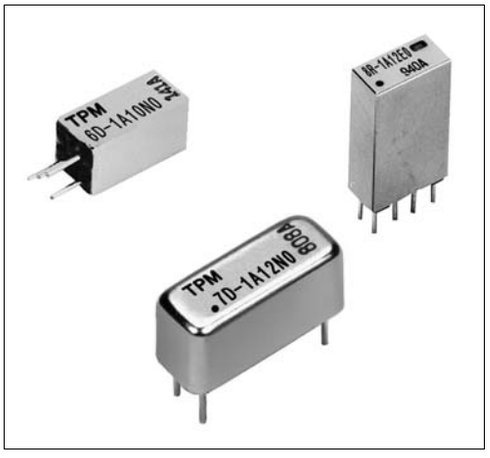
DB LECTRO Inc.
COMPOSANTS ÉLECTRONIQUES
ELECTRONIC COMPONENTS

Ultraminiature Reed Relays



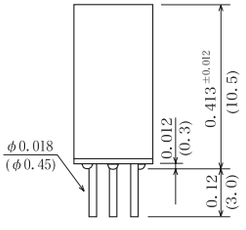
6D and 6R are ultra-compact and lightweight reed relays which has narrow mounting space and easy to use. Besides, they are optimal for compacting equipments.
7D is the world's smallest miniature reed relays, which has high frequency characteristics with coaxial shield.
8R is excellent to debug/high density mounting with LED, which has narrow mounting space.

- Smallest square feet 4.9mm×4.9mm
- Available contact rating 5W and 10W
- Electrostatic Shield and Diode options
- Electric Magnetic Shield

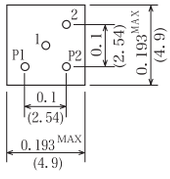
Mechanical Dimensions

All dimensions are measured in inches (millimeters).

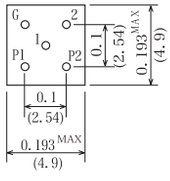
6D−1A□0(N/D)0
6D−1A□1(N/D)0



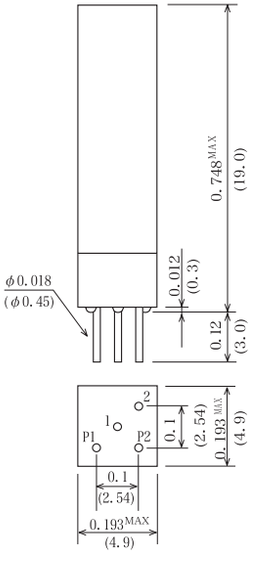
(6D−1A□0(N/D)0)



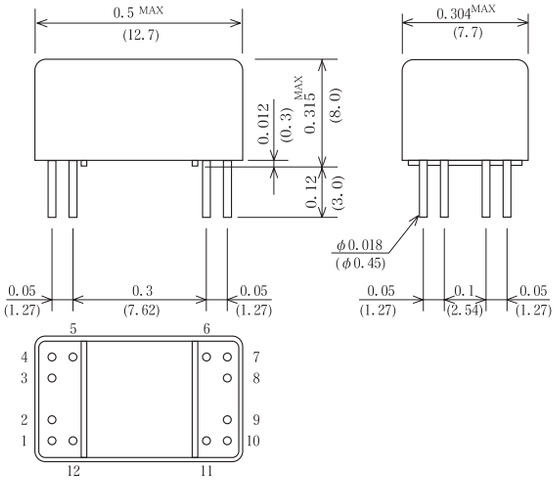
(6D−1A□1(N/D)0)



