

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 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	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			30% Minimum		
	24	29.75	25.35	350	0.71	0.61			
	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

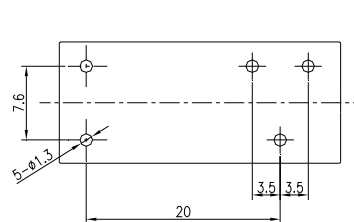
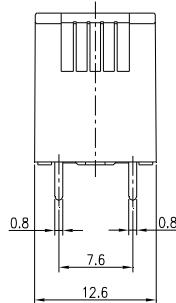
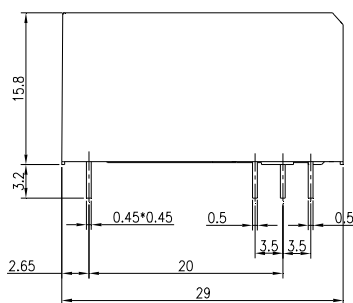
Type:

EMI

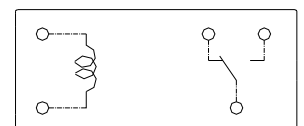
Classification

Model	EMI - 1P					
	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: $+0.1\text{mm}$)



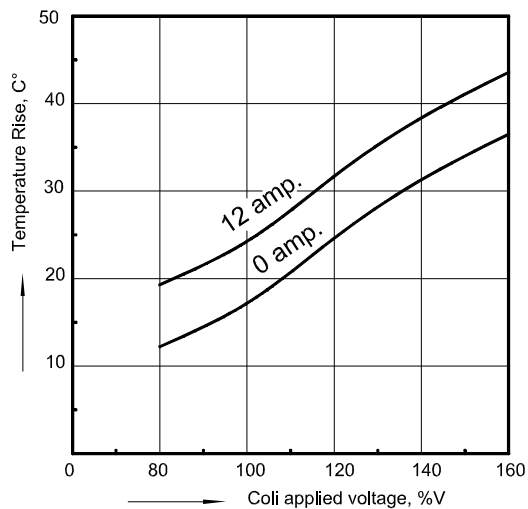
P.C.B. Layout



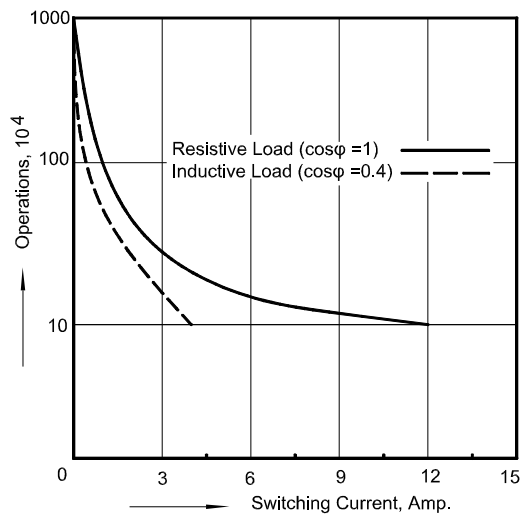
Bottom View

Reference Data

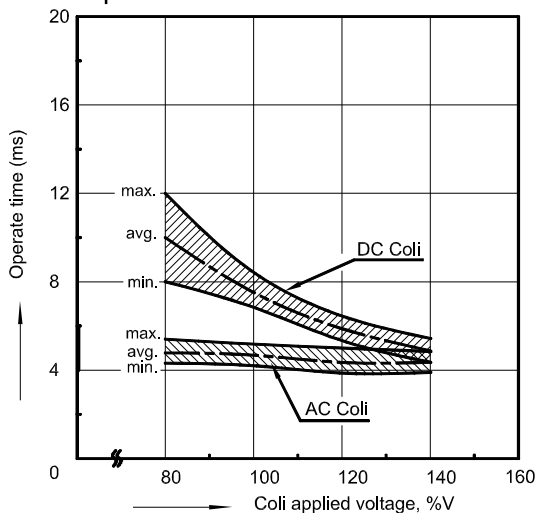
Temperature Rise (at 85°C)



Endurance



Operate time



Release time

