TRADITIONAL TYPE REED RELAY
EMR01,02,03 SERIES

■ FEATURES

- 2.54 mm IC terminal arrangement.
- High switching speed and low bounce time.
- Use gas tube sealed switch to prevent dust, gas and humidity influence.
- Wide operate voltage range and low power consumption.
- Ideal for use on cordless telephone, multifunction telephone, modem, burglar alarm etc..

■ SPECIFICATIONS

Types	01	02	03
Contact Form	1A,1B	1A,1B	1A,1B
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Contact Material	Rhodium	Rhodium	Rhodium
Life Expectancy Signal level load(ref 10VDC,10mA)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	OPEN	METAL	PLASTIC
Can Be Found In This Section of Brochure	PITCH 20.32+2.54mm	PITCH 20.32+2.54mm	PITCH 20.32+2.54mm

■ PART NUMBER SYSTEM

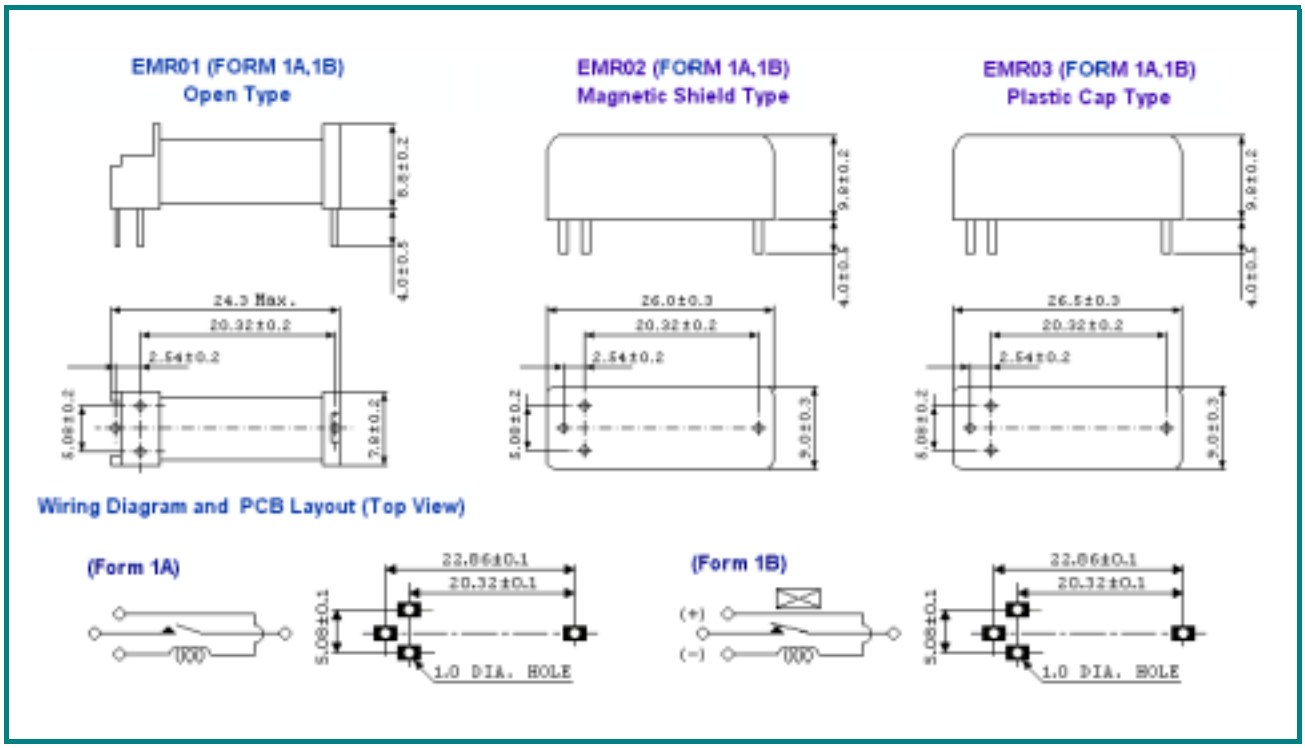
EMR 01 1 A 08

- 08: Nominal voltage: 08:8VDC
- A: Contact form:
  - A: CONTACT a (NORMAL OPEN)
  - B: CONTACT b (NORMAL CLOSE)
  - C: CONTACT c
- 1: Contact number set
- 01: Types
- EMR: Series name

