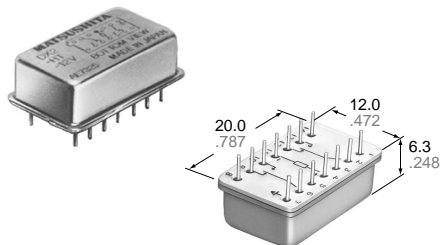


NAIS

HERMETIC SEAL ULTRA SMALL RELAY WITH T0-5 SENSITIVITY AND RF SWITCHING CAPABILITY

DX-RELAYS



mm inch

- High radio frequency characteristics - isolation loss: 40 dB at 300 MHz
 - Latching types available
 - High sensitivity to be IC drivable: 60 mW pick-up only
 - High insulation resistance
 - High shock and vibration resistance thanks to unique balanced armature construction
- Shock: 490 m/s² {50 G}**
Vibration: 294 m/s² {30 G}, 10 to 55 Hz at double amplitude of 5 mm

SPECIFICATIONS

Contacts

Arrangement	2 Form C		
Initial contact bounce, max.	1 ms		
Contact pressure	Approx. 6 g .21 oz		
Initial contact resistance, max. (By voltage drop 6 V DC 1 A)	60 mΩ		
Electrostatic capacitance (Contact to contact)	Approx. 1 pF		
Thermal electromotive force (at nominal coil voltage)	Single side stable	35 μV	
	Latching type	1 μV	
Nominal switching capacity	1 A 30 VDC, 0.5 A 110 VAC		
Rating (resistive)	Max. switching power	30 W DC, 50 VA	
	Max. switching voltage	30 V DC, 110 V AC	
	Max. switching current	1 A DC, 0.5 A AC	
Expected life (min. operations)	Mechanical	3×10 ⁷	
	Electrical	1 A 30 V DC	2×10 ⁵
		0.5 A 30 V DC	10 ⁶
		0.1 A 12 V DC	10 ⁷

Remarks

- *1 Measurement at same location as "Initial breakdown voltage" section
 *2 Detection current: 10 mA
 *3 Excluding contact bounce time
 *4 Half-wave pulse of sine wave: 11ms; detection time: 10μs
 *5 Half-wave pulse of sine wave: 11ms
 *6 Detection time: 10μs
 *7 Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 49)

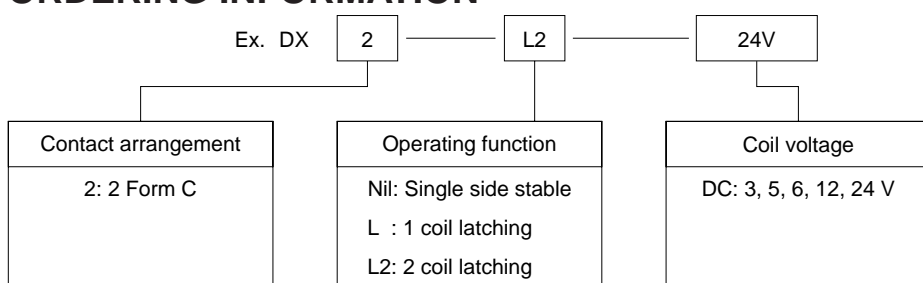
Characteristics (25°C, 50% R. H.)

Max. operating speed	200 cps.	
Initial insulation resistance*1	Min. 10,000 MΩ at 100 V DC	
Initial break- down voltage*2	Between open contacts	500 Vrms
	Between contact sets	500 Vrms
	Between contact and coil	500 Vrms
	Between live parts and ground	500 Vrms
Operate time*3 (at nominal voltage)	Approx. 2 ms	
Release time(without diode)*3 (at nominal voltage)	Approx. 1 ms	
Set time*3 (latching)	Approx. 2 ms	
Reset time*3 (latching)	Approx. 2 ms	
Minimum pulse width (latching)	1.6 ms	
High frequency characteristics	Approx. isolation 40 dB at 300 MHz (50 Ω)	
Temperature rise	Max. 25°C at 120 mW operating power Max. 55°C at 500 mW operating power	
Shock resistance	Functional*4	Min. 490 m/s ² {50 G}
	Destructive*5	Min. 490 m/s ² {50 G}
Vibration resistance	Functional*6	196 m/s ² {20 G}, 10 to 55 Hz at double amplitude of 3.4 mm
	Destructive	294 m/s ² {30 G}, 10 to 55 Hz at double amplitude of 5 mm
Conditions for operation, transport and storage*7 (Not freezing and conde- nsing at low temperature)	Ambient temperature	-55°C to +85°C -67°F to +185°F
	Humidity	5 to 85% R.H.
Soldering temperature	250°C (10s)m 300°C (5s), 350°C (3s)	
Unit weight	Approx. 4g .14 oz	

TYPICAL APPLICATIONS

1. Communication equipment
2. Measuring equipment
3. Computer peripherals
4. Precision equipment for ships and airplanes

ORDERING INFORMATION



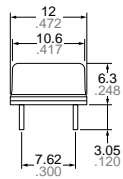
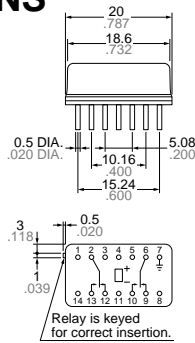
(Standard packing) Carton: 50 pcs., Case: 500 pcs.

