

## Main Feature

1. Dielectric Strength up to 4,000VAC.
2. 8mm safety distance between coil and contact.
3. Two pinning types available: 3.2 and 5.0mm.
4. Class F insulation system.
5. 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	SPDT	SPST	SPST

## Application

Heating Control, Interface Technology, Domestic Appliances, 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/S<sup>2</sup>.
  - Error Operation .....100 m/S<sup>2</sup>.
- Life Expectancy:
  - Electrical.....10<sup>5</sup> Operations at Rated Resistive Load.
  - Mechanical .....10<sup>7</sup> Operations at No load condition.
- Weight .....About 11.0 g.

## Safety Standard & File Number

- UL & C-UL.....E141060
- VDE.....40016958

## 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)
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

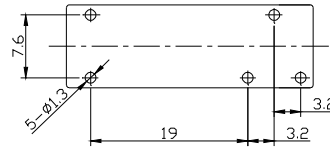
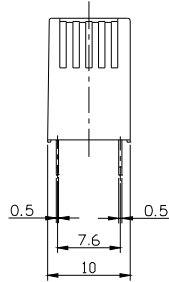
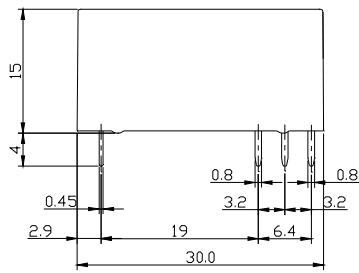
<b>EMR</b>	<b>- 1</b>	<b>12</b>	<b>D</b>	<b>M</b>	<b>- 3</b>	<b>G</b>	
<b>Contact Material:</b>						<b>Nil:</b> AgNi <b>G:</b> AgNi, Gilded <b>O:</b> AgNi, Au Plated <b>N:</b> AgSnO <sub>2</sub> <b>S:</b> AgSnO <sub>2</sub> , Gilded	
<b>Pinning Dimension:</b>						<b>3:</b> Pinning 3.2mm <b>5:</b> Pinning 5.0mm	
<b>Contact Form:</b>						<b>Nil:</b> One Form C <b>M:</b> One Form A <b>B:</b> One Form B (Pinning 3.2mm)	
<b>Coil Type:</b>						<b>D:</b> Standard DC Coil	
<b>Coil Voltage:</b>						<b>03:</b> 3V, <b>05:</b> 5V, <b>06:</b> 6V, <b>09:</b> 9V, <b>12:</b> 12V, <b>18:</b> 18V, <b>24:</b> 24V, <b>48:</b> 48V, <b>60:</b> 60V	
<b>Number of Pole:</b>						<b>1:</b> One Pole	
<b>Type:</b>						<b>EMR</b>	

## 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

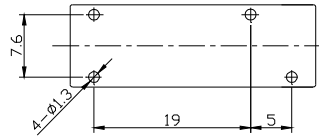
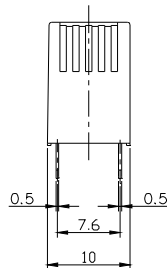
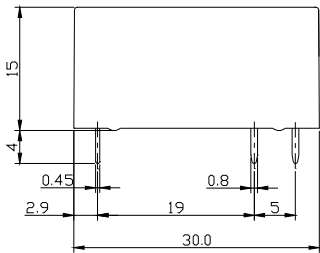


P.C.B Layout



BOTTOM VIEW

## EMR-DM-5

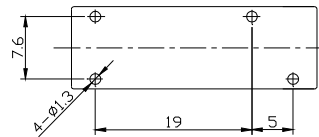
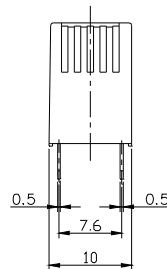
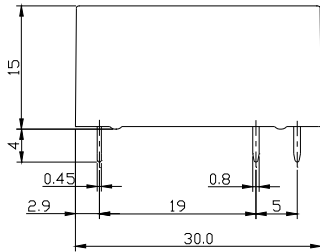


P.C.B Layout

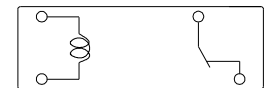


BOTTOM VIEW

## EMR-DB-5

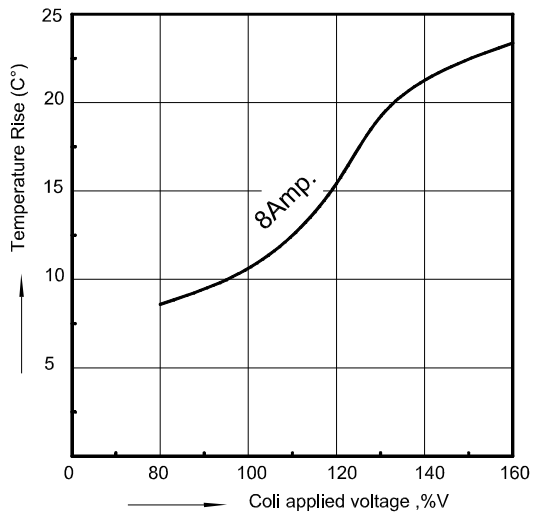


P.C.B Layout

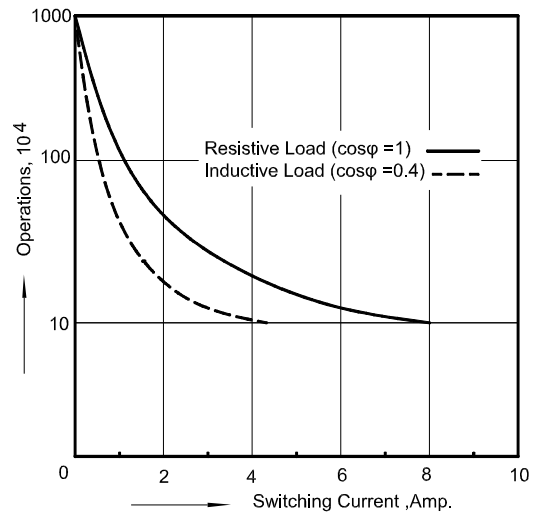


BOTTOM VIEW

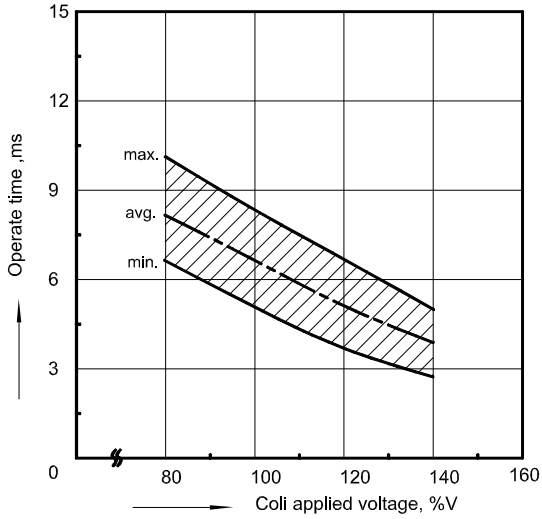
Temperature Rise (at 85°C)



Endurance



Operate time



Release time

