz dual amplitude width 1.5mm.

- Humidity Range 45~85% RH.
- Temperature Range.....-45~85℃.
- Coil Temperature Rise 45℃ Max.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy:
 - Electrical 5x10⁴Operations at Rated Resistive Load.
 - 1.2x10⁴ Operations at Tungsten Load.
 - Mechanical..... 5x10⁶ Operations at No Load condition.
- Contact Material..... Ag Alloy,W.
- Weight About 12.5 g.

Accessories & Sockets

- PI-50BE See Page 177
- PI-50BE/3 See Page 177
- PI-50-0 See Page 179

Safety Standard & Its File Number

- In Progress.

Coil Specification (at 20℃)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
EML DC Coil	3	130	23	Abt. 0.40	70% Maximum	10% Minimum	130%
	5	80	63				
	6	67	90				
	9	44	203				
	12	33	360				
	15	27	563				
	18	22	810				
	24	17	1440				
	48	8	5760				
	60	7	9000				

Ordering Information

EML - SH - 1 12 D M

Capacity Type: NIL: 16A

Contact Form: M: One Form A

Coil Type: D: Standard DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V,

15: 15V, 18: 18V, 24: 24V, 48: 48V, 60: 60V

Number of Pole: 1: One Pole

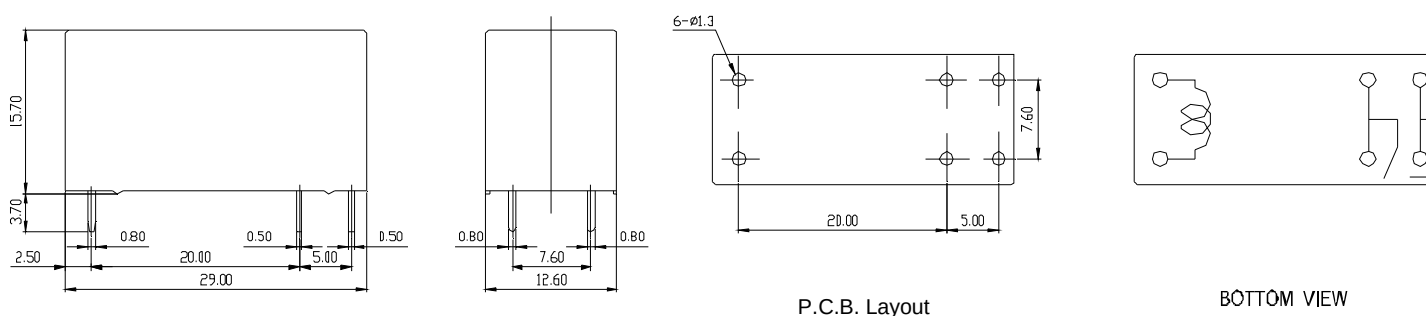
Type of Sealing: SS: RT II Flux Proofed Relays

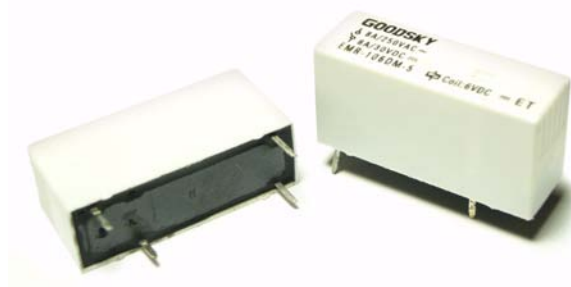
SH: RT III Wash Tight Relays

Type: EML

Classification

Model	EML
Coil Sensitivity	DC Coil
Contact Form	1A
Flow Solder Type	EML-SS-1□□DM
Plastic Sealed Typ	EML-SH-1□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



Main Feature

1. 1 C/O & N/O & 1N/C Contact.
2. 4KV / 8 mm coil-contact.
3. Pinning: 3.2 and 5.0 mm
4. Especially suitable for resistive and inductive loads on N/O and N/C contacts.
5. Class-F (155°C).
6. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EMR (D-3)	EMR (DM-5)	EMR (DB-5)
Rated Load (Resistive)	8A 250 VAC	8A 250 VAC	8A 250 VAC
	5A 30 VDC	5A 30 VDC	5A 30 VDC
Contact capacity	2 FLA/12 LRA 250 VAC	2 FLA/12 LRA 250 VAC	-
	1/8 HP 250 VAC	1/8 HP 250 VAC	-
	Pilot Duty C300	Pilot Duty C300	-
Max. Allowable Voltage	AC 380V	AC 380V	AC 380V
	DC120V	DC120V	DC120V
Max. Allowable Current	8A	8A	8A
Max. Allowable Power Force	2,000VA	2,000VA	2,000VA
	150W	150W	150W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPDT

Application

Heating Control, Interface Technology, Domestic Appliances , and Timer, Temperature Control.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 4 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 10,000V (between coil & Contact 1.2×50μSec.)
- Insulation Resistance 1,000MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -40~85°C.
- Humidity Range 45~85% RH.

- Coil Temperature Rise 40°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5 mm
 - Error Operation 10 to 55 Hz dual amplitude width 1.5 mm
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation 100 m/S².
- Life Expectancy:
 - Electrical 10⁵ Operations at Rated Resistive Load. (tested with flow solder type relay)
 - Mechanical 10⁷ Operations at No load condition.
- Weight About 11.0 g.

Safety Standard & Its File Number

- UL & C-UL E141060
- VDE 40016958

Coil Specification (at 20℃)

Coil Sensitivity	Nominal Voltage(VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
EMR	3	73	41	Abt. 0.22	EMR-D-3 80%Max EMR-DM(B)-5 75%Max	5% Minimum	135%
	5	44.2	113				
	6	36.6	164				
	9	24.4	368				
	12	18.3	650				
	18	12.2	1,475				
	24	9.2	2,620				
	48	5.2	9,210				
	60	3.7	16,364				

Ordering Information

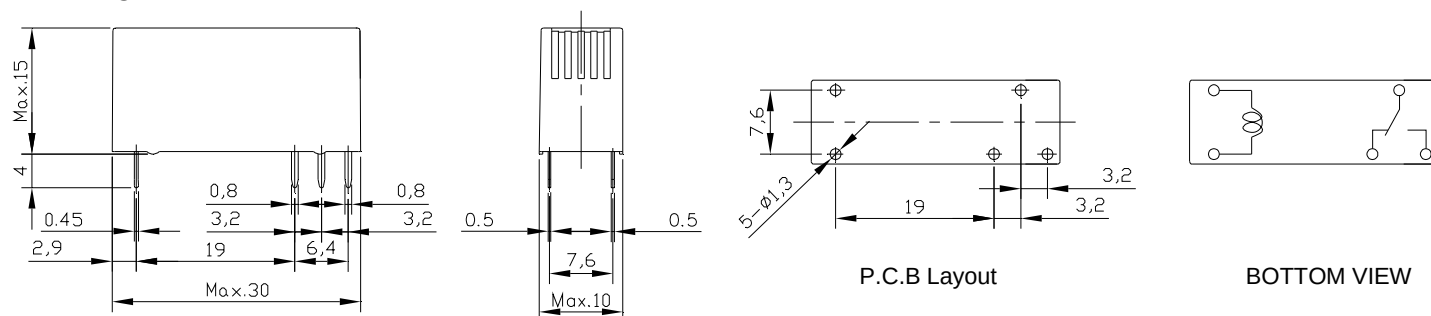
EMR	- 1	12	D	M	- 3	G	
							Contact Material: Nil: AgNi G: AgNi, Gilded O: AgNi, Au Plated N: AgSnO ₂ S: AgSnO ₂ , Gilded C: AgCdO
							Pinning Dimension: 3: Pinning 3.2mm 5: Pinning 5.0mm
							Contact From: Nil: One From C M: One From A B: One From B(Pinning 3.2mm)
							Coil Type: D: Standard DC Coil
							Coil Voltage: 05: 5V, 06: 6V, 09: 9V, 12: 12V, 18: 18V, 24: 24V, 48: 48V, 60: 60V
							Number of Pole: 1: One Pole
							Type: EMR

Classification

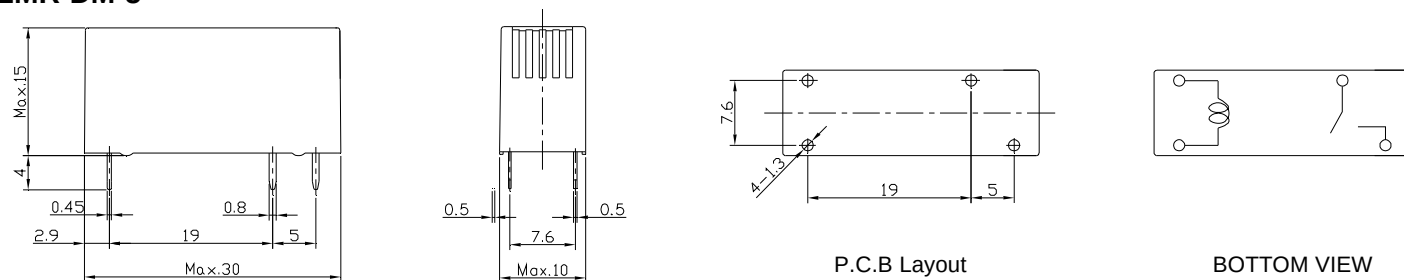
Model	EMR		
Coil Sensitivity	Standard DC Coil		
Contact Form	1C	1A	1B
Wash Tight Relay	EMR-1□□D-3□	EMR-1□□DM-5□	EMR-1□□DB-5□

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

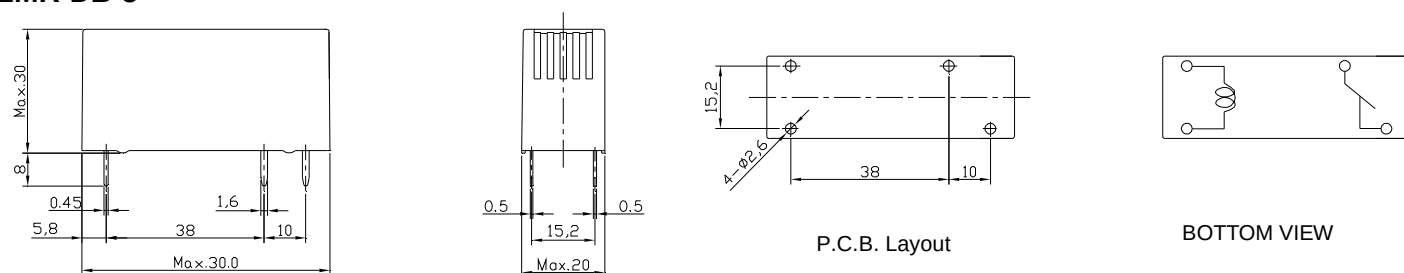
EMR-D-3



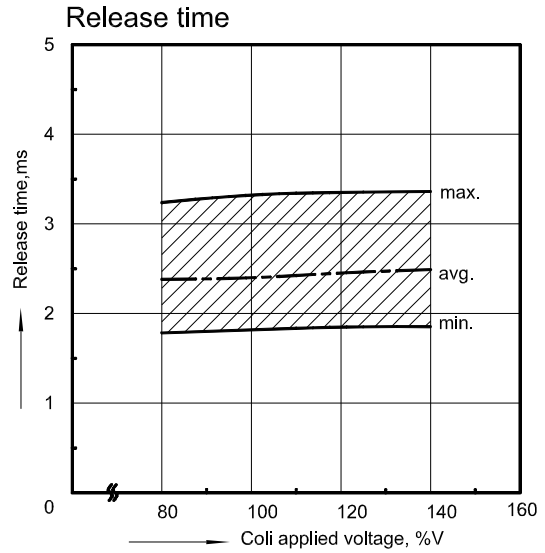
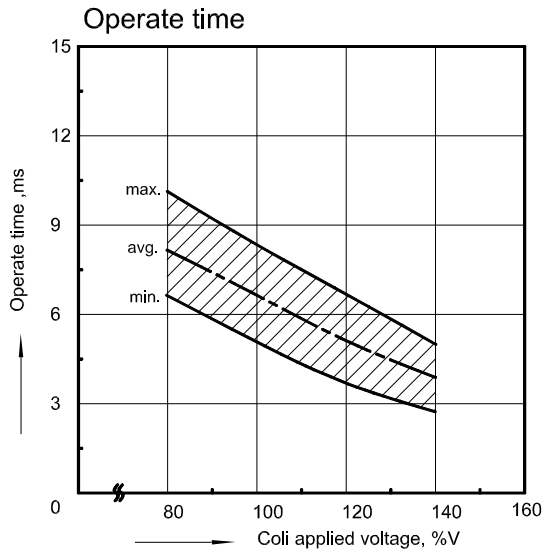
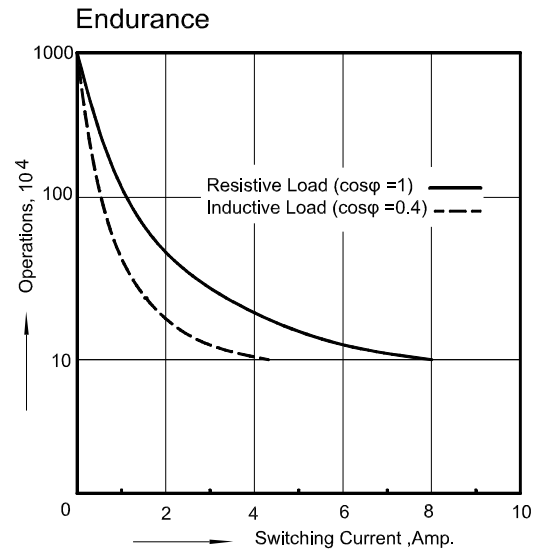
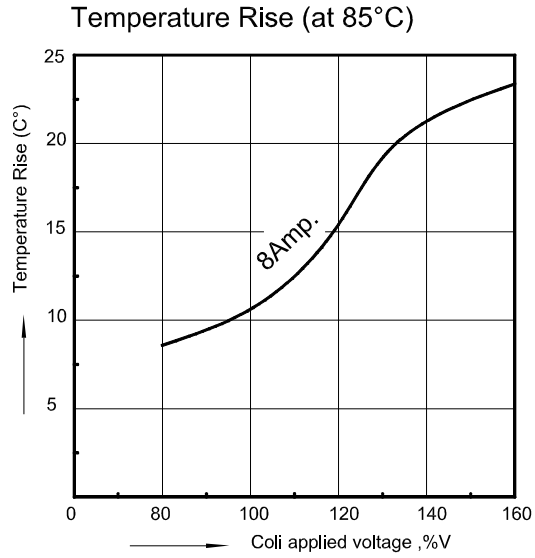
EMR-DM-5

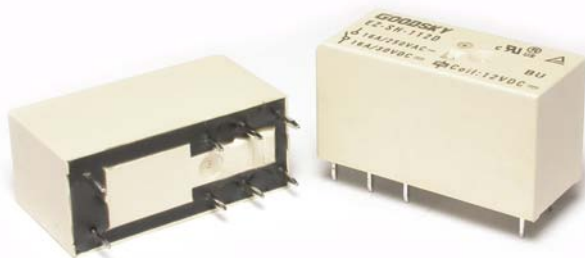


EMR-DB-5



Reference Data





Main Feature

1. EZ Series Relays are designed for switching capacity by 16A to comply with industrial control system use.
2. Slim type and low profile (29.0 x 12.6 x 15.6) is developed to provide end users with more flexibility in PC Board design.
3. Low power consumption and both AC and DC coil available.
4. Proper insulation distance is equipped to ensure EZ will have a 5000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy resin sealed type is available for washing procedure.
6. Halogen free.
7. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EZ (DM/DB)	EZ (D)	EZ (AM/AB)	EZ (A)
Rated Load (Resistive)	16A 250 VAC	16A 250 VAC	16A 250 VAC	16A 250 VAC
	20A 120 VAC	20A 120 VAC	20A 120 VAC	20A 120 VAC
	16A 30VDC	16A 30VDC	16A 30VDC	16A 30VDC
Contact capacity	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC
	1/2 HP 250VAC	1/2 HP 250VAC	1/2 HP 250VAC	1/2 HP 250VAC
	Polit Duty B300/C300	Polit Duty B300/C300	Polit Duty B300/C300	Polit Duty B300/C300
Rated Carrying Current	16A	16A	16A	16A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 300V	DC: 300V	DC: 300V	DC: 300V
Max. Allowable Current	16A	16A	16A	16A
Max. Allowable Power Force	4,000VA	4,000VA	4,000VA	4,000VA
	480W	480W	480W	480W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

Application

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 8 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100MΩ Min.at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -40~85 °C.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 30 °C Max.

