



# Microminiature Reed Relays (1)

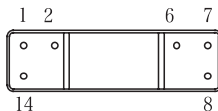
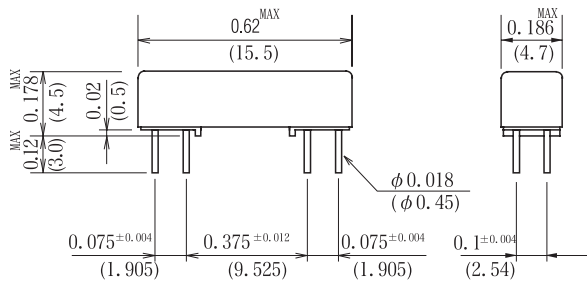


It has been materialized pitch smaller than 30D series to superior to high frequency types 41R series are excellent to debug/high density mounting, as they are low stray capacitance types with LED.

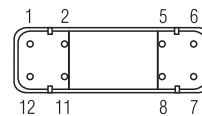
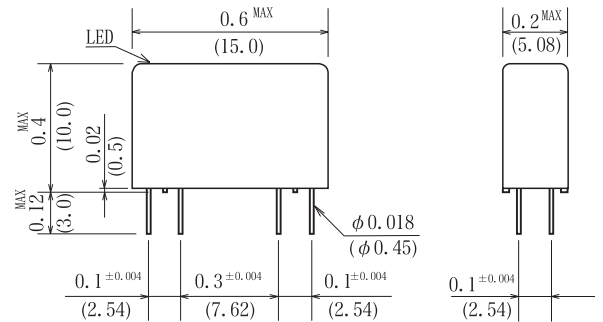
## Mechanical Dimensions

All dimensions are measured in inches (millimeters).

4 0 R - 1 A □ 2 N 1



- 4 1 R - 1 A □ 2 E 0
- 4 1 R - 2 A □ 2 E 0
- 4 1 R - 1 E □ 2 E 0





40R, 41R Series			Model Number		Model Number		Model Number			
			40R-1A□2N1		41R-1A□2E0		41R-2A□2E0		41R-1E□2E0	
Parameters	Test Condition	Units	1 Form A		1 Form A		2 Form A		1 Form C	
<b>Coil Specs</b>										
Nominal coil voltage		VDC	5	12	5	12	5	12	5	12
Coil resistance	±10% at 20°C	Ω	150	600	180	680	180	680	180	680
Operating voltage	15°C~35°C	VDC Max	3.6	9.6	3.6	9.6	3.6	9.6	3.6	9.6
Operating voltage range	15°C~35°C	VDC	—	—	—	—	—	—	3.6/5.5	9.6/13.2
Release voltage	15°C~35°C	VDC Min	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2
<b>Contact Ratings</b>										
Switching voltage	Max. DC/Peak AC resistance	Volts	200		200		200		200	
Switching current	Max. DC/Peak AC resistance	Amps	0.5		0.5		0.5		0.5	
Carry current	Max. DC/Peak AC resistance	Amps	1.0		1.0		1.0		1.0	
Contact rating	Max. DC/Peak AC resistance	Watts	10		10		10		10	
Life expectancy	1V, 10mA	×10 <sup>6</sup> Cyc	1500		100		100		100	
Contact resistance	Maximum initial	mΩ	150		150		150		150	
Contact resistance stability	Maximum initial	mΩ	5.0		5.0		5.0		5.0	
<b>Relay Specifications</b>										
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10 <sup>11</sup>		10 <sup>10</sup>		10 <sup>10</sup>		10 <sup>10</sup>	
Capacitance		pF-Max								
Across open contacts	Shield guarding		0.2		0.2		0.2		0.3	
Contact to Shield	Contacts open, Make-shield								0.3	
	Shield floating		1.2		1.2		1.2		2.4	
Open contact to coil	Shield guarding: Make-Coil		0.5		0.5		0.5		0.5	
Dielectric strength	Between contacts	VDC	200		200		200		200	
	Contacts to shield		200		200		200		200	
Operating time (Including bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.35		0.5		0.5		1.0	
Release time	Diode suppression	msec	0.25		0.5		0.5		1.0	
Environmental Ratings			Schematics Top view							
Measurement reference conditons										
Temp. : 15°C~35°C Humidity : 25%~85%RH										
Atmospheric pressure : 860~1060hPa										
Storage temp. : -40°C~+80°C										
Operating temp. : -20°C~+60°C										
The operating and Release Voltage and the coil resistance are specified at 20°C. These values change approximately 0.4%/°C change in the ambient temperature.										
Vibration : 20Gs to 2000Hz										
Shock : 50Gs										

### Notes :

- Values are specified with a resistive load being applied. A contact protective circuit is required for C and L Type loads.
- The values of the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.
- Model 41R Series : Diode is connected to pin 2 (+) and pin 5 (-).  
Correct coil polarity must be followed.

### ORDERING CODE

4 0 R - 1 A □ 2 N 1

(3)

4 1 R - □ □ □ 2 E 0

(1) (2) (3)

Example 40R-1A12N1 Represents Series 40R with 1Form A, Dry Reed (Ruthenium), Coil Voltage 5V and Coaxial Shield.

- |                       |                                   |                  |
|-----------------------|-----------------------------------|------------------|
| (1) Number of capsule | (2) Contact Form                  | (3) Coil Voltage |
| 1-1capsule            | A-Form A                          | 1-5VDC           |
| 2-2capsules           | E-Multi-pole                      | 2-12VDC          |
|                       | (Break-before-Make action Form C) |                  |