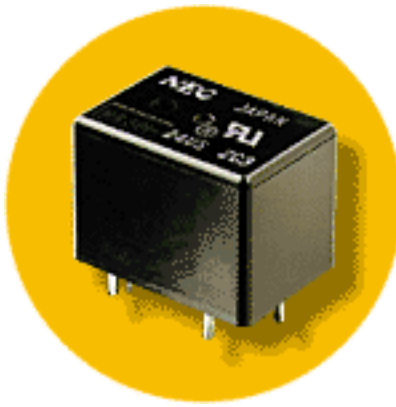




MR301 Series



The NEC MR301 series relay is a miniature, PC-mount, 1 Form C (SPDT) relay. The plastic cover on the MR301 is offered either vented, or fully-sealed to allow for immersion cleaning. Different contact materials are offered to cover loads from 1-20A, at voltages up to 30VDC or 250VAC.

The MR301 is available in an industry-standard footprint. Its very high quality makes it ideal for automotive and industrial control applications.

FEATURES

- Small size, lightweight
- Three types of contacts (.1 - 5A, 1.0 - 10A, 1.0 - 20A switching)
- Fluxtight or washable package is available
- High reliability
- UL recognized (E73266), CSA certified (LR46266)

SPECIFICATIONS

Types (Contact Rating)		MR301 (5A)	MR301-H (10A)	MR301-E (20A)
Contact Form		1 form C		
Contact Ratings	Maximum switching power (resistive load)	150 W, 600 VA	300 W, 1200 VA	480 W, 1900 VA
	Maximum switching voltage (resistive load)	250 Vac, 30 Vdc		
	Maximum switching current (resistive load)	5A	10A	20A
	Minimum switching voltage and current	5 Vdc, 0.1 A	5 Vdc, 1 A	5 Vac, 1 A
	Contact resistance (initial)	10 mOhm typ./50 mOhm max. measured at 5 Vdc, 0.5A	10 mOhm typ./50 mOhm max. measured at 5 Vdc, 2A	
Contact Material		Silver nickel alloy	Silver oxide complex alloy	
Operate Time (Excluding bounce)		Approximately 5 ms (at nominal voltage)		
Release Time (Excluding bounce)		Approximately 2 ms (at nominal voltage) without diode		
Nominal Operate Power		360 mW		
Insulation Resistance		1000 MOhm at 500 Vdc		
Breakdown Voltage	Between open contacts	750 Vac (for one minute)		
	Between contacts and coil	1500 Vac (for one minute)		
Electrostatic Capacitance	Between open contacts	Approximately 1 pF		
	Between contacts and coil	Approximately 10 pF		
Shock Resistance		98 m/s ² (10 G) (misoperating) 980 m/s ² (100G) (destructive failure)		
Vibration Resistance		10 to 300 Hz, 43 m/s ² (4.4 G) (misoperating) 10 to 500 Hz, 43 m/s ² (4.4 G), 200 hours (destructive failure)		
Ambient Temperature		-40 to +85° C (-40 to +185° F)		
Coil Temperature Rise		50° C / W (122° F/W)		
Life Expectancy	Mechanical	100 x 10 ⁶ operations		
	Electrical (at maximum load)	100 x 10 ³ operations		
Weight		Approximately 13 g (0.46 oz)		