- Vibration:
 - Endurance..... 10 to 55 Hz dual amplitude width 1.5 mm
 - Error Operation 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy:
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - Mechanical..... 10⁷ Operations at No load condition.
- Weight About 12.5 g.

Accessories & Sockets

- PI-50BE See Page 177
- PI-50BE/3 See Page 177
- PI-50-0 See Page 179

Safety Standard & Its File Number

- UL & C-UL E141060
- TÜV R3-50008955
- VDE 40009648
- CQC.....02001002513

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)		Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (DC:W;AC:VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ		50HZ	60HZ			
EZ DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202					
	12	33.3		360					
	15	26.6		560					
	18	22.3		810					
	24	16.7		1,440					
	48	8.7		5,520					
	60	8.2		7,340					
	110	4.1		26,530					
EZ AC Coil	24	29.75	25.35	350	0.71	0.61	30% Minimum		
	115	7.65	6.3	8,100	0.88	0.73			
	230	3.42	2.72	32,500	0.79	0.63			

Ordering Information

EZ - SS - 1 12 D M - G

Contact Material

Nil: AgNi
 G: AgNi Gilded
 O: AgNi Plated
 N: AgSnO₂
 S: AgSnO₂ Gilded
 C: AgCdO

Contact Form:

Nil: One Form C
 M: One Form A
 B: One Form B

Coil Type:

D: DC Coil
 A: AC Coil

Coil Voltage:

VDC (06:6V, 09:9V, 12:12V, 15:15V, 18:18V,
 24:24V, 48:48V, 60:60V, 110:110V)
 VAC (24: 24V, 115: 115V, 230: 230V)

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

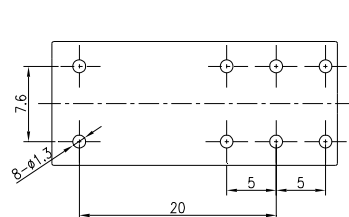
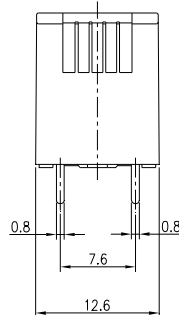
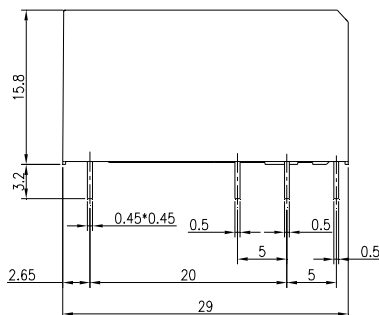
SH : RT III Wash Tight Relays

Type:

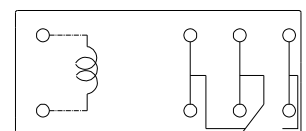
EZ

Classification

Model	EZ					
Coil Sensitivity	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	EZ-SS-1□□□D	EZ-SS-1□□□DM	EZ-SS-1□□□DB	EZ-SS-1□□□A	EZ-SS-1□□□AM	EZ-SS-1□□□AB
Wash Tight Relay	EZ-SH-1□□□D	EZ-SH-1□□□DM	EZ-SH-1□□□DB	EZ-SH-1□□□A	EZ-SH-1□□□AM	EZ-SH-1□□□AB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

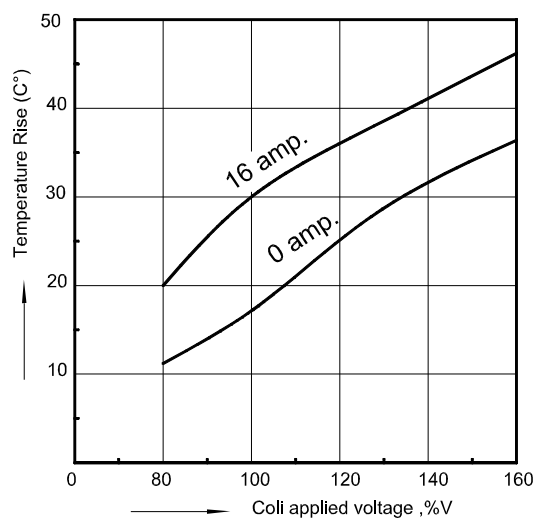
P.C.B. Layout



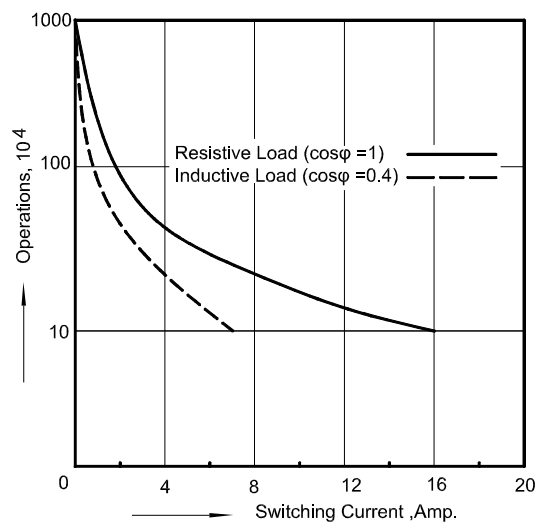
Bottom View

Reference Data

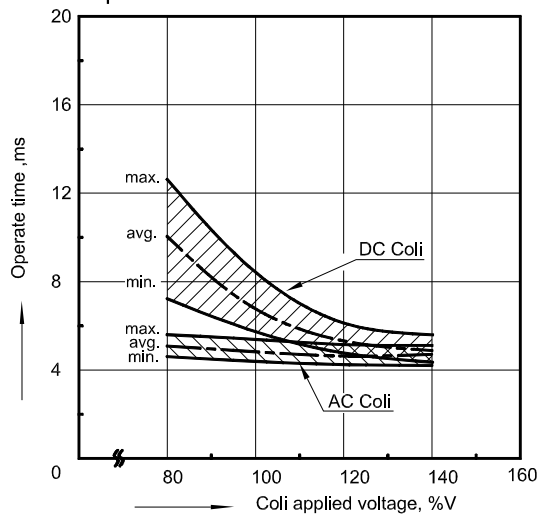
Temperature Rise (at 85°C)



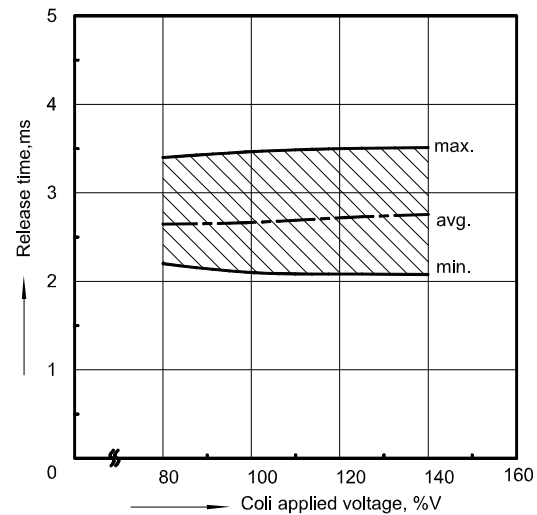
Endurance

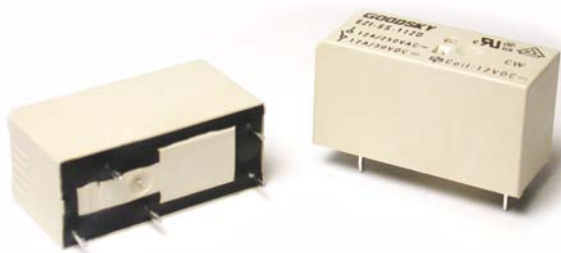


Operate time



Release time





Main Feature

1. Ezi Series Relays are designed for switching capacity by 12A to comply with industrial control system use.
2. Slim type and low profile (29.0 x 12.7 x 15.0) is developed to provide end users with more flexibility in PC Board design.
3. Low power consumption and both AC and DC coil available.
4. Proper insulation distance is equipped to ensure Ezi will has a 5000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy resin sealed type is available for washing procedure.
6. Contacts pin out width 5.0 mm.
7. Halogen free.
8. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	Ezi (DM/DB)	Ezi (D)	Ezi (AM/AB)	Ezi (A)
Rated Load (Resistive)	12A 250VAC	12A 250VAC	12A 250VAC	12A 250VAC
	12A 30VDC	12A 30 VDC	12A 30VDC	12A 30VDC
Rated Carrying Current	12A	12A	12A	12A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 300V	DC: 300V	DC: 300V	DC: 300V
Max. Allowable Current	12A	12A	12A	12A
Max. Allowable Power Force	3,000VA	3,000VA	3,000VA	3,000VA
	360W	360W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

Application

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment, etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max.
@1A,6VDC
- Operate Time 12mSec. Max.
- Release Time 8 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 5,000VAC at 50/60 Hz
for one minute.
Between Contacts 1,000VAC at 50/60 Hz
for one minute.
- Surge Strength 10,000V (between coil
& contact 1.2x50μSec.)
- Insulation Resistance 100MΩ Min. at
500VDC.
- Max. On/Off Switching:
Electrical 6 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range -40~85 °C.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 30 °C Max.

- Vibration:
Endurance 10 to 55 Hz dual
amplitude width 1.5 mm
Error Operation 10 to 55 Hz dual
amplitude width 1.5 mm.
- Shock:
Endurance 1,000 m/S².
Error Operation 100 m/S².
- Life Expectancy:
Electrical 10⁵ Operations at
Rated Resistive Load.
Mechanical 10⁷ Operations at
No load condition.
- Weight About 15 g.

Accessories & Sockets

- PI-50BE See Page 177
- PI-50BE/3 See Page 177
- PI-50-0 See Page 179

Safety Standard & Its File Number

- UL & C-UL E141060
- VDE 40009648
- CQC 02001002513

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)		Coil Resistance (±10%)		Power Consumption (DC:W; AC:VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ	50HZ	60HZ	50HZ	60HZ			
EZI DC Coil	6	66.7		90		Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202						
	12	33.3		360						
	15	26.6		560						
	18	22.3		810						
	24	16.7		1,440						
	48	8.7		5,520						
	60	8.2		7,340						
	110	4.1		26,530						
EZI AC Coil	24	29.75	25.35	350		0.71	0.61		30% Minimum	
	115	7.65	6.3	8,100		0.88	0.73			
	230	3.42	2.72	32,500		0.79	0.63			

Ordering Information

EZI - SS - 1 12 D M - G

Contact Material

Nil: AgNi
G: AgNi Gilded
O: AgNi Plated
N: AgSnO₂
S: AgSnO₂ Gilded
C: AgCdO

Contact Form:

Nil: One Form C
M: One Form A
B: One Form B

Coil Type:

D: DC Coil
A: AC Coil

Coil Voltage:

VDC (06:6V, 09:9V, 12:12V, 15:15V, 18:18V, 24:24V, 48:48V, 60:60V, 110:110V)
VAC (24: 24V, 115: 115V, 230: 230V)

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

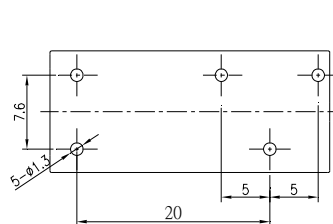
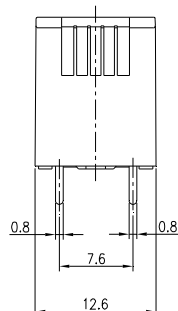
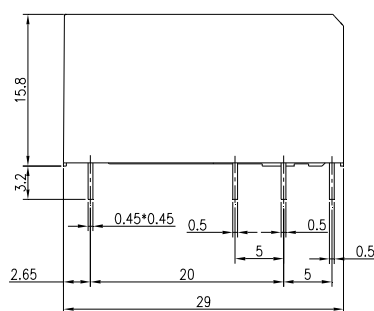
Type:

EZI

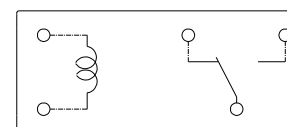
Classification

Model	EZI					
Coil Sensitivity	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	EZI-SS-1□□□D	EZI-SS-1□□□DM	EZI-SS-1□□□DB	EZI-SS-1□□□A	EZI-SS-1□□□AM	EZI-SS-1□□□AB
Wash Tight Relay	EZI-SH-1□□□D	EZI-SH-1□□□DM	EZI-SH-1□□□DB	EZI-SH-1□□□A	EZI-SH-1□□□AM	EZI-SH-1□□□AB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

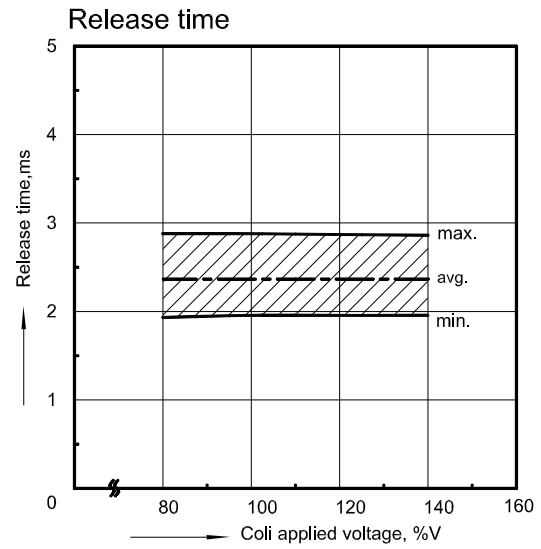
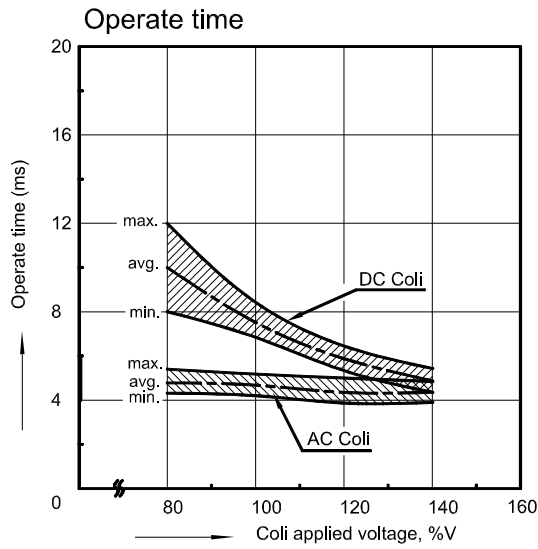
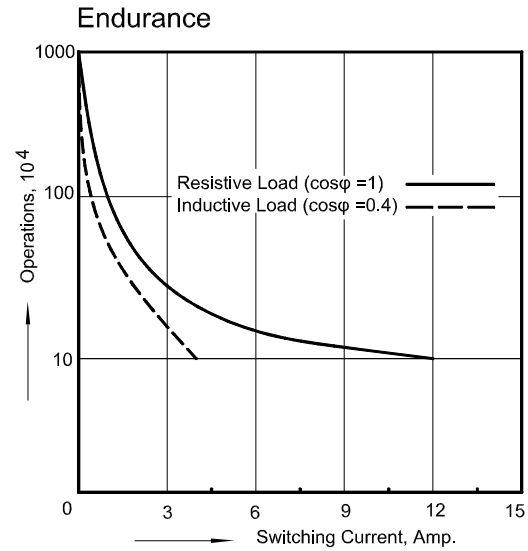
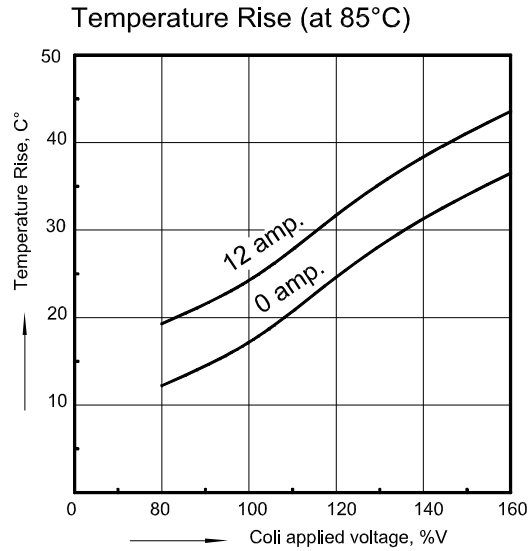


