EQ1 SERIES

FEATURES

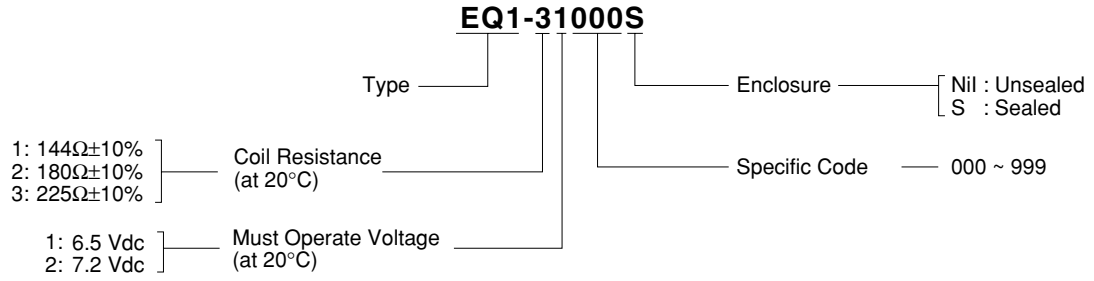
- Same pin-layout as conventional relay (MR301 Series)
- 70% less relay volume than conventional relay (MR301 Series)
- 80% less relay space than conventional relay (MR301 Series)
- 90% less relay height than conventional relay (MR301 Sereis)
- 60% less relay weight than conventional relay (MR301 Sereis)
- Contact switching current of 30A max.
- Flux tight housing
- Delivered in stick-tube for automatic insertion machine
- Washable type available

PART NUMBERS AND COIL RATINGS

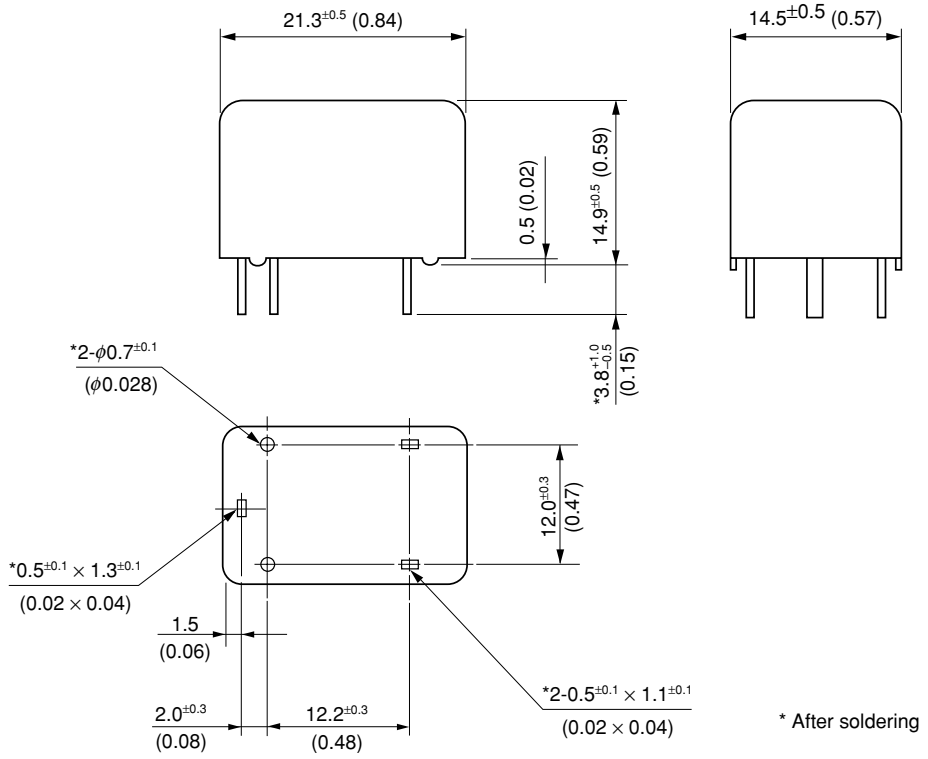
At 20°C (68°F)

Part Number	Nominal Voltage (Vdc)	Coil Resistance (Ω±10%)	Nominal Current (mA)	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)	Nominal Operate Power (W)
EQ1-31000S	12	225	53.3	6.5	0.9	0.64
EQ1-11040S	12	144	83.3	6.5	0.6	1.00
EQ1-22111S	12	180	66.7	7.2	0.7	0.80
EQ1-11111S	12	144	83.3	6.5	0.6	1.00

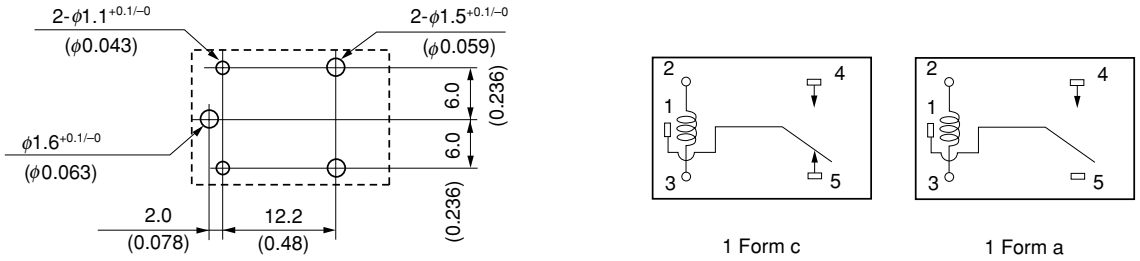
PART NUMBER SYSTEM



DIMENSIONS mm (inch)



PCB PAD LAYOUT and SCHEMATICS (bottom view) mm (inch)



SPECIFICATIONS At 20°C (68°F)

Items		Specification			
		EQ1-31000S	EQ1-11040S	EQ1-11111S	EQ1-22111S
Contact Form		1 form c		1 form a	
Contact Material		Silver oxide complex alloy			
Contact Resistance		5 mΩ typical (measured at 1 A) initial			
Contact Switching Voltage		16 Vdc max. 5 Vdc min.			
Contact Switching Current		30 A max. (at 16 Vdc)			
Contact Carrying Current (2 minutes max.)		40 A (12 Vdc at 25°C) 35 A (12 Vdc at 85°C)	35 A (12 Vdc at 25°C) 30 A (12 Vdc at 85°C)		
Operate Time		3 ms typical (at nominal voltage) initial			
Release Time		4 ms typical (at nominal voltage. with diode) initial			
Nominal Operate Power		640 mW	1000 mW		800 mW
Insulation Resistance		100 MΩ at 500 Vdc			
Breakdown Voltage		500 Vac min. for 1 minute			
Shock Resistance		98 m/s^2 min. [misoperating]			
Vibration Resistance		10 to 300 Hz, 43 m/s^2 min. [misoperating]			
Ambient Temperature		–40°C to +85°C (–40°F to +185°F)		–40°C to +125°C (–40°F to +257°F)	
Coil Temperature		70°C/W (contact carrying current 0 A)			
Life Expectancy	Mechanical	1 × 10^6 operations			
	Electrical	1 × 10^5 operations (at 14 Vdc, motor load 20 A/3 A)		1 × 10^5 operations (at 14 Vdc. Lamp load 120 W)	
Weight		Approx. 9 g			

Mouser Electronics

Authorized Distributor

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NEC:

EQ1-31000S EQ1-22111S EQ1-11111S