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR011A03	3	500	18	2.4	0.8	11.0
EMR011A05	5	500	50	3.2	0.8	11.0
EMR011A06	6	500	72	3.8	0.8	11.0
EMR011A08	8	700	92	6.0	0.8	18.0
EMR011A09	9	700	116	6.0	0.8	18.0
EMR011A12	12	1050	138	8.0	0.8	22.0
EMR011A24	24	2080	277	16.0	0.8	32.0
EMR011B03	3	500	18	2.4	0.8	3.6
EMR011B05	5	500	50	3.75	0.8	6.0
EMR011B06	6	500	72	4.5	0.8	7.2
EMR011B08	8	700	92	6.0	0.8	9.6
EMR011B09	9	700	116	6.75	0.8	10.8
EMR011B12	12	1050	138	9.0	0.8	14.4
EMR011B24	24	2080	277	18.0	0.8	28.8
EMR021A03	3	500	18	2.4	0.8	11.0
EMR021A05	5	500	50	3.2	0.8	11.0
EMR021A06	6	500	72	3.8	0.8	11.0
EMR021A08	8	700	92	6.0	0.8	18.0
EMR021A09	9	700	116	6.0	0.8	18.0
EMR021A12	12	1050	138	8.0	0.8	22.0
EMR021A24	24	2080	277	16.0	0.8	32.0
EMR021B03	3	500	18	2.4	0.8	3.6
EMR021B05	5	500	50	3.75	0.8	6.0
EMR021B06	6	500	72	4.5	0.8	7.2

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR021B08	8	700	92	6.0	0.8	9.6
EMR021B09	9	700	116	6.75	0.8	10.8
EMR021B12	12	1050	138	9.0	0.8	14.4
EMR021B24	24	2080	277	18.0	0.8	28.8
EMR031A03	3	500	18	2.4	0.8	11.0
EMR031A05	5	500	50	3.2	0.8	11.0
EMR031A06	6	500	72	3.8	0.8	11.0
EMR031A08	8	700	92	6.0	0.8	18.0
EMR031A09	9	700	116	6.0	0.8	18.0
EMR031A12	12	1050	138	8.0	0.8	22.0
EMR031A24	24	2080	277	16.0	0.8	32.0
EMR031B03	3	500	18	2.4	0.8	3.6
EMR031B05	5	500	50	3.75	0.8	6.0
EMR031B06	6	500	72	4.5	0.8	7.2
EMR031B08	8	700	92	6.0	0.8	9.6
EMR031B09	9	700	116	6.75	0.8	10.8
EMR031B12	12	1050	138	9.0	0.8	14.4
EMR031B24	24	2080	277	18.0	0.8	28.8

■ DIMENSIONS (UNIT: mm)



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TRADITIONAL TYPE REED RELAY
EMR09,10,11 SERIES

■ FEATURES

- 2.54 mm IC terminal arrangement.
- High switching speed and low bounce time.
- Use gas tube sealed switch to prevent dust, gas and humidity influence.
- Wide operate voltage range and low power consumption.
- Ideal for use on cordless telephone, multifunction telephone, modem, burglar alarm etc..

■ SPECIFICATIONS

Types	09	10	11
Contact Form	1C	1C	1C
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 3 VA 30 VDC 0.2A 0.5A	 3 VA 30 VDC 0.2A 0.5A	 3 VA 30 VDC 0.2A 0.5A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Contact Material	Rhodium	Rhodium	Rhodium
Life Expectancy Signal level load(ref 10VDC,10mA)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	PLASTIC	METAL	PLASTIC
Can Be Found In This Section of Brochure	PITCH 22.86mm	PITCH 19.42+0.9mm	PITCH 19.42+0.9mm

