

Impedance Miniature Reed Relays

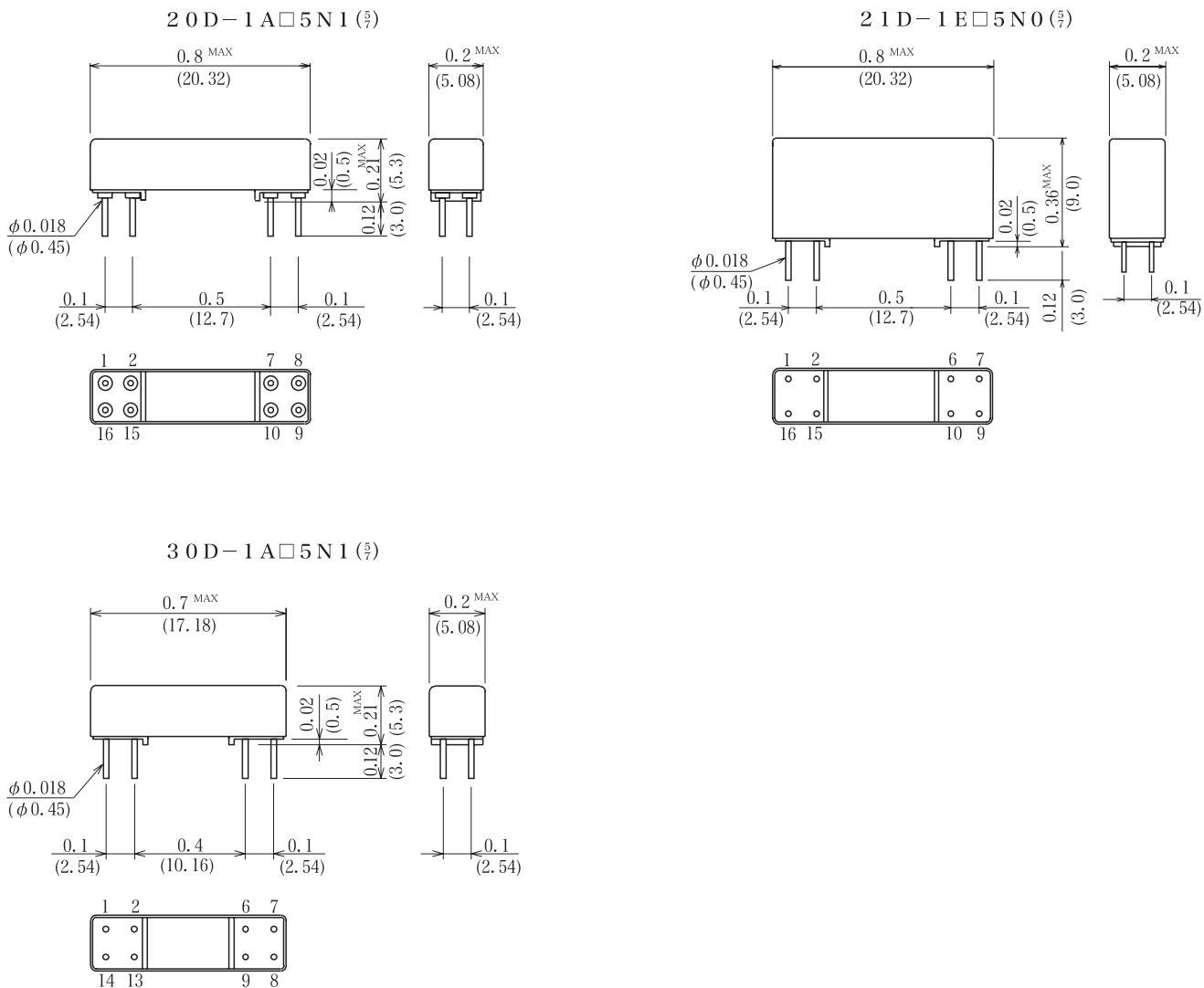


How to shorten delay time of signal by proper adjusted impedance comes to the point as conveying pulse signal switching relays. Delay time should be fixed by impedance (L) and electrostatic capacity (C) of the relay and its circuit, and calculated by " \sqrt{LC} ".