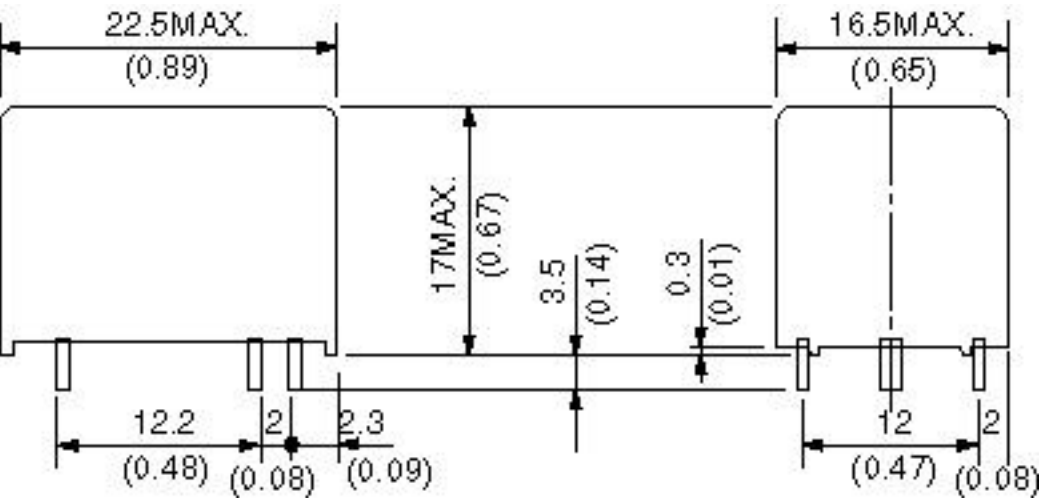
COIL RATING

at 25° C (77° F)

Nominal Voltage		Coil Resistance (Ohm) ±10%	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)
Vdc	3	25	2.1	0.3
	5	70	3.5	0.5
	6	100	4.2	0.6
	9	225	6.3	0.9
	12	400	8.4	1.2
	24	1600	16.8	2.4

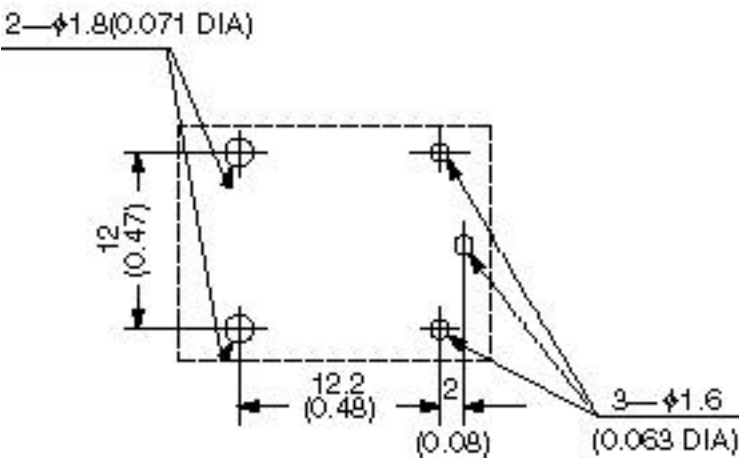
DIMENSIONS

mm (inch)



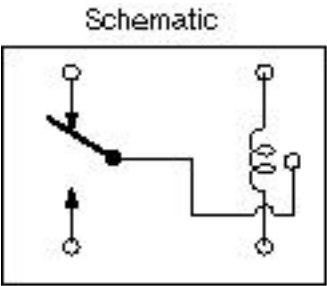
PCB PAD LAYOUT

(bottom view) mm (inch)



SCHEMATICS

(bottom view)



(0.46 oz)

Not energized position
Weight Approx. 13 g

PART NUMBER SYSTEM

MR301 - 3 H U S L
① ② ③ ④ ⑤ ⑥

- ① Relay Series
- ② Nominal Coil Voltage (3, 5, 6, 9, 12, 24 Vdc)
- ③ Contact Type
 - Blank: General Type (5A)
 - H: Medium Power Type (10A)
 - E: High Power Type (20A)
- ④ Safety Standard
 - Blank: Standard Type
 - U: UL Recognized CSA Certified Type
- ⑤ Sealed Type
 - Blank: Fluxtight
 - S: Washtight
- ⑥ Standoff
 - Blank: 0.3 mm
 - L: 0.8 mm

World Products Inc.
19654 8th St. East, Sonoma, CA 95476 USA
Phone: (707) 996-5201 Fax: (707) 996-3380
E-mail: emdsales@worldproducts.com

© 1998 World Products Inc. All rights reserved.