■ PART NUMBER SYSTEM

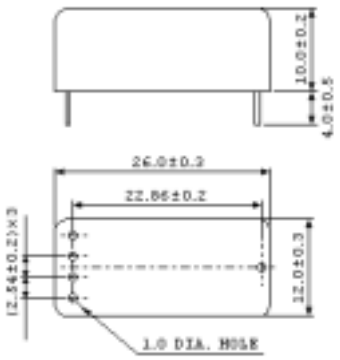
EMR 01 1 A 08

- 08: Nominal voltage: 08:8VDC
- A: Contact form:
  - A: CONTACT a (NORMAL OPEN)
  - B: CONTACT b (NORMAL CLOSE)
  - C: CONTACT c
- 1: Contact number set
- 01: Types
- EMR: Series name

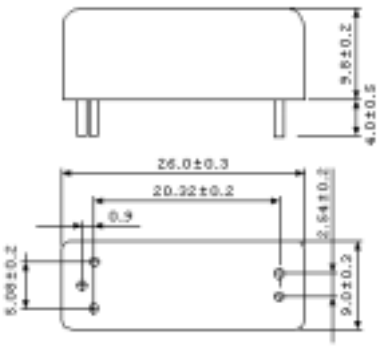
Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR091C03	3	500	18	2.4	0.8	11.0
EMR091C05	5	500	50	3.2	0.8	11.0
EMR091C06	6	500	72	3.8	0.8	11.0
EMR091C08	8	700	92	6.0	0.8	18.0
EMR091C09	9	700	116	6.0	0.8	18.0
EMR091C12	12	1050	138	8.0	0.8	22.0
EMR091C24	24	2080	277	16.0	0.8	32.0
EMR101C03	3	500	18	2.4	0.8	11.0
EMR101C05	5	500	50	3.2	0.8	11.0
EMR101C06	6	500	72	3.8	0.8	11.0
EMR101C08	8	700	92	6.0	0.8	18.0
EMR101C09	9	700	116	6.0	0.8	18.0
EMR101C12	12	1050	138	8.0	0.8	22.0
EMR101C24	24	2080	277	16.0	0.8	32.0
EMR111C03	3	500	18	2.4	0.8	11.0
EMR111C05	5	500	50	3.2	0.8	11.0
EMR111C06	6	500	72	3.8	0.8	11.0
EMR111C08	8	700	92	6.0	0.8	18.0
EMR111C09	9	700	116	6.0	0.8	18.0
EMR111C12	12	1050	138	8.0	0.8	22.0
EMR111C24	24	2080	277	16.0	0.8	32.0

■ DIMENSIONS (UNIT: mm)

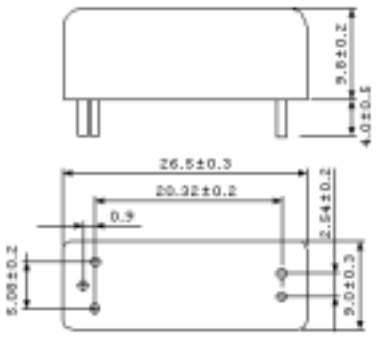
EMR09 (FORM 1C)
Plastic Cap Type



EMR10 (FORM 1C)
Magnetic Shield Type

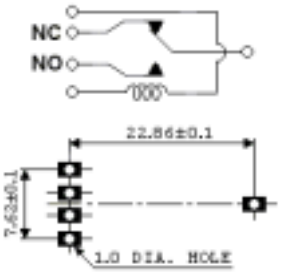


EMR11 (FORM 1C)
Plastic Cap Type

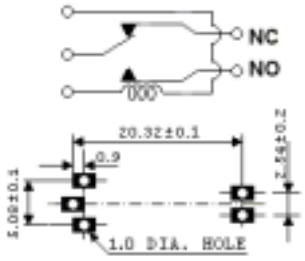


Wiring Diagram and PCB Layout (Top View)

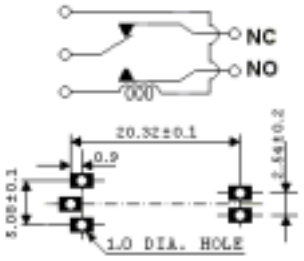
EMR09 (FORM 1C)



EMR10 (FORM 1C)



EMR11 (FORM 1C)



TRADITIONAL TYPE REED RELAY
EMR12,13,16 SERIES

■ FEATURES

- 2.54 mm IC terminal arrangement.
- High switching speed and low bounce time.
- Use gas tube sealed switch to prevent dust, gas and humidity influence.
- Wide operate voltage range and low power consumption.
- Ideal for use on cordless telephone, multifunction telephone, modem, burglar alarm etc..