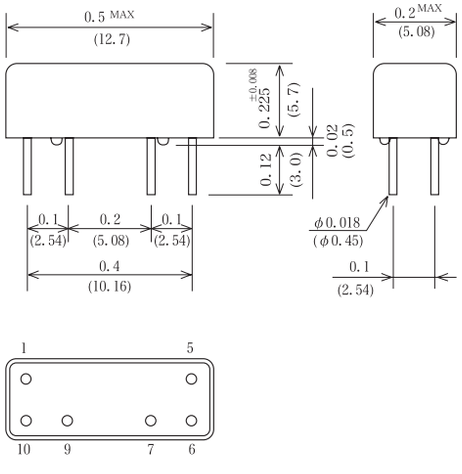
6R−1A□0(N/D)0L



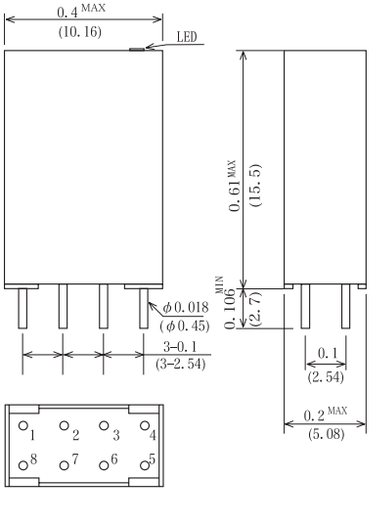
7D−2E□4N1



7D−1A□2N0



8R−1A□2E0
8R−2A□2E0
8R−1E□2E0



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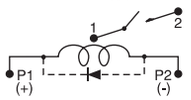
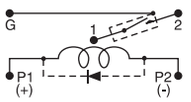
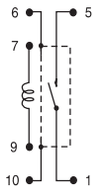
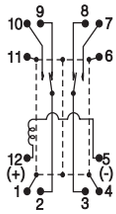
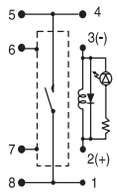
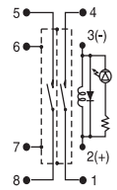
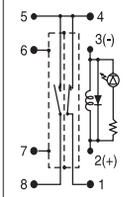
DB LECTRO INC
COMPOSANTS ÉLECTRONIQUES
ELECTRONIC COMPONENTS

6□, 7D, 8R Series

Parameters	Test Condition	Units	Model Number 6D-1A□□□0 1 Form A		Model Number 6R-1A□0□0L 1 Form A		Model Number 7D-1A□2N0 1 Form A		Model Number 7D-2E□4N1 2 Form C		Model Number 8R-1A□2E0 1 Form A	Model Number 8R-2A□2E0 2 Form A	Model Number 8R-1E□2E0 1 Form C	
Coil Specs														
Nominal coil voltage		VDC	5	12	5	12	5	12	5	12	5	12	5	12
Coil resistance	±10% at20°C	Ω	150	600	180	720	160	600	70	450	180	680	180	680
Operating voltage	15°C～35°C	VDC Max	3.6	8.8	3.6	8.8	3.2	8.5	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	—	—	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	0.7	1.2	0.7	1.2
Contact Ratings														
Switching voltage	Max. DC/Peak AC resistance	Volts	50		200		50				200			
Switching current	Max. DC/Peak AC resistance	Amps	0.2		0.5		0.2				0.5			
Carry current	Max. DC/Peak AC resistance	Amps	0.5		1.0		0.5				1.0			
Contact rating	Max. DC/Peak AC resistance	Watts	5		10		5				10			
Life expectancy	1V. 10mA	$\times 10^6$Cyc	300		1500		300				100			
Contact resistance	Maximum initial	mΩ	150		150		150				150			
Contact resistance stability	Maximum initial	mΩ	5.0		5.0		5.0				5.0			
Relay Specifications														
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10^{10}		10^{10}		10^{10}		10^{11}		10^{10}	10^{10}	10^{10}	
Capacitance		pF-Max												
Across open contacts	Shield guarding		0.7				0.25				0.5	0.5	0.5	
Contact to Shield	Contacts open, :Make-shield :Break-shield Shield floating						1.3							
Open contact to coil	Shield guarding : Make-Coil :Break-Coil										1.6	1.6	1.6 3.0	
Dielectric strength	Between contacts	VDC	150		200		150		150		200	200	200	
	Contacts to shield, coil		150		200		200		150		200	200	200	
Operating time (Including. bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.3		0.5		0.3		0.5		0.5	0.5	1.0	
Release time	Diode suppression	msec	0.3		0.5		0.1		0.5		0.5	0.5	1.0	
Environmental Ratings Mesurement 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		Schematics	6D-1A□0(N,D)0 6R-1A□0(N,D)0L  6D-1A□1(N,D)0  Bottom view				 Top view		 Top view		 Top view	 Top view	 Top view	

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) Model 6D, 6R : Diode is connected to pin P1 (+) and pin P2 (−).
7D-2E series are polarity sensitive. Coil pin #1 must be positive (+). See the schematic.
Model 8R : Diode is connected to pin 2 (+) and pin 3 (−).
Correct coil polarity must be followed.

ORDERING CODE

6 □ − 1 A □ □ □ 0 □
(1) (4) (5) (6) (7)

7 D − 1 A □ 2 N 0
(4)

7 D − 2 E □ 4 N 1
(4)

8 R − □ □ □ 2 E 0
(2) (3) (4)

Example 6D-1A10D0 Represents Series 6D with 1 From A, Dry Reed (Rhodium), Coil Voltage 5V and with Diode.

(1) Reed Switch Type
D-Dry Reed(Rhodium)
R-Dry Reed(Ruthenium)

(2) Number of capsule
1-1capsule
2-2capsules

(3) Contact Form
A-Form A
E-Multi-pole.
(Break-before-Make action on Form C)

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

(5) Shield
0-No Shield
1-Electrostatic Shield (6R N/A)

(6) Diode Option
N-No Diode
D-With Diode

(7) L-6R series only