Low stray capacitance reed relays with shorter distance between in and out will be needed. And we provide relays adjusted to 50Ω and 75Ω.

Mechanical Dimensions

All dimensions are measured in inches (millimeters).





20D,30D,21D Series			50Ω Coaxial	75Ω Coaxial	50Ω Coaxial	75Ω Coaxial	50Ω Coaxial	75Ω Coaxial			
			Model Number	Model Number	Model Number	Model Number	Model Number	Model Number			
			20D-1A□5N15	20D-1A□5N17	30D-1A□5N15	30D-1A□5N17	21D-1E□5N05	21D-1E□5N07			
Parameters	Test Condition	Units	1 Form A	1 Form A	1 Form A	1 Form A	1 Form C	1 Form C			
Coil Specs											
Nominal coil voltage		VDC		5	12		5	12			
Coil resistance	±10% at 20°C	Ω		160	600		90	600			
Operating voltage	15°C~35°C	VDC Max		3.6	8.8		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		0.8	1.2		0.7	1.2			
Contact Ratings											
Switching voltage	Max. DC/Peak AC resistance	Volts					100				
Switching current	Max. DC/Peak AC resistance	Amps					0.5				
Carry current	Max. DC/Peak AC resistance	Amps					1.0				
Contact rating	Max. DC/Peak AC resistance	Watts					10				
Life expectancy	1V, 10mA	×10 ⁶ Cyc					1000				
Contact resistance	Maximum initial	mΩ					150				
Contact resistance stability	Maximum initial	mΩ					5.0				
Relay Specifications											
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10 ¹¹	10 ¹¹	10 ¹¹	10 ¹¹	10 ¹⁰	10 ¹⁰			
Capacitance	Across open contacts	pF-Max	0.3	0.3	0.3	0.3	0.5	0.5			
	Contact to Shield		2.0	1.8	2.0	1.8	1.8	1.8			
Open contact to coil	Shield floating	pF-Max					4.0	4.0			
	Shield guarding : Make-Coil : Break-Coil										
Dielectric strength	Between contacts	VDC	200	200	200	200	200	200			
	Contacts to shield		200	200	200	200	200	200			
Operating time (Including bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.5	0.5	0.5	0.5	1.0	1.0			
Release time	Diode suppression	msec	0.5	0.5	0.5	0.5	1.0	1.0			
Return loss	MAX, 0~1000MHz	dB	21	21	21	21	18	15			
	MAX, 0~500MHz										
Insertion loss	MAX, 0~1000MHz	dB	0.5	0.5	0.5	0.5	0.5	0.6			
	MAX, 0~500MHz										
Isolation loss	MAX, 0~1000MHz	dB	20	20	20	20	20	20			
	MAX, 0~500MHz										
Environmental Ratings		Schematics Top view									
Measurement reference conditions 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 :

- (1) Values are specified with a resistive load being applied. A contact protective circuit is required for C and L Type loads.
- (2) The values of the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.
- (3) The relays mounted in the Model 21D-fully observe the (+) and (-) polarity designations of the coil drive voltage.

ORDERING CODE

2 0 D - 1 A □ 5 N 1 □
(1) (2)

3 0 D - 1 A □ 5 N 1 □
(1) (2)

2 1 D - 1 E □ 5 N 0 □
(1) (2)

Example 20D-1A15N15 Represents Series 20D with 1Form A, Dry Reed (Rhodium), Coil Voltage 5V, Coaxial Shield and 50 Ω Impedance.

- (1) Coil Voltage
1-5VDC
2-12VDC

- (2) Special Coad
5-50Ω Impedance
7-75Ω Impedance