

# *EMR SERIES*

**For General Control & Home Appliance**

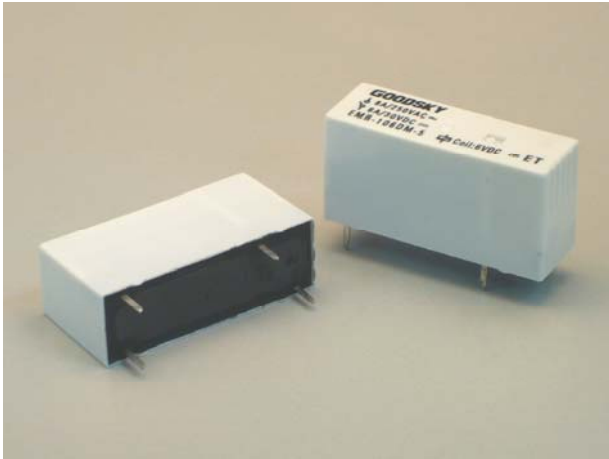
**Application** Control Board for Heating /  
Temp Control on Boiler / Burner; etc.

**Features** Low Profile 30.0×10.0×10.5mm  
EN 60335-1 Certificated  
(Equal to VDE 0700)

**Safety Standard** VDE, C-UL

**RoHS Compliant**





## Main Feature

1. 1 C/O & 1 N/O & 1 N/C Contact.
2. 4KV / 8 mm coil-contact.
3. Pinning: 3.2 and 5.0 mm.
4. Protection class II.
5. Especially suitable for resistive and inductive loads on N/O and N/C contacts.



## Contact Rating

Load Type	EMR (DM)	EMR (D)
Rated Load (Resistive)	8A 250VAC	8A 250VAC
	5A 30VDC	5A 30VDC
Max. Allowable Voltage	AC 380V	AC 380V
	DC 120V	DC 120V
Max. Allowable Current	8A	8A
Max. Allowable Power Force	2,000VA	2,000VA
	150W	150W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	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..... 12 mSec. 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 1.2x50μSec.)
- Insulation Resistance ..... 1,000 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 ..... 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/S<sup>2</sup>.
  - Error Operation..... 100 m/S<sup>2</sup>.
- Life Expectancy:
  - Electrical ..... 10<sup>5</sup> Operations at Rated Resistive Load. (tested with flow solder type relay)
  - Mechanical ..... 10<sup>7</sup> Operations at No load condition.
- Weight ..... about 11.0 g.

## Safety Standard & Its File Number

- 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	5	44.2	113	Abt. 0.22	EMR-D-3 80%Max EMR-DM(B)-5(3) 75%Max	5% Minimum	135%
	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 F

Type of Sealing

Nil : RT III wash tight relays

F : RT II flux proofed relays

Contact Material:

Nil: AgNi

G: AgNi, Gilded

O: AgNi, Au Plated

N: AgSnO<sub>2</sub>

S: AgSnO<sub>2</sub>, Gilded

Pinning Dimension:

3: Pinning 3.2mm

5: Pinning 5.0mm

Contact Form:

Nil: One Form C

M: One Form A

B: One Form 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:

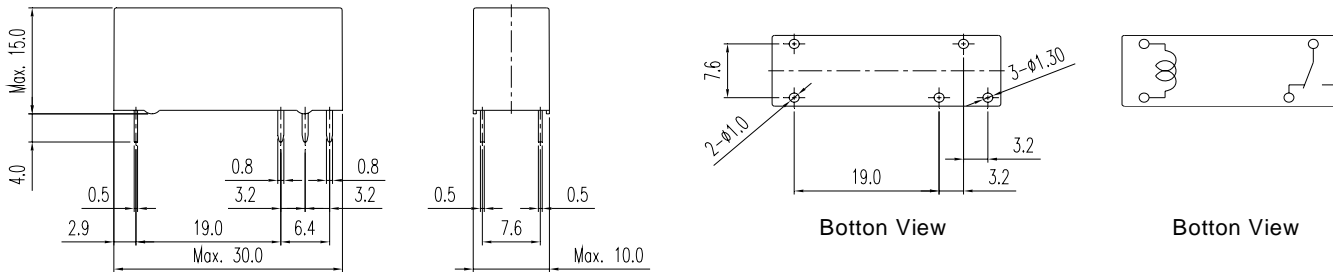
EMR

## Classification

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

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

