

## MR62 Series



The NEC MR62 series offers such characteristics as, sealed package for flow soldering, stable contact resistance at high temperature, as well as 1500V to 2500V FCC surge capability between coil and contacts.

This MR62 series is available in 2 form C (DPDT) contact arrangements in a through hole DIP terminal design.

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### FEATURES

- DIP terminal
- 2 form C Bifurcated-Crossbar contacts
- Plastic sealed package for flow-soldering process
- Super reliability at signal level
- UL recognized (E73266), CSA certified (LR46266)
- 1500 V FCC surge between coil and contacts and between adjacent contacts (Standard type)
- 1500 V FCC surge between open contacts (K, KY type)
- 1500 V FCC surge between coil and contacts and between adjacent contacts (K, Y, KY type)
- 2500 V FCC surge strength between coil and contacts (Z type)
- 1500 V FCC surge strength between open contacts, and between adjacent contacts (Z type)
- 400 mW nominal operate power (Y, KY type)
- 400 mW nominal operating power (Z type)

## SPECIFICATIONS

Types		MR62	MR62-**K**	MR62-****Y	MR62-**K*Y	MR62-*****Z
Contact Form		2 form C				
Contact Material		Silver alloy with gold alloy overlay				
Contact Ratings	Maximum switching power	60 W, 125 VA				
	Maximum switching voltage	220 Vdc, 250 Vac				
	Maximum switching current	2 A				
	Maximum carrying current	2 A				
Minimum Contact Ratings		100 mVdc, 100 $\mu$ A				
Initial Contact Resistance		50 mOhm typical				
Nominal Operating Power		Approximately 550 mW	Approximately 550 mW	Approximately 400 mW	Approximately 400 mW	Approximately 400 mW
Operate Time (Excluding bounce)		Approximately 2.5 ms without diode		Approximately 3.5 ms without diode		
Release Time (Excluding bounce)		Approximately 2 ms				
Insulation Resistance		1000 MOhm at 500 Vdc				
Breakdown Voltage	Between open contacts	500 Vac*1	1000 Vac*1 1500 V surge*2	500 Vac*1	1000 Vac*1 1500 V surge*2	1000 Vac*1 1500 V surge (10 x 160 $\mu$ s*2)
	Between adjacent contacts	1000 Vac*1	1000 Vac*1 1500 V surge*2			
	Between coil to contacts	1000 Vac*1 1500 V surge*2				1500 Vac*1 2500 V surge*3
Shock Resistance		294 m/s <sup>2</sup> (30 G) (misoperating) 980 m/s <sup>2</sup> (100G) (destructive failure)				
Vibration Resistance		10 to 55 Hz, double amplitude 1.5 mm (10 G) (misoperating) 10 to 55 Hz, double amplitude 5 mm (30 G) (destructive failure)				
Ambient Temperature		-40 to +85°C				
Coil Temperature Rise		40° C (550mW)	35° C		35° C (400mW)	
Running Specifications	Nonload	1 x 10 <sup>7</sup> operations				
	Load	50 Vdc, 0.1 A (resistive) 1 x 10 <sup>6</sup> operations at 85°C 10 Vdc, 10 mA (resistive) 1 x 10 <sup>6</sup> operations at 85°C				
Weight		Approximately 5 g				