P.C.B. Layout



Bottom View

Reference Data





Main Feature

1. EZL Series Relays are designed for switching capacity by 10A to comply with industrial control system use.
2. Slim type and low profile (28.5 x 12.2 x 15.0mm) is developed to provide end users with more flexibility in PC Board design.
3. 1 N/O contact with a tungsten pre-make contact
4. Proper insulation distance is equipped to ensure EZL will have a 5,000VAC dielectric strength between contact and coil.
5. Complete protective construction from dust and soldering flux is designed. If required, plastic epoxy resin sealed type is available for washing procedure.
6. 1 pole 10 A, 1 NO contact (W pre-make contact +AgSnO₂). 80A / 20 ms inrush peak current.
7. In accordance with IEC 60335-1 and IEC 60730-1.

Contact Rating

Load Type	EZL (DM)
Rated Load (Resistive)	VDE & UL: 10A 250VA
	UL: 10A 30VDC
Rated Carrying Current	10A
Max. Allowable Voltage	AC 250V
	DC 30V
Max. Allowable Current	10A
Max. Allowable Power Force	2500W
	300W
Contact Material	R: Ag Alloy, L: W
Contact Capacity	Tungsten Load : 2500W/250VAC
	Inrush peak current(20ms): 80A
Contact Form	SPST

Application

Lamp Control, Audio Equipment, Domestic Appliance and Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A,6VDC
- Operate Time 8 mSec. Max.
- Release Time 3 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 5,000VAC at 50/60Hz for one minute.
 - Between Contacts 1,000VAC at 50/60Hz for one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50mSec.)
- Insulation Resistance 100MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -40~85°C
- Vibration:
 - Endurance.....10 to 55Hz dual amplitude width 1.5 mm

- Error Operation10 to 55Hz dual amplitude width 1.5mm.
- Humidity Range 45~85% RH.
- Coil Temperature Rise 45°C Max.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy:
 - Electrical 5x10⁴ Operations at Rated Resistive Load.
 - 4x10⁴ Operations at Tungsten Load.
 - Mechanical..... 5x10⁶ Operations at No Load condition.
- Weight About 12.5 g.

Accessories & Sockets

- PI-50BE See Page 177
- PI-50BE/3 See Page 177
- PI-50-0 See Page 179

Safety Standard & Its File Number

- UL & C-UL.....E141060
- VDE.....40009648

Coil Specification (at 20℃)

Coil Sensitivity	Nominal Voltage	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
EZL DC Coil	6	80	75	Abt. 0.48	75% Maximum	7.5% Minimum	130%
	9	53.3	169				
	12	40	300				
	18	26.7	674				
	24	20	1200				
	48	10	4800				
	60	8	7500				

Ordering Information

EZL - SS - 1 12 D M

Contact Form:

M: One Form A

Coil Type:

D: DC Coil

Coil Voltage:

06: 6V, 09: 9V, 12: 12V, 18: 18V, 24: 24V, 48: 48V, 60: 60V

Number of Pole:

1: One Pole

Type of Sealing:

SS: RT II Flux Proofed Relays

SH: RT III Wash Tight Relays

Type:

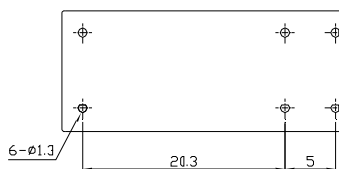
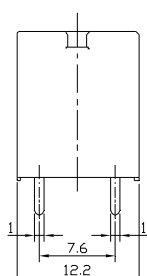
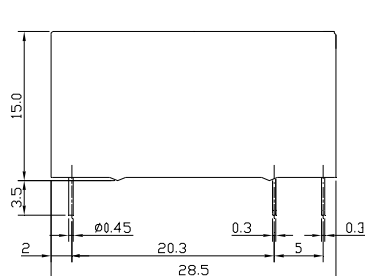
EZL

NOTE:

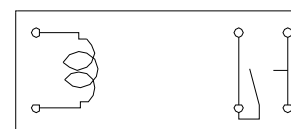
Contact Material: R: AgSnO₂, L: W

Classification

Model	EZL
Coil Sensitivity	DC Coil
Contact Form	1A
Flow Solder Type	EZL-SS-1□□DM
Plastic Sealed Type	EZL-SH-1□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

P.C.B. Layout



BOTTOM VIEW

Main Feature



1. Slim size (20.4 x 7.0 x 15.0mm).
2. Only 7mm wide.
3. Sensitive coil 200 mW.
4. 5A 250VAC suitable for PLC and heating element controls.
5. 8 mm creepage / clearance.



Contact Rating

Load Type	GCJ (DM)
Rated Load (Resistive)	5A 250VAC
	5A 30VDC
Rated Carrying Current	5A
Max. Allowable Voltage	AC 400V
	DC 30V
Max. Allowable Current	5A
Max. Allowable Power Force	1250VA
	150W
Contact Material	Ag Alloy
Contact Form	SPST

Application

Home Appliance, General Control.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max.@1A,6VDC
- Operate Time..... 10 mSec. Max.
- Release Time 4 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact.....4,000VAC at 50/60 Hz for one minute
 - Between Contacts..... 1,250VAC at 50/60 Hz for one minute
- Surge Resistance 7,000V (between coil & Contact 1.2 / 50μSec.)
- Insulation Resistance 1,000 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -30~85°C (F Class 105°C)

- Humidity Range 20~85% RH.
- Temperature Range..... 45°C Max
- Vibration :
 - Endurance 10 to 55 Hz dual Amplitude width 1.5mm
 - Error Operation..... 10 to 55 Hz dual Amplitude width 1.5mm
- Shock:
 - Endurance..... 1,000 m/S²
 - Error Operation 100 m/S²
- Life Expectancy :
 - Mechanical..... 5x10⁶ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
- Contact Material Ag Alloy.
- Weight About 4 g.

Safety Standard & Its File Number

- UL & C-UL.....E141060
- VDE.....40026954

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GCJ	3	66.7	45	Abt. 0.2	75% Maximum	5% Minimum	130%
	5	40	125				
	6	33.3	180				
	9	22.5	405				
	12	16.7	720				
	15	13.3	1125				
	18	11.1	1620				
	24	8.6	2880				

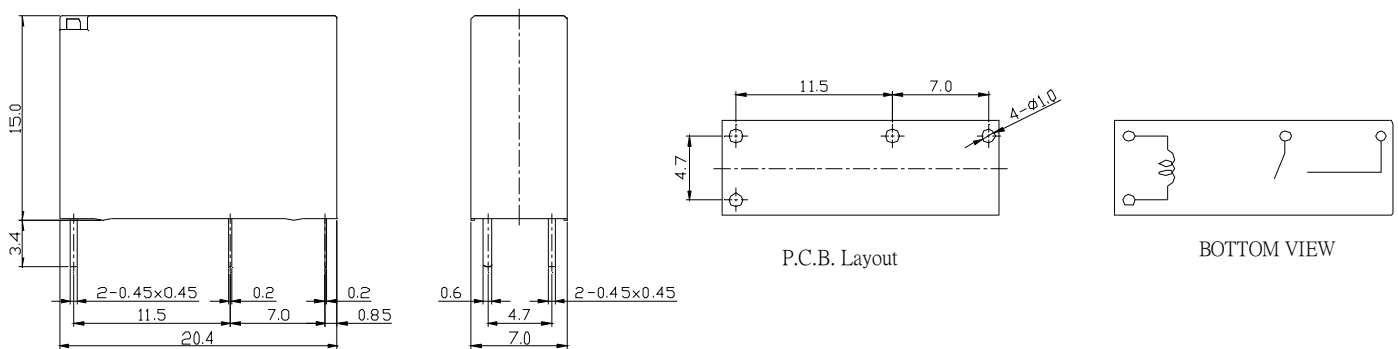
Ordering Information

GCJ - SH - 1 12 D M - N F	Insulation System:	Nil : Standard F : F Class
	Contact Material:	Nil : AgNi N : AgSnO2 S : AgSnO2 Gilded
	Contact Form:	M : One Form A
	Coil Type:	D : Standard DC Coil
	Coil Voltage:	03: 3V, 05: 5V, 06: 6V, 09: 9V, 12:12V, 15:15V, 18: 18V, 24: 24V
	Number of Pole:	1: One Pole
	Type of Sealing:	SS: RT II Flux Proofed Relays SH: RT III Wash Tight Relays
	Type:	GCJ

Classification

Model	GCJ
Coil Type	Standard DC Coil
Contact Form	1A
Flux Proofed Relays	GCJ-SS-1□□DM
Wash Tight Relays	GCJ-SH-1□□DM

Dimension($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



Main Feature



1. Quick terminal is available.
2. High resistance to noise.
3. High contact capacity 30A
4. High dielectric strength.



Contact Rating

Load Type	GL-1P (DM/AM)	GL-2P (DM/AM)
Rated Load (Resistive)	30A 250VAC	25A 250VAC
	30A 277VAC	25A 277VAC
Rated Carrying Current	30A	25A
Max. Allowable Voltage	AC 277V	AC 277V
Max. Allowable Current	30A	30A
Max. Allowable Power Force	8,300VA	6,900VA
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	DPST

Application

Home Appliance, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equipment...etc..

Performance (at Initial Value)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 30 mSec. Max.
- Release Time 30 mSec. Max.
- Dielectric Strength :
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 2,000VAC at 50/60 Hz for one minute.
 - Different Polarity..... 3,000VAC at 50/60 Hz for one minute.
- Surge Strength 10,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 15 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -25~60°C

- Humidity Range..... 5~85% RH.
- Coil Temperature Rise 55°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
- Weight About 90 g.

Safety Standard & Its File Number

- UL & C-ULE175730
E141060
- TÜVR50028914
R50019870
- CQC.....07001018736

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC/VAC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption	Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
GL DC Coil	6	317	18.9	Abt. 1.90 W	75% Maximum	10% Minimum	110%
	9	211	42.6				
	12	158	75.8				
	24	79.0	303				
	48	40.0	1,220				
	60	31.7	1,895				
	100	19.0	5,260				
GL AC Coil	110	17.0	6,400	Abt. 1.7~2.5 VA			
	12	142	-				
	24	71.0	-				
	48	34.0	-				
	100~120	17.0 ~ 20.4	-				
	200~240	8.5 ~ 10.2	-				

Ordering Information

GL - S - 1 12 D M P F C

Internal Form:

Nil: PC Board

C: PC Board + Capacitor for AC model

Case Type:

Nil: Standard Square Shape

F: Flanged Case

Terminal Type:

Nil: Quick Connect Tabs

P: PC Board terminal

Contact Form:

M: Form A

Coil Type:

D: DC Coil

A: AC Coil

Coil Voltage:

DCV (06: 6V, 09: 9V, 12: 12V, 24: 24V

48: 48V, 60: 60V, 100: 100V, 110: 110V)

ACV (12: 12V, 24: 24V, 48: 48V, 110: 100~120V

220: 200~240V)

Number of Pole:

1: One Pole

2: Two Poles

Type of Sealing:

S : RT I Dust Protected Relays

Type:

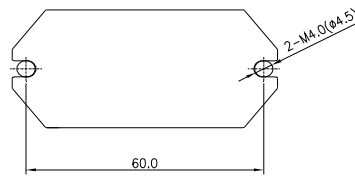
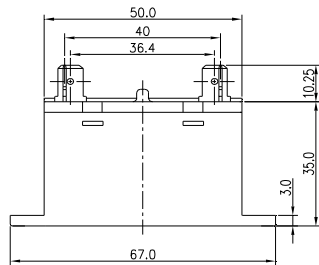
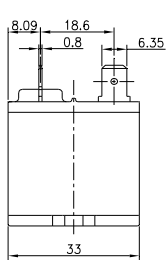
GL

Classification

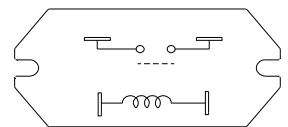
Model	GL			
Coil Type	DC Coil		AC Coil	
Number of Pole	1 Pole	2 Poles	1 Pole	2 Poles
Terminal Type	GL-S-1□□DM/DMP	GL-S-2□□DM/DMP	GL-S-1□□AM/AMP	GL-S-2□□AM/AMP
Case Type	GL-S-1□□DM/DMF	GL-S-2□□DM/DMF	GL-S-1□□AM/AMF	GL-S-2□□AM/AMF
Internal Form	NIL	NIL	GL-S-1□□AMPC/AMFC	GL-S-2□□AMPC/AMFC

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

GL-S-1

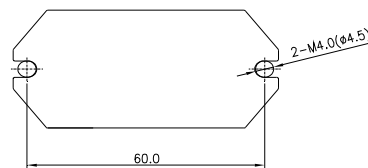
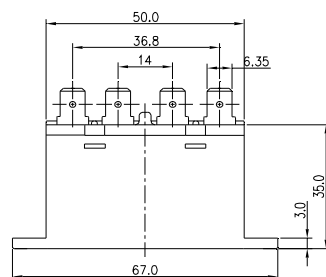
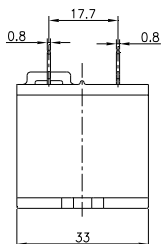


Top View

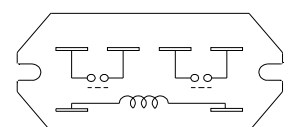


Bottom View

GL-S-2



Top View



Bottom View



Main Feature

1. The contact form construction is 1a (SPST).
2. Miniature size with high sensitive type 200mW, high contact reliability with sealed type.
3. The Surge Strength of GQ Series is 10,000V.
4. The selection of plastic insulation material is designed for high temperature and provides better chemical solution performance.