■ SPECIFICATIONS

Types	12	13	16
Contact Form	1A,1B	1A,1B	1A
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 10 VA 100 VDC 0.5A 1.0A	**E155181(R)** 10 VA 100 VDC 0.5A 1.0A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Contact Material	Rhodium	Rhodium	Rhodium
Life Expectancy Signal level load(ref 10VDC,10mA)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 200 VDC	 1500 VAC 200 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	METAL	PLASTIC	METAL
Can Be Found In This Section of Brochure	SIP TYPE PITCH 5.08+10.16+5.08mm	SIP TYPE PITCH 5.08+10.16+5.08mm	SIP TYPE PITCH 5.08+10.16+5.08mm

■ PART NUMBER SYSTEM

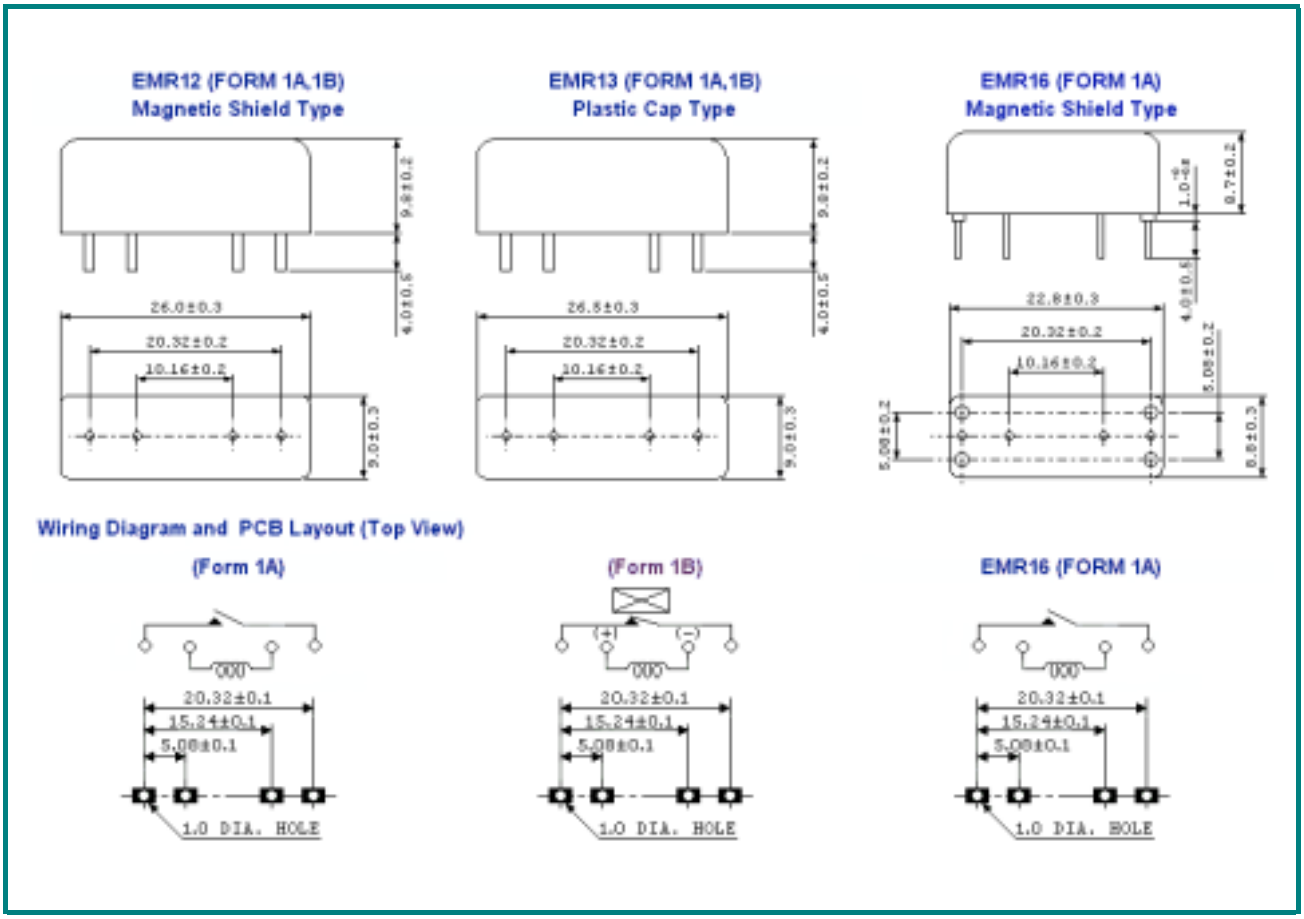
EMR 01 1 A 08

- 08: Nominal voltage: 08:8VDC
- A: Contact form:
  - A: CONTACT a (NORMAL OPEN)
  - B: CONTACT b (NORMAL CLOSE)
  - C: CONTACT c
- 1: Contact number set
- 01: Types
- EMR: Series name

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR121A03	3	500	18	2.4	0.8	11.0
EMR121A05	5	500	50	3.2	0.8	11.0
EMR121A06	6	500	72	3.8	0.8	11.0
EMR121A08	8	700	92	6.0	0.8	18.0
EMR121A09	9	700	116	6.0	0.8	18.0
EMR121A12	12	1050	138	8.0	0.8	22.0
EMR121A24	24	2080	277	16.0	0.8	32.0
EMR121B03	3	500	18	2.4	0.8	3.6
EMR121B05	5	500	50	3.75	0.8	6.0
EMR121B06	6	500	72	4.5	0.8	7.2