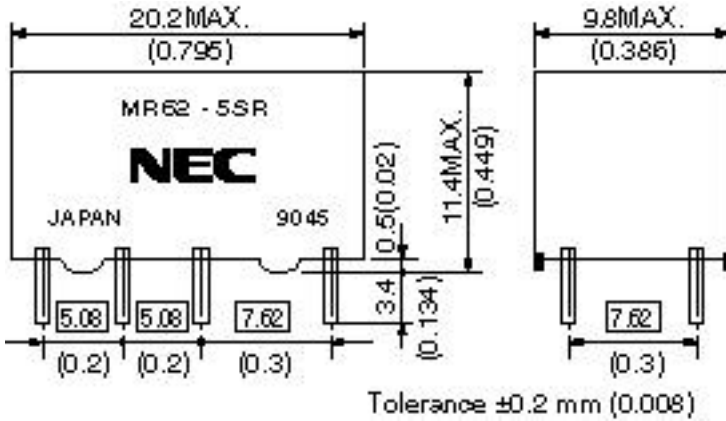
\*1 for one minute

\*2 rise time: 10 $\mu$ s,  
fall time: 160 $\mu$ s

\*3 rise time: 2 $\mu$ s,  
fall time: 10 $\mu$ s

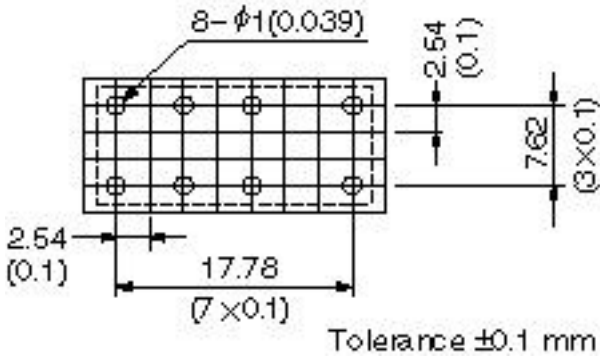
## DIMENSIONS

mm (inch)



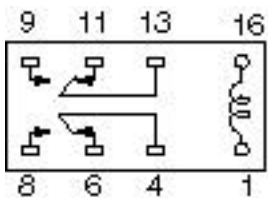
## PCB PAD LAYOUT

(bottom view) mm (inch)



## SCHEMATICS

(bottom view)



Approx. 5g (0.17 oz)

Not energized position

## PART NUMBER SYSTEM

MR62 - 5 U K S R Y Z  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① Relay Series
- ② Nominal Coil Voltage (See part numbers)
- ③ Safety Standard  
 U: UL Recognized CSA Certified Type
- ④ Breakdown voltage between open contacts  
 Blank: 500Vac  
 K: 1000Vac
- ⑤ Sealed Type (Washable)
- ⑥ Contact Material  
 Blank: Silver-palladium alloy with gold alloy overlay  
 R: Silver-nickel alloy with gold alloy overlay
- ⑦ Nominal operate power  
 Blank: 550 mW  
 Y: 400 mW
- ⑧ Breakdown voltage between coil to contact  
 Blank: 1000Vac  
 Z: 1500Vac

## STANDARD PART NUMBERS - Standard Type

At 25° C (77° F)

Part Number	Nominal Voltage (Vdc)	Coil Resistance (Ohm) ±10%	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)
MR62-5SR	5	42	3.1	0.25
MR62-6SR	6	66	3.9	0.33
MR62-9SR	9	140	5.7	0.45
MR62-12SR	12	280	8.1	0.68
MR62-24SR	24	1050	15.8	1.3
MR62-48SR	48	4200	34.4	2.6

**STANDARD PART NUMBERS - K, Y, KY Type**

At 25° C (77° F)

Part Number	Nominal Voltage (Vdc)	Coil Resistance (Ohm) ±10%	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)
MR62-5SR Y	5	62.5	3.5	0.25
MR62-6SR Y	6	90	4.2	0.33
MR62-9SR Y	9	202.5	6.3	0.45
MR62-12SR Y	12	360	8.4	0.68
MR62-24SR Y	24	1440	16.8	1.3
MR62-48SR Y	48	5760	33.6	2.6
MR62-5KSR	5	42	3.5	0.25
MR62-6KSR	6	66	4.2	0.33
MR62-9KSR	9	140	6.3	0.45
MR62-12KSR	12	280	8.4	0.68
MR62-24KSR	24	1050	16.8	1.3
MR62-48KSR	48	4200	38.4	2.6
MR62-5KSR Y	5	62.5	3.5	0.25
MR62-6KSR Y	6	90	4.2	0.33
MR62-9KSR Y	9	202.5	6.3	0.45
MR62-12KSR Y	12	360	8.4	0.68
MR62-24KSR Y	24	1440	16.8	1.3
MR62-48KSR Y	48	5360	38.4	2.6

**STANDARD PART NUMBERS - Z Type**

At 25° C (77° F)

Part Number	Nominal Voltage (Vdc)	Coil Resistance (Ohm) ±10%	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)
MR62-4.5SR YZ	4.5	50.5	3.6	0.23
MR62-5SR YZ	5	62.5	4.0	0.25
MR62-6SR YZ	6	90	4.8	0.33
MR62-9SR YZ	9	202.5	7.2	0.45
MR62-12SR YZ	12	360	9.6	0.68
MR62-24SR YZ	24	1440	19.2	1.3

## SAFETY STANDARD AND RATING

UL Recognized (UL508)* File No. E73266	CSA Certified (CSA C22.2 No. 14) File No. LR46266
30 Vdc, 2A (Resistive) 110 Vdc, 0.6 A (Resistive) 125 Vac, 0.5 A (Resistive)	

\* Spacing: UL114, UL478

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