Contact Rating

Load Type	GQ (LM)
Rated Load (Resistive)	10A 250VAC
	12A 120 VAC
	10A 30VDC
Contact Capacity	TV-5 120VAC
Rated Carrying Current	10A
Max. Allowable Voltage	AC 250V
	DC 30V
Max. Allowable Current	5A
Max. Allowable Power Force	1,250VA
	150W
Contact Material	Ag Alloy
Contact Form	SPST

Application

Domestic Appliances, Office Machines, Audio Equipment, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 10mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength :
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz For one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -40~105°C
- Humidity Range..... 45~85% RH.
- Coil Temperature Rise 40°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - 2.5x10⁴ Operations at TV Rated Load.
- Weight About 9.0 g.

Safety Standard & Its File Number

- UL & C-UL E141060
- TÜV R50121172
- VDE 40002204

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GQ	3	67	45	Abt. 0.20	80% Maximum	5% Minimum	110%
	5	40	125				
	6	33.3	180				
	9	22.5	400				
	12	16.7	720				
	24	8.3	2,880				

Ordering Information

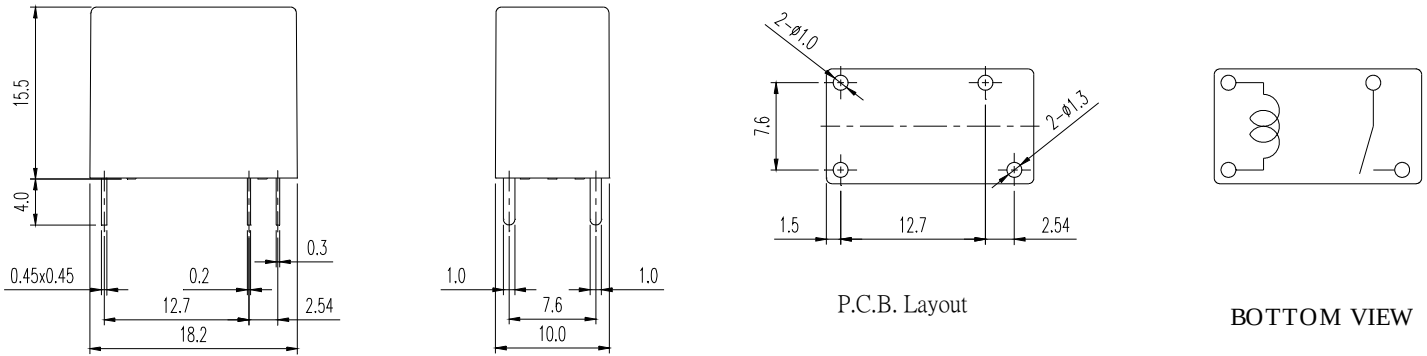
GQ - SS - 1 12 L M F

Insulation System: F : Class F
 Contact Form: M: One Form A
 Coil Type: L: High Sensitivity DC Coil
 Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V
 Number of Pole: 1: One Pole
 Type of Sealing: SS : RT II Flux Proofed Relays
 SH : RT III Wash Tight Relays
 Type: GQ

Classification

Model	GQ
Coil Sensitivity	High Sensitivity DC Coil
Flux Proofed Relay	GQ-SS-1□□LMF
Wash Tight Relay	GQ-SH-1□□LMF

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)





Contact Rating

Load Type	GSA (DM)
Rated Load (Resistive)	5 A 250VAC
	5 A 120VAC
	5 A 30 VDC
Contact capacity	TV-5 120VAC
Rated Carrying Current	5A
Max. Allowable Voltage	AC 250V
	DC 30V
Max. Allowable Current	5A
Max. Allowable Power Force	1250VA
	150W
Contact Material	Ag Alloy
Contact Form	DPST

Application

Audio Equipment, Controlling Equipment, Home Appliance...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax.@1A,6VDC
- Operate Time..... 20 mSec. Max.
- Release Time 10 mSec. Max.
- Dielectric Strength :
 - Between Coil & Contact 3,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 5,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -25~55°C
- Humidity Range 45~85% RH.

Main Feature

1. Two Change-Over Contacts is supplied to user's selection.
2. Small size and slim type have small occupying area for high density P.C. Board mounting technique application.
3. Insulation distance of 6mm is designed. The employment of high insulation material is meeting to JIS Insulation Class E.
4. TV-5 at 120VAC of GSA Series is certified by UL.
5. Dielectric Strength of 3,000VAC Minimum and Surge Resistance of 5,000V Minimum can be reached.

- Coil Temperature Rise55°C Max.
- Vibration:
 - Endurance.....10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation10 to 55 Hz dual amplitude width 1.5mm.
- Shock :
 - Endurance1,000 m/S².
 - Error Operation100 m/S².
- Life Expectancy :
 - Mechanical10⁷ Operations at No Load condition.
 - Electrical10⁵ Operations at Rated Resistive Load.
 - 2.5x10⁴ Operations at TV Rated Load.
- Weight.....About 13.8 g.

Safety Standard & Its File Number

- UL & C-UL.....E141060
- TÜVR9854034
- CQC.....02001001371

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GSA	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	11	4,400				

Ordering Information

GSA - SS - 2 12 D M

Contact Form:

M: Form A

Coil Type:

D: Standard DC Coil

Coil Voltage:

03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

2: Two Poles

Type of Sealing:

SS : RT II Flux Proofed Relays

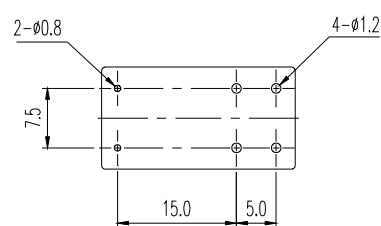
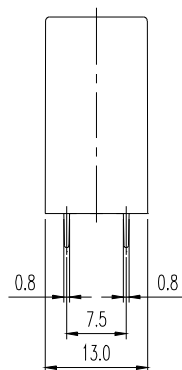
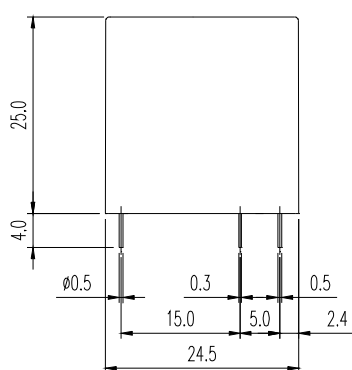
SH : RT III Wash Tight Relays

Type:

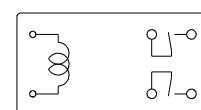
GSA

Classification

Model	GSA
Contact Form	2A
Flux Proofed Relay	GSA-SS-2□□DM
Wash Tight Relay	GSA-SH-2□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

P.C.B. Layout



BOTTOM VIEW



Main Feature

1. Insulation distance of 6 mm minimum suitable for domestic appliances and industrial equipment with dielectric strength at 4,000VAC.
2. The employment of high performance Contact Material is suitable for high inrush current.
3. The employment of suitable plastic materials is applied under high temperature and various chemical solutions.
4. TV-8 at 120VAC of GSZ model is certified by UL.

Contact Rating

Load Type	GSZ (DM)
Rated Load (Resistive)	16A 120VAC
	16A 30VDC
Contact Capacity	TV-8 120VAC
Rated Carrying Current	16A
Max. Allowable Voltage	AC 240V
	DC 100V
Max. Allowable Current	16A
Max. Allowable Power Force	1920VA
	480W
Contact Material	Ag Alloy
Contact Form	SPST

Application

Cooling Applications, Air Conditioners, Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax.@1A,6VDC
- Operate Time..... 20 mSec. Max.
- Release Time 10 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 7,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -25~55°C

- Humidity Range45~85% RH.
- Coil Temperature Rise55°C Max.
- Vibration:
 - Endurance.....10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation10 to 55 Hz dual amplitude width 1.5mm.
- Shock :
 - Endurance1,000 m/S².
 - Error Operation100 m/S².
- Life Expectancy :
 - Mechanical10⁷ Operations at No Load condition.
 - Electrical10⁵ Operations at Rated Resistive Load.
 - 2.5x10⁴ Operations at TV Rated Load.
- Weight.....About 13.6 g.

Safety Standard & Its File Number

- ULE141060
- CQC.....02001001371

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GSZ	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	120%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	11	4,400				

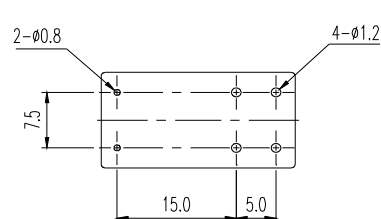
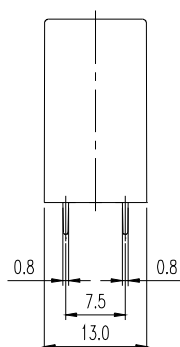
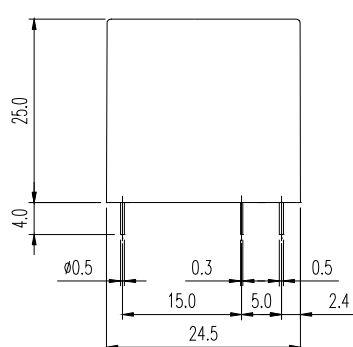
Ordering Information

GSZ - SS - 1 12 D M
Contact Form: M: One Form A
Coil Type: D: Standard DC Coil
Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V
Number of Pole: 1: One Pole
Type of Sealing: SS : RT II Flux Proofed Relays
SH : RT III Wash Tight Relays
Type: GSZ

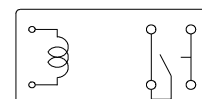
Classification

Model	GSZ
Contact Form	1A
Flux Proofed Relay	GSZ-SS-1□□DM
Wash Tight Relay	GSZ-SH-1□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout



BOTTOM VIEW



Main Feature

1. Smaller size with 16A switching capacity is designed for high density P.C. Board mounting technique.
2. 8mm Creepage distance. Surge Resistance of 10,000V and Dielectric Strength of 5,000V are available.
3. High Sensitivity DC Coil Type of low power consumption is available.
4. 1/3 Horse Power at 250VAC of GZ Series is certified by UL.
5. TV-8 at 120VAC rating of GZT Model is approved by UL.
6. SPST (1a) is available for Relay GZT model. Both of SPST & SPDT are available for Relay GZ Series.

Contact Rating

Load Type	GZ	GZT (DM/LM)
Rated Load (Resistive)	N.O.:16A 250VAC N.O.:16A 24VDC N.C.:10A 250VAC N.C.:10A 24VDC	16A 250VAC 16A 24VDC
	20A 120 VAC (U.L)	20A 120 VAC (U.L)
	20A 24 VDC(U.L)	20A 24 VDC(U.L)
Contact Capacity	-	TV-8 120VAC
Rated Carrying Current	16A	16A
Max. Allowable Voltage	AC: 240V	AC: 240V
	DC: 110V	DC: 110V
Max. Allowable Current	16A	16A
Max. Allowable Power Force	4,000VA	4,000VA
	380W	380W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPDT	SPST

Application

Cooking Appliances, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equipment...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A,6VDC
- Operate Time..... 15 mSec. Max. (D Type)
20 mSec. Max. (L Type)
- Release Time 8 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 5,000VAC at 50/60 Hz
for one minute.
Between Contacts 1,000VAC at 50/60 Hz
for one minute.
- Surge Strength 10,000V (between Coil
& Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at
500VDC.
- Max. On/Off Switching:
Electrical..... 6 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range..... -30~55°C
- Humidity Range..... 45~85% RH.
- Coil Temperature Rise..... 45°C Max. (D Type)
35°C Max. (L Type)
- Vibration:

Endurance.....10 to 55 Hz dual
amplitude width 1.5mm.
Error Operation10 to 55 Hz dual
amplitude width 1.5mm.

- Shock:
Endurance1,000 m/S².
Error Operation100 m/S².
- Life Expectancy:
Mechanical10⁷ Operations at No
Load condition.
Electrical10⁵ Operations at
Rated Resistive Load.
2.5x10⁴ Operations at
TV Rated Load.
- Weight.....About 13.2 g.

Safety Standard & Its File Number

- UL & C-UL.....E141060
- TÜVR9854192
- VDE.....40006999
- CQC.....02001001374

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GZ/D/DM GZT/DM	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	47				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
	48	14.5	3,300				
GZ/L/LM GZT/LM	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	100	50				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	10.9	4,400				

Ordering Information

GZ - SS - 1 12 D M

Contact Form:

Nil: One Form C

M: One Form A

B: One Form B

Coil Type:

D: Standard DC Coil

L: High Sensitivity DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole: 1: One Pole

Type of Sealing: SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

Type:

GZ

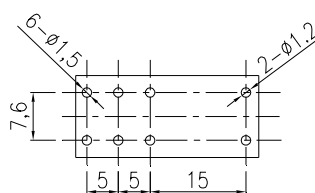
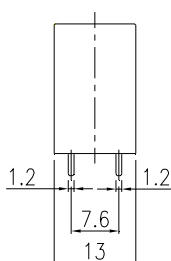
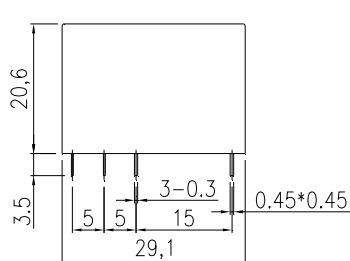
GZT

Classification

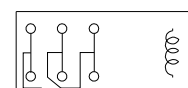
Model	GZ / GZT					
Coil Sensitivity	Standard DC Coil			High Sensitivity DC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	GZ-SS-1□□D	GZ (T)-SS-1□□DM	GZ-SS-1□□DB	GZ-SS-1□□L	GZ (T)-SS-1□□LM	GZ-SS-1□□LB
Wash Tight Relay	GZ-SH-1□□D	GZ (T)-SH-1□□DM	GZ-SH-1□□DB	GZ-SH-1□□L	GZ (T)-SH-1□□LM	GZ-SH-1□□LB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

GZ

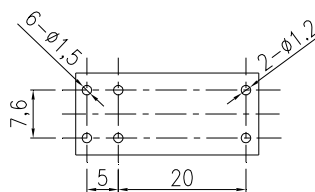
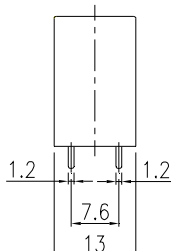
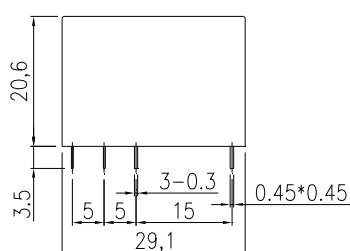


P.C.B. Layout

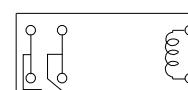


Bottom View

GZT



P.C.B. Layout



Bottom View

Main Feature



1. Slim size (28.8x12.7x25.5mm).
2. 8mm clearance and creepage distance.
3. High-capacity (16A) types available.
4. Complete protective structure is designed from dust and soldering flux. If required, plastic sealed type is available for washing procedure.

Contact Rating

Load Type	GZR(LM/DM)	GZR(L/D)
Rated Load (Resistive)	16A 250VAC	16A 250VAC
	16A 30VDC	16A 30VDC
Rated Carrying Current	16A	16A
Max. Allowable Voltage	AC 380V	AC 380V
	DC125V	DC125V
Max. Allowable Current	16A	16A
Max. Allowable Power Force	4000VA	4000VA
	480W	480W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

General Control, Home Appliance.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max.@1A,6VDC
- Operate Time..... 15mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact.....5,000VAC at 50/60 Hz for one minute
 - Between Contacts..... 1,000VAC at 50/60 Hz for one minute
- Surge Resistance 7,000V (between coil & Contact 1.2 / 50μSec.)
- Insulation Resistance 1,000 MΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 20 Cycles per Minute.
 - Mechanical..... 300 Cycles per Minute.
- Temperature Range.....-40~85°C
- Humidity Range..... 5~85% RH.

