

EN2 SERIES

FEATURES

- Twin relay for motor and solenoid reversible control
- 30% less relay space than conventional two relays
- Contact switching current of 35 A max.
- High performance and productivity by unique symmetrical structure
- 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 ($\Omega \pm 10\%$)	Nominal Current (mA)	Must Operate Voltage (Vdc)	Must Release Voltage (Vdc)	Nominal Operate Power (W)
H bridge Type	Separate Type						
EN2-1N1S	EN2-1N1ST	12	125	96.0	6.5	0.6	1.15
EN2-1N2S	EN2-1N2ST	12	125	96.0	7.0	0.6	1.15
EN2-2N3S	EN2-2N3ST	12	180	67.0	7.5	0.6	0.8
EN2-2N4S	EN2-2N4ST	12	180	67.0	8.0	0.6	0.8
EN2-3N4S	EN2-3N4ST	12	225	53.0	8.0	0.9	0.64
EN2-3N5S	EN2-3N5ST	12	225	53.0	8.5	0.9	0.64

PART NUMBER SYSTEM

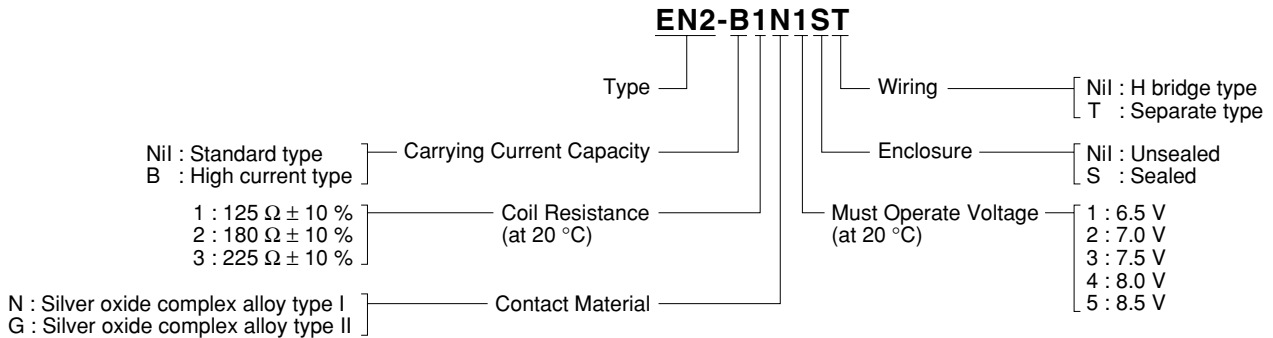
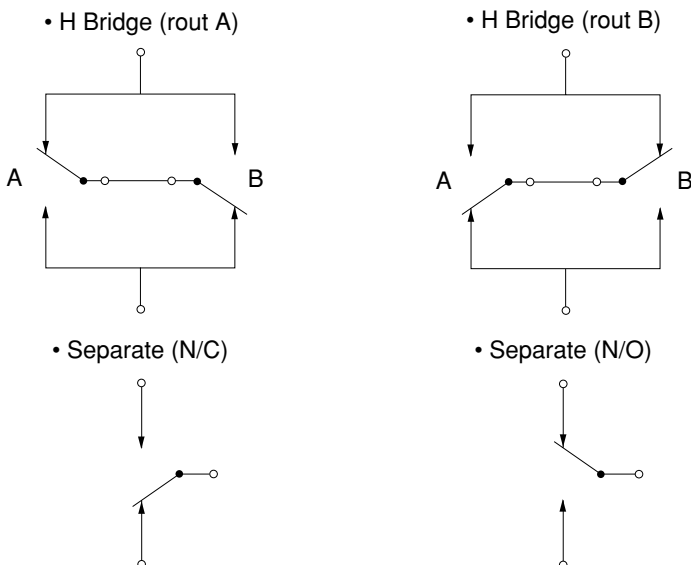
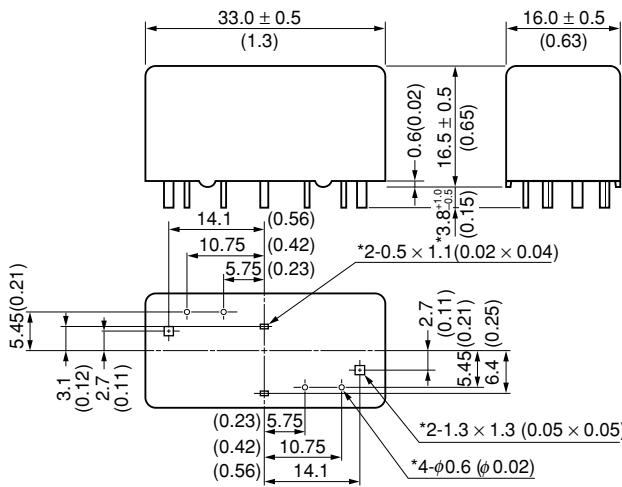