DX

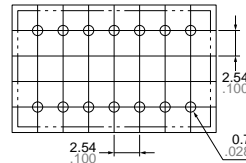
TYPES AND COIL DATA at 20°C 68°F

Type	Part No.	Nominal voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Nominal operating current, mA	Nominal operating power, mW	Coil resistance, Ω (±10%)	Max. allowable voltage, at 40°C, VDC
Single side stable	DX2-3V	3	2.1	0.3	42.8	128	70	6.6
	DX2-5V	5	3.5	0.5	25	125	200	11.0
	DX2-6V	6	4.2	0.6	21.4	128	280	13.2
	DX2-12V	12	8.4	1.2	12	144	1,000	26.4
	DX2-24V	24	16.8	2.4	6	144	4,000	53.0
Type	Part No.	Nominal voltage, V DC	Set voltage, V DC (max.)	Reset voltage, V DC (max.)	Nominal operating current, mA	Nominal operating power, mW	Coil resistance, Ω (±10%)	Max. allowable voltage, at 40°C, VDC
1 coil latching	DX2-L-3V	3	2.1	2.1	42.8	128	70	6.6
	DX2-L-5V	5	3.5	3.5	25	125	200	11.0
	DX2-L-6V	6	4.2	4.2	21.4	128	280	13.2
	DX2-L-12V	12	8.4	8.4	12	144	1,000	26.4
	DX2-L-24V	24	16.8	16.8	6	144	4,000	53.0
2 coil latching	DX2-L2-3V	3	2.1	2.1	85.7	257	35	4.6
	DX2-L2-5V	5	3.5	3.5	50	250	100	7.8
	DX2-L2-6V	6	4.2	4.2	42.8	257	140	9.3
	DX2-L2-12V	12	8.4	8.4	24	288	500	18.6
	DX2-L2-24V	24	16.8	16.8	12	288	2,000	37.2

DIMENSIONS

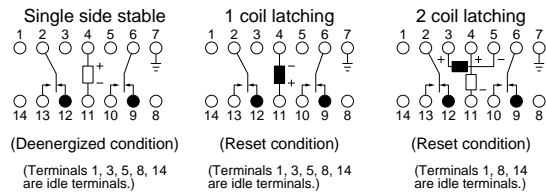


PC board pattern (Bottom view)



mm inch

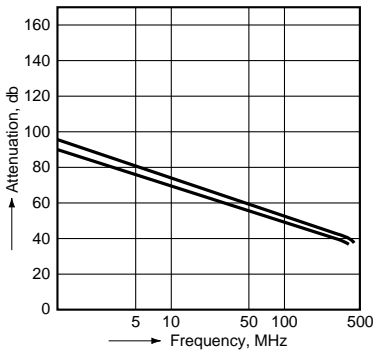
Schematic (Bottom view)



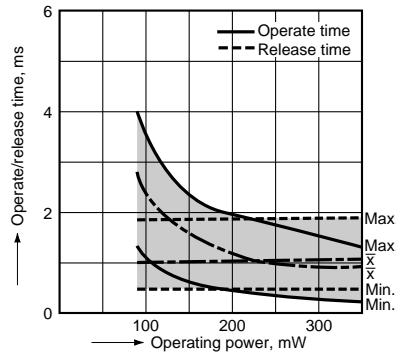
General tolerance: $\pm 0.3 \pm 0.012$

REFERENCE DATA

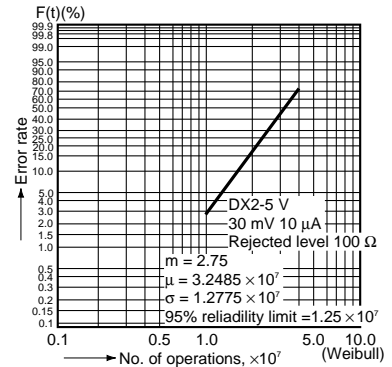
1. High frequency characteristics (Isolation) (50 Ω)
Sample: 10 pcs. DX2-12V
Ambient temperature: 20°C 68°F



2. Operate/release time



3. Contact reliability



4. Thermal electro motive force

Sample: 5 pcs. DX2-5V
Coil applied V: 100%V
Ambient atmosphere: 20°C 68°F 60% R. H.