- Vibration :
 - Endurance 10 to 55 Hz dual Amplitude width 1.5mm
 - Error Operation 10 to 55 Hz dual Amplitude width 1.5mm
- Shock:
 - Endurance 1,000 m/S²
 - Error Operation 100 m/S²
- Life Expectancy :
 - Mechanical..... 1x10⁷ Operations at No Load condition.
 - Electrical..... 10⁵ Operations at Rated Resistive Load.
- Contact Material Ag Alloy.
- Weight About 17g.

Safety Standard & Its File Number

- In Progress.

Coil Specification (at 20℃)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GZR/D/DM	3	240	13	Abt. 0.72	70% Maximum	15% Minimum	170%
	5	144	36				
	6	120	50				
	9	80	112.5				
	12	60	200				
	15	48	313				
	18	40	450				
	24	30	820				
	48	15	3300				
	60	12	5000				
GZR/L/LM	100	7.2	13888	Abt. 0.53	70% Maximum	15% Minimum	170%
	3	176.7	17				
	5	106	47				
	6	88.3	68				
	9	58.8	155				
	12	44.2	275				
	15	35.3	425				
	18	29.4	612				
	24	22.08	1100				
	48	11.04	4170				
	60	8.83	6795				
	100	5.3	18860				

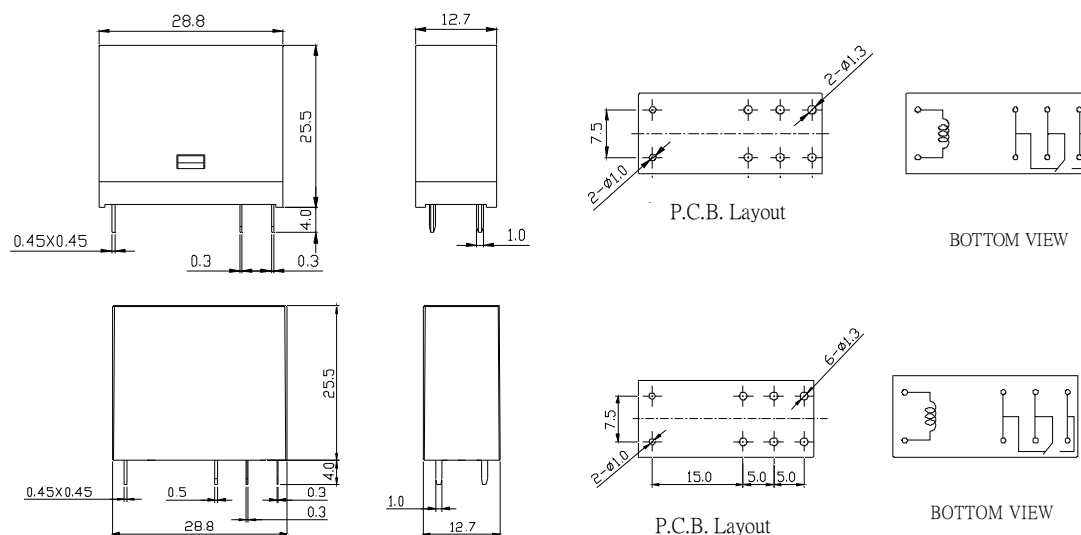
Ordering Information

GZR - S - 1 05 D M	Capacity Type:	Nil:
	Contact Form:	M: One Form A
		Nil: One Form C
	Coil Type:	D: Standard DC Coil
		L: High Sensitivity DC Coil
	Coil Voltage:	03:3V, 05:5V, 06:6V, 09:9V, 12:12V, 15:15V, 18:18V, 24:24V, 48:48V, 60:60V, 100:100V
	Number of Pole:	1: One Pole
	Type of Sealing:	S: RT I Dust Protected Relays
		SS: RT II Flux Proofed Relays
		SH: RT III Wash Tight Relays
	Type:	GZR

Classification

Model	GZR			
Coil Sensitivity	Standard DC Coil		High Sensitivity DC Coil	
Contact Form	1A	1C	1A	1C
Dust Protected Relay	GZR-S-1□□DM	GZR-S-1□□D	GZR-S-1□□LM	GZR-S-1□□L
Flow Solder Type	GZR-SS-1□□DM	GZR-SS-1□□D	GZR-SS-1□□LM	GZR-SS-1□□L
Plastic Sealed Type	GZR-SH-1□□DM	GZR-SH-1□□D	GZR-SH-1□□LM	GZR-SH-1□□L

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



Main Feature



1. 1 N/O & 1 C/O Contact
2. Sensitive coil 200mW.
3. Dielectric strength between coil & contact 4KV.
4. Low profile 10.5 mm.
5. Class I protection conforms to Industrial Norm, clearance and creepage more than 5.0 mm.
6. Cadmium-Free Contacts.
7. In accordance with IEC 60730-1.

Contact Rating

Load Type	JE (DM)	JE (D)
Rated Load (Resistive)	8A 250VAC	5A 250VAC
	8A 30VDC	5A 30VDC
Max. Allowable Voltage	AC 440V	AC 380V
	DC 30V	DC 30V
Max. Allowable Current	8A	5A
Max. Allowable Power Force	2000VA	1,250VA
	240W	150W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

1. Industrial Electronic Instrument, PLC, Timers, Temperature Control & Measure.
2. White goods.
3. Building Automation.
4. Air Conditioner.
5. Actuating Driver.

Performance (at Initial Value)

- Contact Resistance 100 mΩ Max. @1A, 6VDC
- Operate Time 8 mSec. Max.
- Release Time 6 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
Electrical 15 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range -40~85°C

- Humidity Range 45~85% RH.
- Coil Temperature Rise 40°C Max.
- Vibration:
Endurance 10 to 55 Hz dual amplitude width 1.5mm.
Error Operation 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
Endurance 1,000m/S².
Error Operation 100 m/S².
- Life Expectancy:
Mechanical 10⁷ Operations at No load condition.
Electrical 10⁵ Operations at Rated Resistive Load.
- Weight about 6.0 g.

Safety Standard & Its File Number

- UL & C-UL E141060
- VDE 40013405

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
JE	3	66.7	45	Abt. 0.2	75% Maximum	5% Minimum	150%
	5	40.0	125				
	6	33.3	180				
	9	22.2	405				
	12	16.7	720				
	24	8.3	2,880				
	48	4.2	11,520				

Ordering Information

JE - 1 12 D M - G

Contact Material:

Nil: AgNi

G: AgNi Gilded

O: AgNi Plated

N: AgSnO₂

S: AgSnO₂ Gilded

Contact Form:

Nil: One Form C

M: One Form A

Coil Type:

D: Standard DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type:

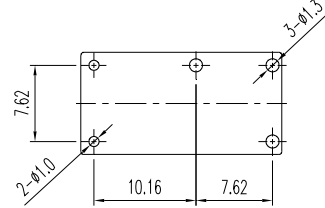
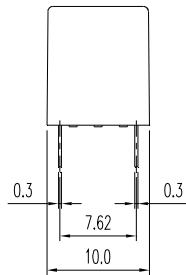
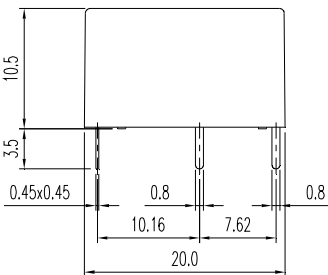
JE

Classification

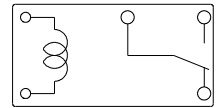
Model	JE	
Coil Sensitivity	Standard DC Coil	
Contact Form	1C	1A
Wash Tight Relay	JE - 1□□D - □	JE - 1□□DM - □

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

JE-D

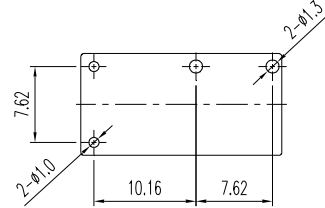
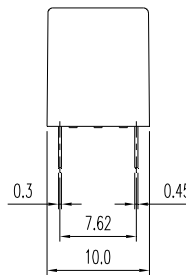
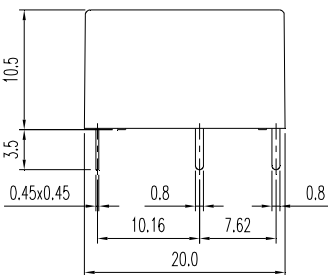


P.C.B. Layout

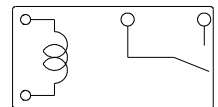


BOTTOM VIEW

JE-DM



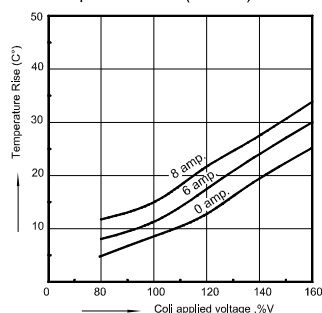
P.C.B. Layout



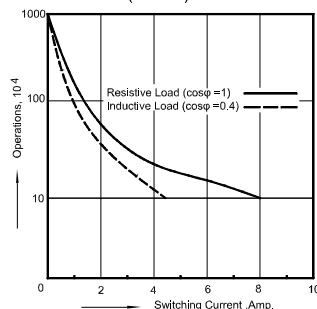
BOTTOM VIEW

Reference Data

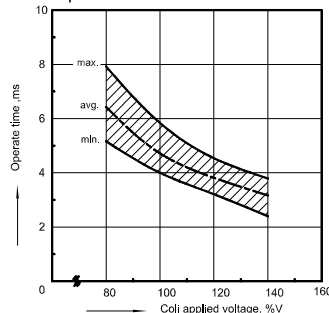
Temperature Rise (at 85°C)



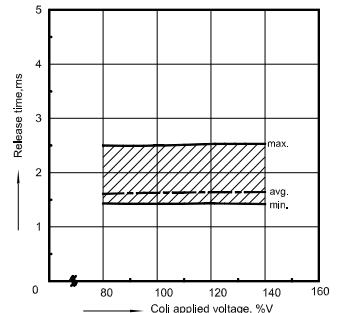
Endurance(JE-DM)



Operate time



Release time





Main Feature

1. Smaller size compared to RW series, but with 5A of contact capacity and TV-5 /120VAC at smaller power consumption.
2. Application for LCD monitor, only SPST available.
3. Dielectric Strength between Coil & Contact 1000VAC.
4. Plastic sealed types are available.

Contact Rating

Load Type	JMT (DM)
Rated Load (Resistive)	5A 120VAC
	5A 30VDC
Contact Capacity	TV-5 120VAC
Max. Allowable Voltage	AC 120V
	DC 30V
Max. Allowable Current	5A
Max. Allowable Power Force	600VA
	150W
Contact Material	Ag Alloy
Contact Form	SPST

Application

LCD Monitor...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A,6VDC
- Operate Time..... 12 mSec. Max.
- Release Time 6 mSec. Max.
- Dielectric Strength :
 - Between Coil & Contact 1,000VAC at50/60 Hz for one minute.
 - Between Contacts 500VAC at 50/60 Hz for one minute.
- Surge Strength 1,500V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -40~55°C
- Humidity Range 45~85% RH.
- Coil Temperature Rise..... 50°C Max.

- Vibration:
 - Endurance.....10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation10 to 55 Hz dual amplitude width 1.5mm.
- Shock :
 - Endurance1,000 m/S².
 - Error Operation100 m/S².
- Life Expectancy :
 - Mechanical10⁷ Operations at No load condition.
 - Electrical10⁵ Operations at Rated Resistive Load.
- Weight.....About 5.2 g.

Safety Standard & Its File Number

- NIL.

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
JMT	3	180	16.7	Abt. 0.54	80% Maximum	5% Minimum	120%
	5	108	46.3				
	6	90	66.7				
	9	60	100				
	12	44.4	270				
	24	22.5	1,067				

Ordering Information

JMT - SS - 1 12 D M

Contact Form: M: One Form A

Coil Type: D: Standard DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V

Number of Pole: 1: One Pole

Type of Sealing: SS : RT II Flux Proofed Relays

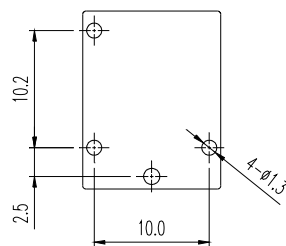
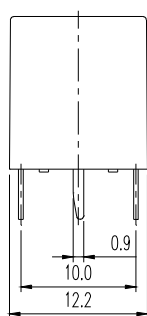
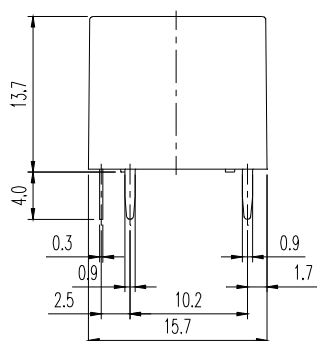
SH : RT III Wash Tight Relays

Type: JMT

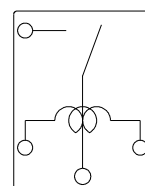
Classification

Model	JMT
Contact Form	1A
Flux Proofed Relay	JMT-SS-1□□DM
Wash Tight Relay	JMT-SH-1□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout



BOTTOM VIEW

Main Feature



1. Small size with slim width.
2. SPST and SPDT Contact forms are available.
3. Contact Capacity is 10A.
4. Surge Strength can be up to 8000V.



Contact Rating

Load Type	JQ (DM/TM/LM)	JQ (D/T/L)
Rated Load (Resistive)	10A 125VAC	NO:10A 125VAC
	5A 250VAC	5A 250VAC
	5A 30VDC	5A 30VDC
	-	NC: 5A 125VAC
	-	3A 250VAC
Rated Carrying Current	5A	5A
Max. Allowable Voltage	AC 250V	AC 250V
	DC 30V	DC 30V
Max. Allowable Current	10A	10A
Max. Allowable Power Force	1,250VA	1,250VA
	150W	150W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

Air Conditioner, Fan Control, Home Appliances, Timer and Thermal Control Application.

Performance (at Initial Value)

- Contact Resistance 100mΩMax.@1A,6VDC
- Operate Time..... 6 mSec. Max.
- Release Time 2 mSec. Max.
- Dielectric Strength :
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute.
- Surge Strength 8,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min.at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -40~70°C.
- Humidity Range..... 45~85% RH

- Coil Temperature Rise 45°C Max.
- Vibration :
 - Endurance 10 to 55 Hz dual. amplitude width 1.5mm.
 - Error Operation..... 10 to 55 Hz dual. amplitude width 1.5mm.
- Shock :
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
- Weight About 5.6g.