Figure 1 Contact Resistance*

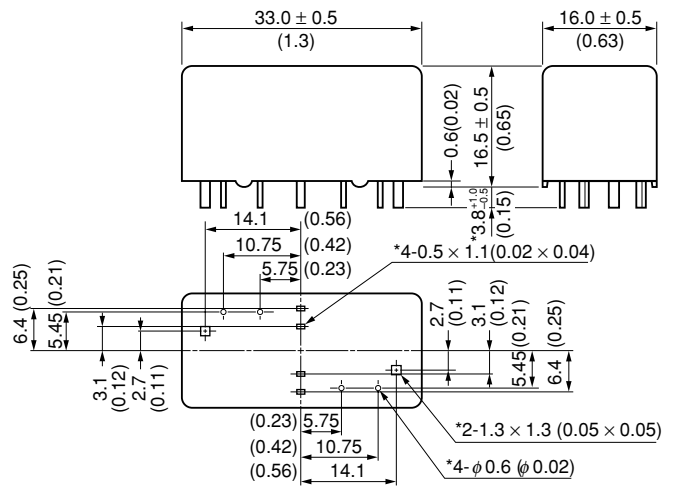


DIMENSIONS mm (inch)

[H Bridge Type]



[Separate (T) Type]

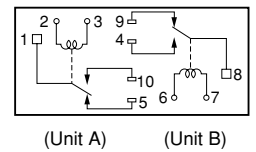
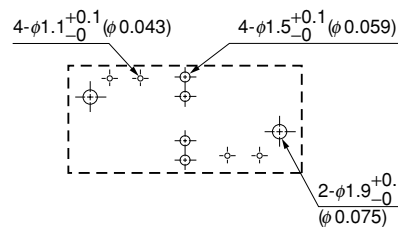
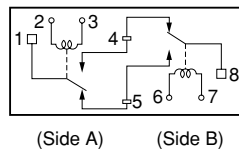
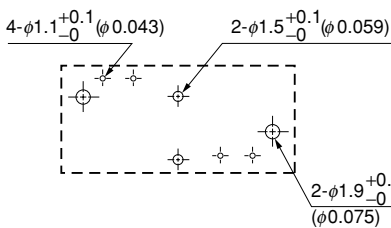


* After soldering

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

[H Bridge Type]

[Separate (T) Type]



SPECIFICATIONS

At 20°C (68°F)

Items	Specification	
	EN2-(Standard)	EN2-B (High Current)
Contact Form	1 Form c x 2 (H Bridge Type or Separate Type)	
Contact Material	Silver oxide complex alloy (Special types available)	
Contact Resistance (*figure 1) (measured by voltage drop at 6 Vdc, 7A)	H Bridge (rout A): 8.1 mΩ typ. H Bridge (rout B): 7.8 mΩ typ. Separate (N/C): 3.9 mΩ typ. Separate (N/O): 3.9 mΩ typ.	H Bridge (rout A): 4.9 mΩ typ. H Bridge (rout B): 4.6 mΩ typ. Separate (N/C): 2.3 mΩ typ. Separate (N/O): 2.3 mΩ typ.
Contact Switching Voltage	16 Vdc max. 5 Vdc min.	
Contact Switching Current	35A max. (at 16 Vdc) 1 A min.	
Contact Carrying Current (2 minutes max.)	H Bridge 25A (12Vdc, 20°C) 20A (12Vdc, 85°C)	35A (12Vdc, 20°C) 30A (12Vdc, 85°C)
	Separate 30A (12Vdc, 20°C) 25A (12Vdc, 85°C)	40A (12Vdc, 20°C) 35A (12Vdc, 85°C)
Operate Time	Approx. 5 ms (at 12 Vdc)	
Release Time	Approx. 7 ms (at 12 Vdc), with diode	
Nominal Operate Power	0.64 W/0.8 W/1.15 W (at 12 Vdc)	
Insulation Resistance	100 MΩ min. at 500 Vdc, Initial	
Breakdown Voltage	500 Vac min. for 1 minute, Initial	
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)	
Coil Temperature Rise	50°C/W (Contact Carrying Current 0 A)	
Life Expectancy	Mechanical	1 x 10 ⁶ operations
	Electrical	1 x 10 ⁵ operations (at 14 Vdc, Motor Load 30 A/7 A)
Weight	Approx. 18 g	

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Standard: Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots

Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

Specific: Aircrafts, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems or medical equipment for life support, etc.

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