EMR121B08	8	700	92	6.0	0.8	9.6
EMR121B09	9	700	116	6.75	0.8	10.8
EMR121B12	12	1050	138	9.0	0.8	14.4
EMR121B24	24	2080	277	18.0	0.8	28.8
EMR131A03	3	500	18	2.4	0.8	11.0
EMR131A05	5	500	50	3.2	0.8	11.0
EMR131A06	6	500	72	3.8	0.8	11.0
EMR131A08	8	700	92	6.0	0.8	18.0
EMR131A09	9	700	116	6.0	0.8	18.0
EMR131A12	12	1050	138	8.0	0.8	22.0
EMR131A24	24	2080	277	16.0	0.8	32.0
EMR131B03	3	500	18	2.4	0.8	3.6
EMR131B05	5	500	50	3.75	0.8	6.0

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR131B06	6	500	72	4.5	0.8	7.2
EMR131B08	8	700	92	6.0	0.8	9.6
EMR131B09	9	700	116	6.75	0.8	10.8
EMR131B12	12	1050	138	9.0	0.8	14.4
EMR131B24	24	2080	277	18.0	0.8	28.8
EMR161A03	3	500	18	2.4	0.8	11.0
EMR161A05	5	500	50	3.2	0.8	11.0
EMR161A06	6	500	72	3.8	0.8	11.0
EMR161A08	8	700	92	6.0	0.8	18.0
EMR161A09	9	700	116	6.0	0.8	18.0
EMR161A12	12	1050	138	8.0	0.8	22.0
EMR161A24	24	2080	277	16.0	0.8	32.0

■ DIMENSIONS (UNIT: mm)



TRADITIONAL TYPE REED RELAY
EMR07,15,17 SERIES

■ FEATURES

- 2.54 mm IC terminal arrangement.
- High switching speed and low bounce time.
- Use gas tube sealed switch to prevent dust, gas and humidity influence.
- Wide operate voltage range and low power consumption.
- Ideal for use on cordless telephone, multifunction telephone, modem, burglar alarm etc..