Safety Standard & Its File Number

- UL & C-UL E141060
- TÜV R3-50008011
- VDE 40010922
- CQC.....07001018734(For D/DM/LM)

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
JQ-D/DM	3	150	20	Abt. 0.45	75% Maximum	5% Minimum	120%
	5	91	55				
	6	75	80				
	9	50	180				
	12	37.5	320				
	24	18.8	1,280				
JQ-T/TM	3	133.3	22.5	Abt.0.4			
	5	80	62.5				
	6	66.7	90				
	9	44.4	202				
	12	33.3	360				
	24	16.7	1,440				
JQ-LM	3	67	45	Abt.0.2			
	5	40	125				
	6	33.3	180				
	9	22.5	400				
	12	16.7	720				
	24	8.3	2,800				

Ordering Information

JQ - SS - 1 12 D M

Contact Form:

Nil: One Form C (for D Type Only)

M: One Form A (for D,L Type Only)

D: Standard DC Coil

T: Middle Consumption DC Coil

L: High Sensitivity DC Coil

Coil Voltage:

03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

Type:

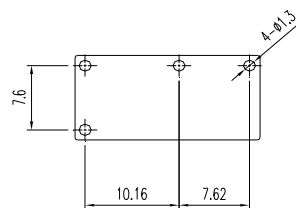
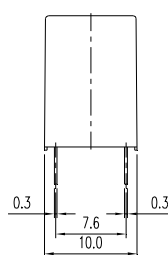
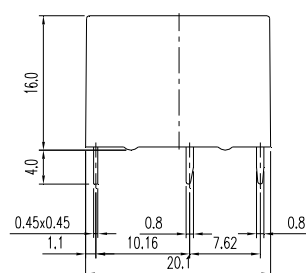
JQ

Classification

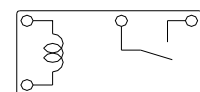
Model	JQ				
Contact Form	1C		1A		
Coil Type	Standard DC Coil	Middle Consumption	Standard DC Coil	Middle Consumption	High Sensitivity DC
Flux Proofed Relay	JQ -SS-1□□D	JQ -SS-1□□T	JQ -SS-1□□DM	JQ -SS-1□□TM	JQ -SS-1□□LM
Wash Tight Relay	JQ -SH-1□□D	JQ -SH-1□□T	JQ -SH-1□□DM	JQ -SH-1□□TM	JQ -SH-1□□LM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

JQ-DM

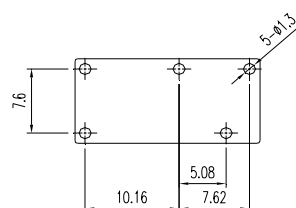
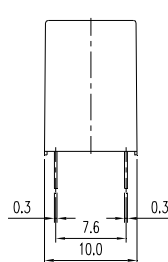
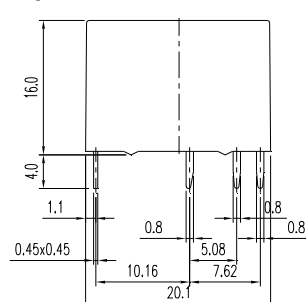


P.C.B. Layout

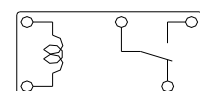


BOTTOM VIEW

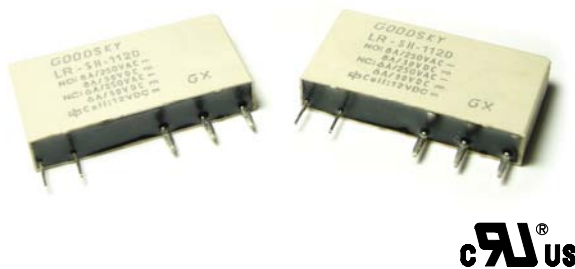
JQ-D



P.C.B. Layout



BOTTOM VIEW



Main Feature

1. Slim size(28.0 x 5.0 x 15.0mm).
2. Wide switching capacity 100mA/12VDC~8A/250VAC.
3. Sensitive coil 170mW.
4. 5kV coil-contact, 6 / 8mm clearance/creepage, NO version with 8 / 8mm clearance/creepage on request.
5. Light weight Approx.6g
6. Reinforced insulation(protection class II)
7. Allows high function-/packing density

Contact Rating

Load Type	LR (DM)	LR (D)
Rated Load (Resistive)	8A 250VAC	NO: 8A 250VAC / 30VDC
	8A 30VDC	NC: 6A 250VAC / 30VDC
Rated Carrying Current	8A	NO: 8A / NC: 6A
Max. Allowable Voltage	AC 400V	AC 400V
	DC 30V	DC 30V
Max. Allowable Current	8A	NO: 8A / NC: 6A
Max. Allowable Power Force	2000VA	NO:2000VA ,NC:1500VA
	240W	NO:240W ,NC:180W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

PLC, Factory Machine, Timer / Counter, Temperature Controller, Measuring Instrument, Testing Instrument, OA Equipments...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max.@1A,6VDC
- Operate Time..... 8 mSec. Max.
- Release Time 4 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact.....5,000VAC at 50/60 Hz for one minute
 - Between Contacts..... 1,000VAC at 50/60 Hz for one minute
- Surge Resistance 6,000V (between coil & Contact 1.2 / 50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical 6 Cycles per Minute.
 - Mechanical..... 180 Cycles per Minute.

- Temperature Range -40~85°C
- Humidity Range..... 45~85% RH.
- Temperature Range 40°C Max
- Vibration :
 - Endurance..... 10 to 55 Hz dual Amplitude width 1.5mm
 - Error Operation 10 to 55 Hz dual Amplitude width 1.0mm
- Shock:
 - Endurance..... 1,000 m/S²
 - Error Operation..... 100 m/S²
- Life Expectancy :
 - Mechanical 5x10⁶ Operations at No Load condition.
 - Electrical.....(NO: 5x10⁴ ,NC:3x10⁴) Operations at Rated Resistive Load.
- Contact Material Ag Alloy.
- Weight About 6 g.

Safety Standard & Its File Number

- UL & C-UL E141060 & E175730

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
LR	3	56.6	53	Abt. 0.17	70% Maximum	5% Minimum	150%
	4.5	37	121				
	5	34	147				
	6	28.3	211				
	9	18.8	476				
	12	14.2	847				
	15	11.3	1,323				
	18	9.4	1,905				
	24	7.1	3,388				
	48	4.5	10,617	Abt. 0.217			
	60	3.6	16,590				

Ordering Information

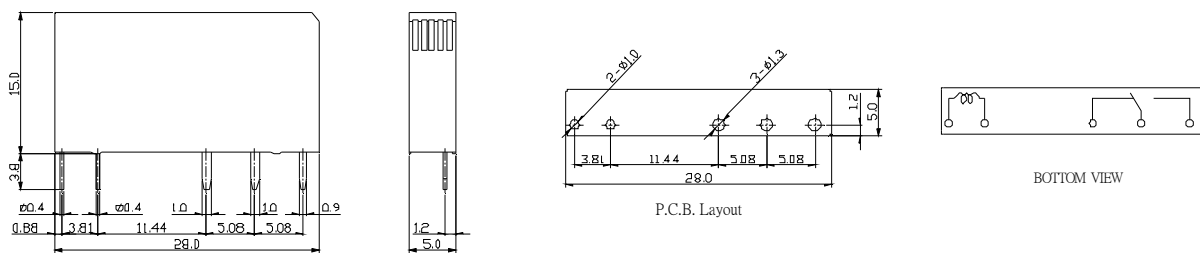
LR - SH - 1 12 D M N - L F	Insulation System:	Nil: Standard Class F: F Class
	Operation function:	Nil: DIP L: SMD
	Contact Material:	Nil: AgNi N: AgSnO2 S: AgSnO2 Gilded
	Contact Form:	Nil: One Form C M: One Form A
	Coil Type:	D: Standard DC Coil
	Coil Voltage:	03: 3V, 04: 4.5V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 15: 15V, 18: 18V, 24: 24V, 48: 48V, 60: 60V
	Number of Pole:	1: One Pole
	Type of Sealing:	SS: RT II Flux Proofed Relays SH: RT III Wash Tight Relays
	Type:	LR

Classification

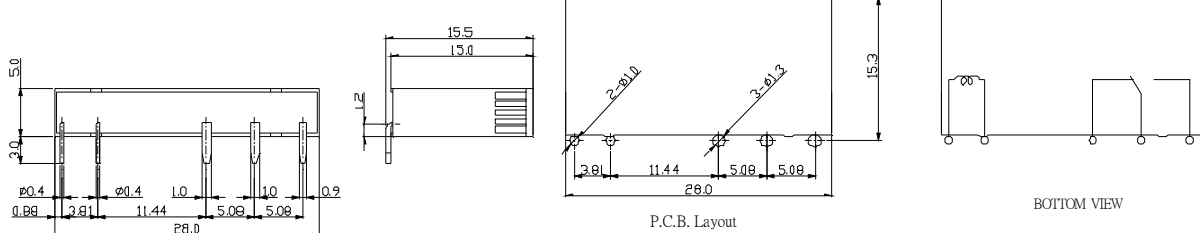
Model	LR			
Coil Type	Standard DC Coil			
Contact Form	1C		1A	
Flux Proofed Relays	LR-SS-1□□D/F	LR-SS-1□□D-L/F	LR-SS-1□□DM/F	LR-SS-1□□DM-L/F
Wash Tight Relays	LR-SH-1□□D/F	LR-SH-1□□D-L/F	LR-SH-1□□DM/F	LR-SH-1□□DM-L/F

Dimension(≤5mm±0.2mm, >5mm±0.3mm, the tolerance of PCB thru hole: +0.1mm)

LR-SS/SH-D



LR-SS/SH-D-L





Main Feature

1. Switching capacity 5A is available with 2 change-over contacts.
2. Slim type and small occupying area can offer high dense P.C. Board technique.
3. Insulation distance of 8mm Min. is designed. The employment of insulation material is meeting to JIS insulation class E. Dielectric Strength of 5,000V Min. and Surge Strength 10,000V Min. is realized.
4. 1/8 Horse Power at 120VAC and 1/8 Horse Power at 250VAC are certified by UL.
5. TV-3 at 120VAC rating is approved by UL.
6. Complete protective construction is designed from dust and soldering flux. If required, plastic sealed type is available for washing procedure.

Contact Rating

Load Type	MI-2P(DM/LM)	MI-2P(D/L)
Rated Load (Resistive)	5A 250VAC	5A 250VAC
	5A 30VDC	5A 30VDC
Contact Capacity	TV-3 120VAC	TV-3 120VAC
	1/8HP 250VAC	1/8HP 250VAC
Rated Carrying Current	5A	5A
Max. Allowable Voltage	AC: 240V	AC: 240V
	DC:110V	DC:110V
Max. Allowable Current	5A	5A
Max. Allowable Power Force	1,250VA	1,250VA
	150W	150W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	DPST	DPDT

Application

Cooking Appliances, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equivalent, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A, 6VDC
- Operate Time..... 15mSec. Max. (D Type)
20mSec. Max. (L Type)
- Release Time 8 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 5,000VAC at 50/60 Hz
for one minute.
Between Contacts 1,000VAC at 50/60 Hz
for one minute.
- Surge Strength 10,000V (between Coil
& Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at
500VDC.
- Max. On/Off Switching :
Electrical..... 20 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range..... -30~70°C
- Humidity Range..... 45~85% RH.
- Coil Temperature Rise..... 45°C Max. (D Type)
35°C Max. (L Type)

- Vibration:
Endurance.....10 to 55 Hz dual
amplitude width 1.5mm.
Error Operation10 to 55 Hz dual
amplitude width 1.5mm.
- Shock :
Endurance1,000 m/S².
Error Operation100 m/S².
- Life Expectancy :
Mechanical10⁷ Operations at No
Load condition.
Electrical10⁵ Operations at
Rated Resistive Load.
2.5x10⁴ Operations at
TV Rated Load.
- Weight.....About 13.8 g.

Accessories & Sockets

- PI-50BE.....See Page 177
- PI-50BE/3.....See Page 177
- PI-50-0See Page 179

Safety Standard & Its File Number

- UL , TÜV
- VDE (MI-D/DM/L/LM Type) ..6846ÜG
- CQC.....02001001376

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MI-2P D/DM Type	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	14	51.5	272				
	18	38	470				
	21	34.3	612.5				
	24	29.3	820				
	28	25.7	1,089				
MI-2P L/LM Type	48	14.5	3,300	Abt. 0.54	80% Maximum	5% Minimum	130%
	3	176.5	17				
	5	100	50				
	6	88	68				
	9	58	155				
	12	44.4	270				
	14	38.6	363				
	18	30	600				
	21	25.7	817				
	24	21.8	1,100				
	28	19.3	1,452				
	48	10.9	4,400				

Ordering Information

MI - SS - 2 12 D M

Contact Form:

Nil: Form C

M: Form A

B: Form B

Coil Type:

D: Standard DC Coil

L: High Sensitivity DC Coil

Coil Voltage:

03:3V, 05:5V, 06:6V, 09:9V, 12:12V, 14:14V, 18:18V,
21:21V, 24:24V, 28:28V, 48:48V

Number of Pole:

2: Two Poles

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

Type:

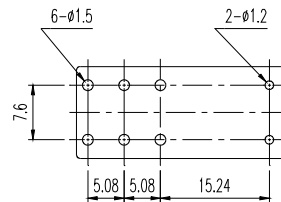
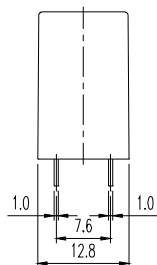
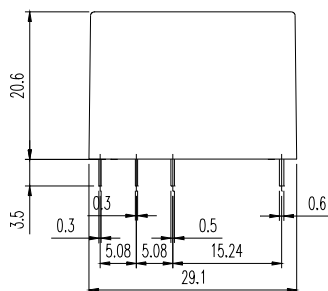
MI

Classification

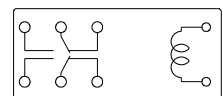
Model	MI - 2P					
Coil Sensitivity	Standard DC Coil			High Sensitivity DC Coil		
Contact Form	2C	2A	2B	2C	2A	2B
Flux Proofed Relay	MI-SS-2□□D	MI-SS-2□□DM	MI-SS-2□□DB	MI-SS-2□□L	MI-SS-2□□LM	MI-SS-2□□LB
Wash Tight Relay	MI-SH-2□□D	MI-SH-2□□DM	MI-SH-2□□DB	MI-SH-2□□L	MI-SH-2□□LM	MI-SH-2□□LB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

MI-2P-SS/SH



P.C.B. Layout



BOTTOM VIEW



Main Feature

1. Insulation distance of 8 mm Min. is designed. The employment of insulation material is meeting to JIS insulation class E. Dielectric Strength 5,000V Min. and Surge Strength of 10,000V Min. can be reached.
2. The employment of suitable plastic materials is applied under high temperature condition and various chemical solutions.
3. Complete protective construction is designed from dust and soldering flux. If required, plastic sealed type is available for washing procedure.

Contact Rating

Load Type	MI (DM/LM)	MI (D/L)	MIH (DM/LM)	MIH (D/L)
Rated Load (Resistive)	10A 250VAC	10A 250 VAC	16A 240VAC	16A 240VAC
	10A 30VDC	10A 30VDC	16A 24VDC	16A 24VDC
	1/3 HP 250VAC	1/3 HP 125VAC	1/3 HP 250VAC	1/3 HP 125VAC
	-	1/2 HP 250VAC	-	1/2 HP 250VAC
Rated Carrying Current	10A	10A	16A	16A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 110V	DC: 110V	DC: 110V	DC: 110V
Max. Allowable Current	10A	10A	16A	16A
Max. Allowable Power Force	2500VA	2500VA	3840VA	3840VA
	300W	300W	384W	384W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Application

Cooking Appliances, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equivalent, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A, 6VDC
- Operate Time 15mSec. Max. (D Type)
20mSec. Max. (L Type)
- Release Time 8 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 5,000VAC at 50/60 Hz
for one minute.
Between Contacts 1,000VAC at 50/60 Hz
for one minute.
- Surge Strength 10,000V (between Coil
& Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at
500VDC.
- Max. On/Off Switching:
Electrical 6 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range -30~70°C
- Humidity Range 45~85% RH.
- Coil Temperature Rise 45°C Max. (D Type)
35°C Max. (L Type)

- Vibration :
Endurance 10 to 55 Hz dual
amplitude width 1.5mm.
Error Operation 10 to 55 Hz dual
amplitude width 1.5mm.
- Shock :
Endurance 1,000 m/S².
Error Operation 100 m/S².
- Life Expectancy :
Mechanical 10⁷ Operations at No
Load condition.
Electrical 10⁵ Operations at Rated
Resistive Load.
Weight About 12.2 g.

Safety Standard & Its File Number

- UL & CUL E141060
- TÜV R9854160
- VDE (MI-L/LM/D/DM Type) ..6846ÜG
- CQC 02001001376

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MI/MIH D/DM	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
MI/MIH L/LM	48	14.5	3,300	Abt. 0.54	80% Maximum	5% Minimum	130%
	3	176.5	17				
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	10.9	4,400				

Ordering Information

MI - SS - 1 12 D M

Contact Form:

Nil: One Form C

M: One Form A

B: One Form B

Coil Type:

D: Standard DC Coil

L: High Sensitivity DC Coil

Coil Voltage:

03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

SH : RT III Wash Tight Relays

Type:

MI

MIH

Classification

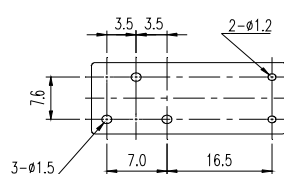
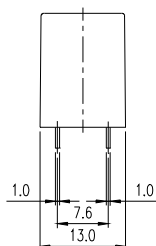
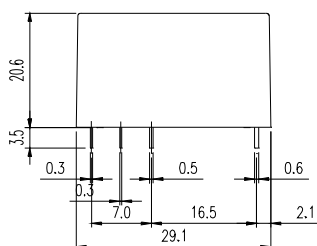
Model	MI / MIH					
Coil Sensitivity	Standard DC Coil			High Sensitivity DC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	MI(H)-SS-1□□D	MI(H)-SS-1□□DM	MI(H)-SS-1□□DB	MI(H)-SS-1□□L	MI(H)-SS-1□□LM	MI(H)-SS-1□□LB
Wash Tight Relay	MI(H)-SH-1□□D	MI(H)-SH-1□□DM	MI(H)-SH-1□□DB	MI(H)-SH-1□□L	MI(H)-SH-1□□LM	MI(H)-SH-1□□LB

Accessories & Sockets

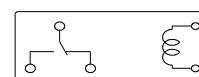
MI-1P

- PI-35BE See Page 164
- PI-35BE/3 See Page 165
- PI-35-0 See Page 167

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout



BOTTOM VIEW



Main Feature

1. Slim type and small occupying area can be applied in high density P.C. Board mounting technique.
2. Insulation distance of 8mm is designed. The employment of insulation material is meeting to JIS Insulation Class E. Surge Resistance of 10,000V is realized.
3. Low power consumption of MIT-L type and general power consumption of MIT-D type are designed for user's selection.
4. TV-5 at 120VAC (600W) is certified by UL.

Contact Rating

Load Type	MIT (DM)	MIT (LM)
Rated Load (Resistive)	10A 240VAC	10A 240VAC
	5A 24VDC	5A 24VDC
Contact Capacity	TV-5 120VAC	TV-5 120VAC
	Tungsten (600W)	Tungsten (600W)
Rated Carrying Current	10A	10A
Max. Allowable Voltage	AC 240V	AC 240V
	DC 110V	DC 110V
Max. Allowable Current	10A	10A
Max. Allowable Power Force	2,400VA	2,400VA
	120W	120W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

Application

Remote Control TV Receivers, Monitor Displays, Audio Equipment and High Inrush Current can be used.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A, 6VDC
- Operate Time 15mSec. Max. (D Type)
20mSec. Max. (L Type)
- Release Time 8 mSec. Max.
- Dielectric Strength :
Between Coil & Contact 5,000VAC at 50/60 Hz
for one minute.
Between Contacts 1,000VAC at 50/60 Hz
for one minute.
- Surge Strength 10,000V (between Coil
& Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at
500VDC.
- Max. On/Off Switching:
Electrical 20 Cycles per Minute.
Mechanical 300 Cycles per Minute.
- Temperature Range MIT-D : -30~55°C
MIT-L : -30~70°C
- Humidity Range 45~85% RH.
- Coil Temperature Rise 45°C Max. (D Type)
35°C Max. (L Type)
- Vibration:
Endurance 10 to 55 Hz dual
amplitude width 1.5mm.
Error Operation 10 to 55 Hz dual
amplitude width 1.5mm.
- Shock:
Endurance 1,000 m/S².
Error Operation 100 m/S².
- Life Expectancy:
Mechanical 10⁷ Operations at No
Load condition.
Electrical 10⁵ Operations at
Rated Resistive Load.
2.5x10⁴ Operations at
TV Rated Load.
- Weight About 12.2 g.

Safety Standard & Its File Number

- UL E141060
- TÜV R9352331
- CQC 02001001376

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MIT - DM	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
	48	14.5	3,300				
MIT - LM	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	11	4,400				

Ordering Information

MIT - SS - 1 12 D M

Contact Form:

M: One Form A

Coil Type:

D: Standard DC Coil

L: High Sensitivity DC Coil

Coil Voltage: 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type of Sealing:

SS : RT II Flux Proofed Relays

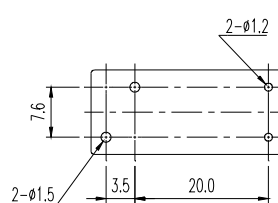
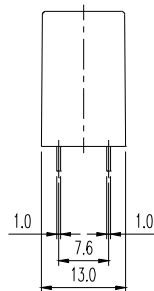
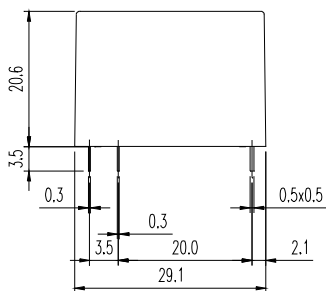
SH : RT III Wash Tight Relays

Type:

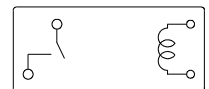
MIT

Classification

Model	MIT	
Coil Sensitivity	Standard DC Coil	High Sensitivity DC Coil
Flux Proofed Relay	MIT-SS-1□□DM	MIT-SS-1□□LM
Wash Tight Relay	MIT-SH-1□□DM	MIT-SH-1□□LM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

P.C.B. Layout



BOTTOM VIEW



Contact Rating

Load Type	RUT (DM)	RUT (DM1)	RUT (DM8)
Rated Load (Resistive)	5A 30VDC	5A 30VDC	5A 30VDC
	5A 120VAC	15A 120VAC	8A 120VAC
	10A 250VAC(TUV)	10A 250VAC	10A 250VAC
	5 A 30VDC(TUV)	5 A 30VDC	5 A 30VDC
Contact Capacity	TV-5 120VAC	Tungsten (1800W) 120VAC 1/2HP 120VAC	TV-8 120VAC
Rated Carrying Current	10A	10A	15A
Max. Allowable Voltage	AC 250V	AC 250V	AC 250V
	DC 110V	DC 110V	DC 110V
Max. Allowable Current	15A	15A	15A
Max. Allowable Power Force	2,500VA	1,800VA	1,800VA
	300W	300W	300W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPST

Application

Remote Control TV Receivers, Monitor Displays, Audio Equipment and High Inrush Current Use Application.

Performance (at Initial Value)

- Contact Resistance 100mΩMax.@1A,6VDC
- Operate Time..... 15mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 1,500VAC at 50/60 Hz for one minute.
 - Between Contacts 750VAC at 50/60 Hz for one minute.
- Surge Strength 3,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
 - Electrical..... 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -30~70°C.

Main Feature

1. The employment of suitable plastic material is applied under high temperature condition and various chemical solution.
2. Complete protective construction is designed from dust and soldering flux. Flow solder type is available for dust and soldering flux prevention. Plastic sealed type is also available for simple washing procedure.
3. 1/2 Horse Power for RUT Series is approved by UL.
4. 120VAC, 15A Tungsten (1800W) is certified by UL.

- Humidity Range45~85% RH.
- Coil Temperature Rise30°C Max.
- Vibration:
 - Endurance.....10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance1,000 m/S².
 - Error Operation100 m/S².
- Life Expectancy :
 - Mechanical10⁷ Operations at No Load condition.
 - Electrical10⁵ Operations at Rated Resistive Load.
 - 2.5x10⁴ Operations at TV Rated Load.
- Weight.....About 11.4 g.

Safety Standard & Its File Number

- UL & C-UL.....E141060
- TÜVR9352326
- CQC.....07001018732

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
RUT	3	120	25	Abt. 0.36	75% Maximum	5% Minimum	130%
	6	60	100				
	9	40	225				
	12	30	400				
	24	15	1,600	Abt. 0.51			
	48	11	4,500				

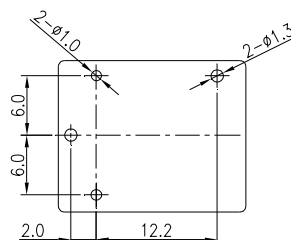
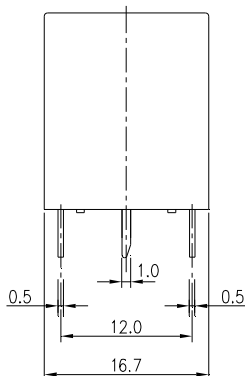
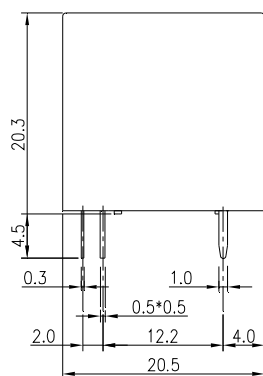
Ordering Information

RUT - SS - 1 12 D M 1	Specification:	Nil: Standard, TV-5 1: 1800W 8: TV-8
	Contact Form:	M: One Form A
	Coil Type:	D: Standard DC Coil
	Coil Voltage:	03: 3V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V
	Number of Pole:	1: One Pole
	Type of Sealing:	SS: RT II Flux Proofed Relays SH: RT III Wash Tight Relays
	Type:	RUT

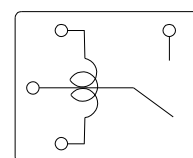
Classification

Model	RUT		
Contact Type	Standard	TV-5	TV-8
Flux Proofed Relay	RUT -SS-1□□DM	RUT - SS-1□□DM1	RUT -SS-1□□DM8
Wash Tight Relay	RUT -SH-1□□DM	RUT - SH-1□□DM1	RUT -SH-1□□DM8

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout



Bottom View

RUUH/RUDH



Main Feature

1. RUDH Series Relay covers switching capacity by 12A under UL approval in spite of miniature size to comply with user's selection.
2. RUDH is approved by UL, CUL & TÜV safety standard.
3. The employment of suitable plastic materials is applied under high temperature and various chemical solutions.
4. Complete protective construction is designed from dust and soldering flux. If required, plastic sealed type is available for washing procedure.

Contact Rating

Load Type	RUDH (DM/DB)	RUDH (D)	RUUH (DM/DB)	RUUH (D)
Rated Load (Resistive)	12A 120 VAC	12A 120 VAC	15A 120VAC	15A 120VAC
	12A 24 VDC	12A 24 VDC	15A 24VDC	15A 24VDC
	10A 250 VAC	10A 250 VAC	-	-
Rated Carrying Current	12A	12A	12A	12A
Max. Allowable Voltage	AC 250V	AC 250V	AC 250V	AC 250V
	DC 110V	DC 110V	DC 110V	DC 110V
Max. Allowable Current	12A	12A	15A	15A
Max. Allowable Power Force	2500VA	2500VA	1500VA	1500VA
	288W	288W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Application

Domestic Appliances, Office Machines, Audio Equipment, Coffeepot, Control Units, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax. @1A, 6VDC
- Operate Time 15mSec. Max.
- Release Time 5 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 1,500VAC at 50/60 Hz for one minute.
 - Between Contacts 750VAC at 50/60 Hz for one minute.
 - 2,000VAC (Special spec)
- Surge Strength 3,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range -30~70°C
- Humidity Range 45~85% RH.

- Coil Temperature Rise 35°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation 10 to 55 Hz dual amplitude width 1.5mm.
- Shock :
 - Endurance 1,000 m/S².
 - Error Operation 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
- Weight About 12.2 g.

Safety Standard & Its File Number

- RUDH:
 - UL & C-UL E141060
 - TÜV R9352326
- RUUH NIL.
- CQC 07001018732

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
RUUH RUDH	3	150	20	Abt. 0.45	75% Maximum	5% Minimum	130%
	6	75	80				
	9	50	180				
	12	37.5	320				
	24	18.7	1,280	Abt. 0.51	80% Max.		
	48	13.7	4,500				

Ordering Information

RUDH - SS - 1 12 D M

Contact Form:

Nil: One Form C

M: One Form A

B: One Form B

Coil Type:

D: Standard DC Coil

Coil Voltage:

03: 3V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type of Sealing:

SS: RT II Flux Proofed Relays

SH: RT III Wash Tight Relays

Type:

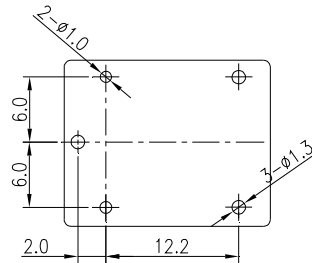
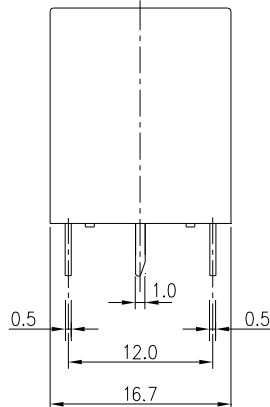
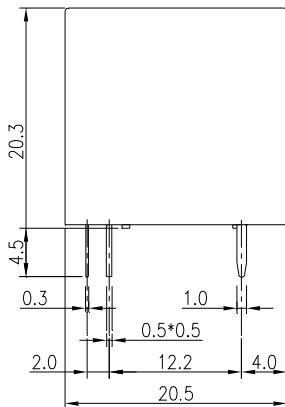
RUDH

RUUH

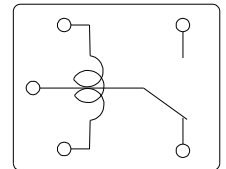
Classification

Model	RUDH / RUUH		
Contact Form	1C	1A	1B
Flux Proofed Relay	RUDH / RUUH -SS-1□□D	RUDH / RUUH - SS-1□□DM	RUDH / RUUH -SS-1□□DB
Wash Tight Relay	RUDH / RUUH-SH-1□□D	RUDH / RUUH - SH-1□□DM	RUDH / RUUH -SH-1□□DB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)



P.C.B. Layout



Bottom View



Main Feature

SF:

1. Flat formed type power relay rating 16A.
2. Appropriate for control of resistive load.
3. Low power consumption 200mW.

SFG:

1. Flat formed type power relay with fasten terminals and PC board terminals.
2. Appropriate for control of resistive load.
3. Low power consumption 200mW.