■ SPECIFICATIONS

Types	07	15	17
Contact Form	2A,2B	1A	1A
Contact Rating Maximum switching power Maximum switching voltage Maximum switching current Maximum carry current	 10 VA 100 VDC 0.5A 1.0A	 1 VA 24 VDC 0.1A 0.3A	 25 VA 200 VDC 1.5A 2.5A
Nominal Input Power Reference 5V Version	50 mW	50 mW	50 mW
Contact Resistance, Initial	150 mΩ	150 mΩ	150 mΩ
Contact Material	Rhodium	Rhodium	Gold-Nickel Alloy
Life Expectancy Signal level load(ref 10VDC,10mA)	$10x10^6$	$10x10^6$	$10x10^6$
Timing (at nominal VDC, 25Hz drive, 50% duty cycle with diode suppression) Operate time, maximum (Including Bounce) Release time, maximum	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms	 1.0 ms 0.5 ms
Dielectric Voltage Coil to contact Across contacts	 500 VAC 200 VDC	 500 VAC 150 VDC	 3750 VAC 350 VDC
Insulation Resistance(Ω)	$100x10^6$	$100x10^6$	$100x10^6$
Temperature Range	-10℃ to +60℃	-10℃ to +60℃	-10℃ to +60℃
Shock Resistance	30G Min.	30G Min.	30G Min.
Electrical Life at Rated Load	10^6	10^6	10^6
Package Type	PLASTIC	PLASTIC	PLASTIC
Can Be Found In This Section of Brochure	PITCH 22.86mm	PITCH 12.7mm	SIP TYPE PITCH 10.6+10.6+10.6mm

■ PART NUMBER SYSTEM

EMR 01 1 A 08

- 08: Nominal voltage: 08:8VDC
- A: Contact form:
  - A: CONTACT a (NORMAL OPEN)
  - B: CONTACT b (NORMAL CLOSE)
  - C: CONTACT c
- 1: Contact number set
- 01: Types
- EMR: Series name

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR072A03	3	500	18	2.4	0.8	11.0
EMR072A05	5	500	50	3.2	0.8	11.0
EMR072A06	6	500	72	3.8	0.8	11.0
EMR072A08	8	700	92	6.0	0.8	18.0
EMR072A09	9	700	116	6.0	0.8	18.0
EMR072A12	12	1050	138	8.0	0.8	22.0
EMR072A24	24	2080	277	16.0	0.8	32.0
EMR072B03	3	500	18	2.4	0.8	3.6
EMR072B05	5	500	50	3.75	0.8	6.0
EMR072B06	6	500	72	4.5	0.8	7.2
EMR072B08	8	700	92	6.0	0.8	9.6
EMR072B09	9	700	116	6.75	0.8	10.8
EMR072B12	12	1050	138	9.0	0.8	14.4
EMR072B24	24	2080	277	18.0	0.8	28.8
EMR151A03	3	500	18	2.4	0.8	3.6
EMR151A05	5	500	50	4.0	0.8	6.0
EMR151A06	6	500	72	4.8	0.8	7.2
EMR151A08	8	700	92	6.4	0.8	9.6
EMR151A09	9	700	116	7.2	0.8	10.8
EMR151A12	12	1050	138	9.6	0.8	14.4
EMR151A24	24(18)	2080	277	14.4	0.8	28.8
EMR171A03	3	500	18	2.4	0.8	11.0
EMR171A05	5	500	50	3.2	0.8	11.0

Part Number	Nominal Voltage(VDC)	Coil Resistance (Ohms+/-10%)	Nominal Input Power(mW)	Must Operate Voltage(VDC)	Must Release Voltage(VDC)	Maximum Voltage(VDC)
EMR71A06	6	500	72	3.8	0.8	11.0
EMR171A08	8	700	92	6.0	0.8	18.0
EMR171A09	9	700	116	6.0	0.8	18.0
EMR171A12	12	1050	138	8.0	0.8	22.0
EMR171A24	24	2080	277	16.0	0.8	32.0

■ DIMENSIONS (UNIT: mm)