Contact Rating

Load Type	SF (DM)	SFG (DM)
Rated Load (Resistive)	15A 125VAC	15A 125VAC
	10A 277VAC	15A 250VAC
	16A 250VAC	10A 30VDC
	15A 24VDC	-
Contact capacity	1/4HP 125/250VAC TV-5 120VAC	-
Rated Carrying Current	16A	15A
Max. Allowable Voltage	AC 277V	AC 277V
Max. Allowable Current	16A	15A
Max. Allowable Power Force	4,000VA,	3,750VA
	384W	300W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

Application

Domestic, Appliance, Office Machine, Air Conditioner, Controlling Equivalent, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 20 mSec. Max.
- Release Time 10 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 1,500VAC at 50/60 Hz for one minute.
 - Between Contacts 1,000VAC at 50/60 Hz for one minute
- Surge Strength 5,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching :
 - Electrical 6 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -40~85°C
- Humidity Range 45~85% RH.
- Coil Temperature Rise 35°C Max.
- Vibration:
 - Endurance 10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 5x10⁴ Operations at Rated Resistive Load.
- Weight About SF :8.5g.
SFG :9 g.

Safety Standard & Its File Number

- SF: C-UL..... E141060
TÜV..... R9956053
CQC..... 04001011802
- SFG: UL..... E141060
CQC..... 04001011802

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)			
SF/SFG	5	40	125	Abt. 0.20	70% Maximum	5% Minimum	150%			
	6	34	180							
	9	23	405							
	12	17	720							
	18	11	1,620							
	24	8.3	2,880							
	48	4.2	11,520	Abt. 0.56						
	100	5.6	18,000							

Ordering Information

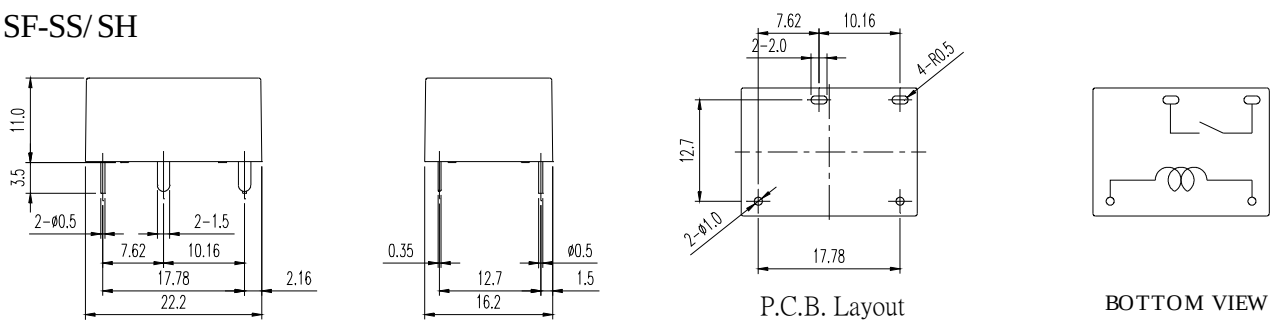
SF - SS - 1 12 D M
Contact Form: M: One Form A
Coil Type: D: Standard DC Coil
Coil Voltage: 05: 5V, 06: 6V, 09: 9V, 12: 12V, 18: 18V, 24: 24V, 48: 48V, 100: 100V
Number of Pole: 1: One Pole
Type of Sealing: SS: RT II Flux Proofed Relays
SH: RT III Wash Tight Relays
Type: SF
SFG

Classification

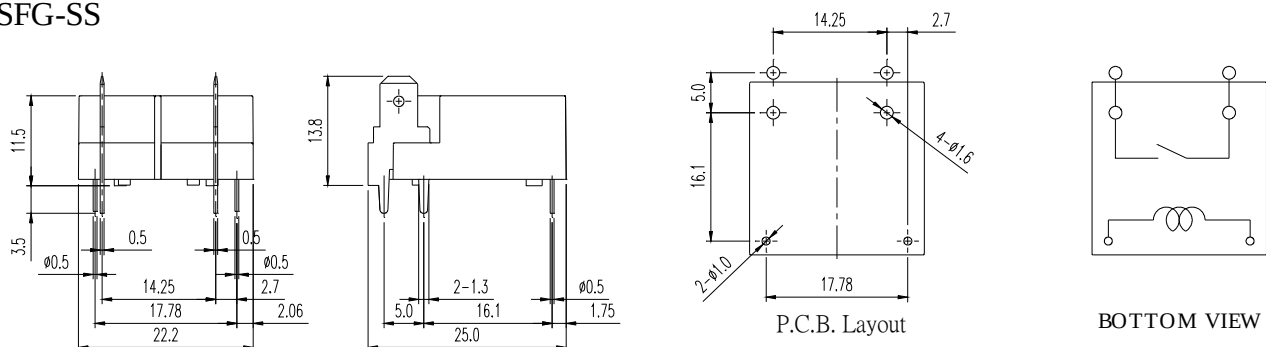
Model	SF	SFG
Contact Form	1A	1A
Flux Proofed Relay	SF-SS-1□□DM	SFG-SS-1□□DM
Wash Tight Relay	SF-SH-1□□DM	SFG-SH-1□□DM

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

SF-SS/SH



SFG-SS





Contact Rating

Load Type	SMIT (DMR/LMR)
Rated Load (Resistive)	10A 250 VAC.
	10A 30VDC
Contact Capacity	TV-5 120VAC
Rated Carrying Current	10A
Max. Allowable Voltage	AC 250V
	DC 110V
Max. Allowable Current	10A
Max. Allowable Power Force	1250VA
	300W
Contact Material	Ag Alloy
Contact Form	SPST

Application

Industrial Control Units, Air Conditioners and Consumer Equipment use...etc.

Performance (at Initial Value)

- Contact Resistance 100mΩ Max.@1A,6VDC
- Operate Time..... 15 mSec. Max.
- Release Time 10 mSec. Max.
- Dielectric Strength:
 - Between Coil & Contact 4,000VAC at 50/60 Hz for one minute.
 - Between Contacts 900VAC at 50/60 Hz for one minute.
- Surge Strength 7,000 V(between Coil & Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
 - Electrical..... 20 Cycles per Minute.
 - Mechanical 300 Cycles per Minute.
- Temperature Range..... -40~+70°C
- Humidity Range 45~85% RH.
- Coil Temperature Rise..... 40°C Max.
- Vibration :
 - Endurance 10 to 55 Hz dual amplitude width 1.5mm.
 - Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.

Main Feature

1. Slim type one make Relay with size 24.5 x 10.5 x 24.8 mm. Contact Capacity of 10A is available to comply with wide application.
2. Insulation distance 6mm is designed for insulation voltage 7000V.
3. Double Insulation construction for high reliability.
4. The employment of suitable plastic material to be applied for high temperature and various chemical solutions.
5. Complete protective construction is designed from dust and solder flux. If required, the plastic sealed type is available for washing procedure.
6. TV-5 at 120VAC is certified by UL.

- Shock :
 - Endurance 1,000 m/S².
 - Error Operation..... 100 m/S².
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
 - 2.5x10⁴ Operations at TV Rated Load.
- Weight About 10.2 g.

Safety Standard & Its File Number

SMIT - DMR/LMR

- C-UL E141060
- TÜV R9854437
- CQC.....02001002515

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
SMIT-DMR	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	120%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
SMIT-LMR	48	11	4,400	Abt. 0.25	80% Maximum	5% Minimum	120%
	3	83	36				
	5	50	100				
	6	42	144				
	9	28	325				
	12	21	580				
	24	10.4	2,300				

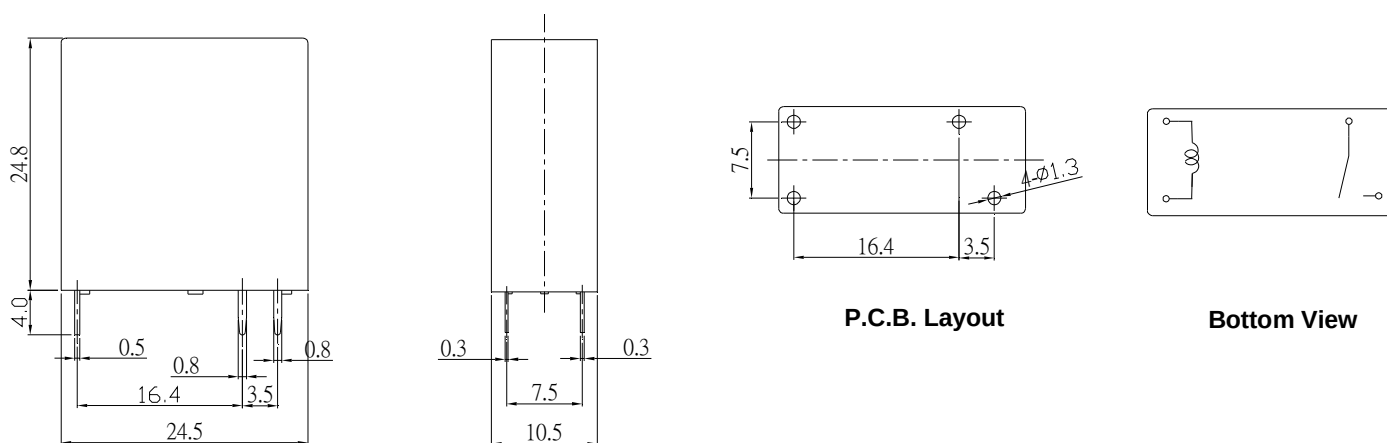
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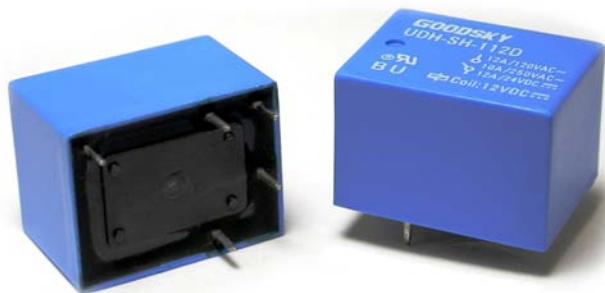
SMIT - SS - 1 12 D M R	
Contact Rating:	R: 10A/250VAC
Contact Form:	M: One Form A
Coil Type:	D: Standard DC Coil L: High Sensitivity DC Coil
Coil Voltage:	03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V
Number of Pole:	1: One Pole
Type of Sealing:	SS : RT II Flux Proofed Relays SH : RT III Wash Tight Relays
Type:	SMIT

Classification

Model	SMIT	
Coil Sensitivity	Standard DC Coil	High Sensitivity DC Coil
Contact Form	DMR	LMR
Flow Solder Type	SMIT -SS-1□□DMR	SMIT -SS-1□□LMR
Plastic Sealed Type	SMIT -SH-1□□DMR	SMIT -SH-1□□LMR

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)





Main Feature

1. UDH Relay Series is designed with switching capacity by 12A to comply with user's selection.
2. Insulation distance 4 mm Min. is designed. The employment of insulation material is meeting to JIS Insulation Class E. The Dielectric Strength of 2,000VAC Min. and Surge Resistance of 5,000V can be reached.
3. 2.54 mm terminal pitch employment is equal to I.C.'s terminal pitch.
4. Employment of suitable plastic materials is to be applied to high temperature condition and various chemical solutions.
5. Complete protective construction is designed from dust and soldering flux. If required, the plastic sealed type is available for washing procedure.

Contact Rating

Load Type	UDH (DM/DB)	UDH (D)
Rated Load (Resistive)	12A 120 VAC	12A 120 VAC
	10A 250 VAC	10A 250 VAC
	12A 24 VDC	12A 24 VDC
Rated Carrying Current	12A	12A
Max. Allowable Voltage	AC 240V,	AC 240V
	DC 110V	DC 110V
Max. Allowable Current	12A	12A
Max. Allowable Power Force	2,500VA	2,500VA
	280W	280W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

Cooking Appliances, Air Conditioners, Audio Equipment, Domestic Appliances, Car Control Units, etc.

Performance (at Initial Value)

- Contact Resistance 100mΩMax.@1A,6VDC
- Operate Time..... 7 mSec. Max.
- Release Time 4 mSec. Max.
- Dielectric Strength:
Between Coil & Contact 2,000VAC at 50/60 Hz
for one minute.
Between Contacts 750VAC at 50/60 Hz
for one minute.
- Surge Strength 5,000V (between Coil.
& Contact 1.2x50μSec.)
- Insulation Resistance 100 MegaΩ Min. at
500VDC.
- Max. On/Off Switching :
Electrical..... 6 Cycles per Minute.
Mechanical 300 Cycles per Minute.

- Temperature Range-30~65°C
- Humidity Range45~85% RH.
- Coil Temperature Rise40°C Max. (3~24V)
50°C Max. (48V)
- Vibration:
Endurance.....10 to 55 Hz dual
amplitude width 1.5mm.
Error Operation10 to 55 Hz dual
amplitude width 1.5mm.
- Shock :
Endurance1,000 m/S².
Error Operation100 m/S².
- Life Expectancy :
Mechanical10⁷ Operations at No
Load condition.
Electrical10⁵ Operations at
Rated Resistive Load.
- Weight.....About 9.5 g.

Safety Standard & Its File Number

- UL & C-UL.....E141060

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
UDH-D/DM	3	150	20	Abt. 0.45	75% Maximum	5% Minimum	130%
	5	86.2	56				
	6	75	80				
	9	50	180				
	12	37.5	320				
	24	20.9	1,150	Abt. 0.66			
	48	13.7	3,500				

Ordering Information

UDH - SS - 1 12 D M

Contact Form:

Nil: One Form C

M: One Form A

B: One Form B

Coil Type:

D: Standard DC Coil

Coil Voltage:

03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type of Sealing:

SS: RT II Flux Proofed Relays

SH: RT III Wash Tight Relays

Type:

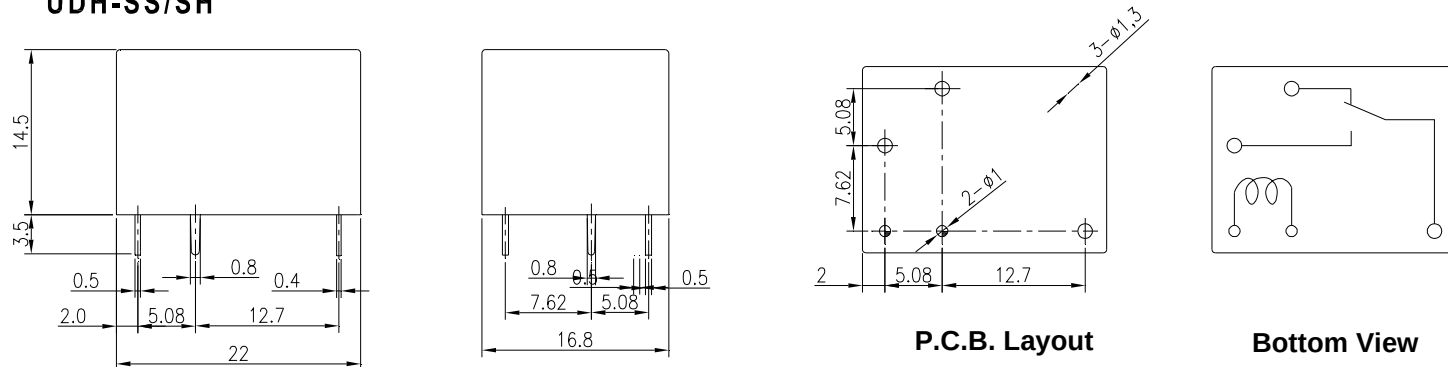
UDH

Classification

Model	UDH		
Contact Form	1C	1A	1B
Flux Proofed Relay	UDH -SS-1□□D	UDH - SS-1□□DM	UDH -SS-1□□DB
Wash Tight Relay	UDH -SH-1□□D	UDH - SH-1□□DM	UDH -SH-1□□DB

Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

UDH-SS/SH



Reference Data

