

REED SWITCH

ORD311

Super Ultra Miniature Long Life

■ GENERAL DESCRIPTION

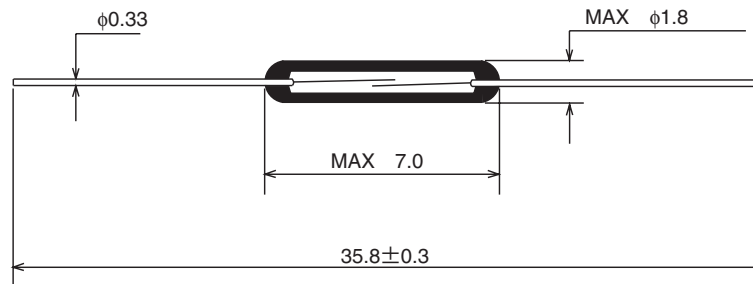
The ORD311 is a small single-contact reed switch designed for general control of medium level loads less than 100 V. The contacts are sealed within the glass tube with inert gas to maintain contact reliability.

■ FEATURES

- (1) Reed switches are hermetically sealed within a glass tube with inert gas and do not receive any influence from the external atmospheric environment.
- (2) Quick response
- (3) The structure comprises the operating parts and electrical circuits arranged coaxially. Reed switches are suited to applications in radio frequency operation.
- (4) Reed switches are compact and light weight.
- (5) Superior corrosion resistance and wear resistance of the contacts assures stable switching operation and long life.
- (6) With a permanent magnet installed, reed switches economically and easily become proximity switches.

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■ EXTERNAL DIMENSIONS (Unit: mm)



■ APPLICATIONS

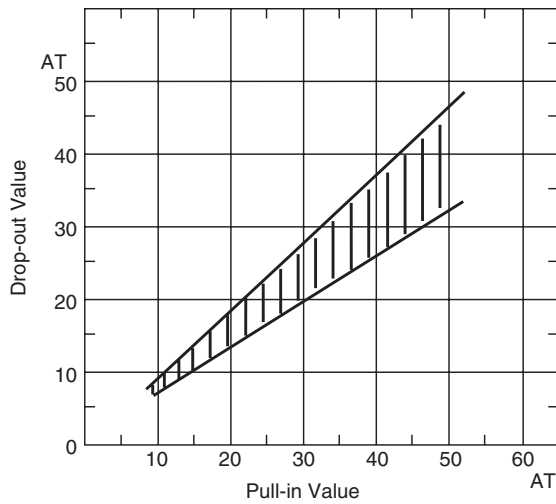
- Automotive electronic devices
- Control equipment
- Communication equipment
- Measurement equipment
- Household appliances

■ ELECTRICAL CHARACTERISTICS

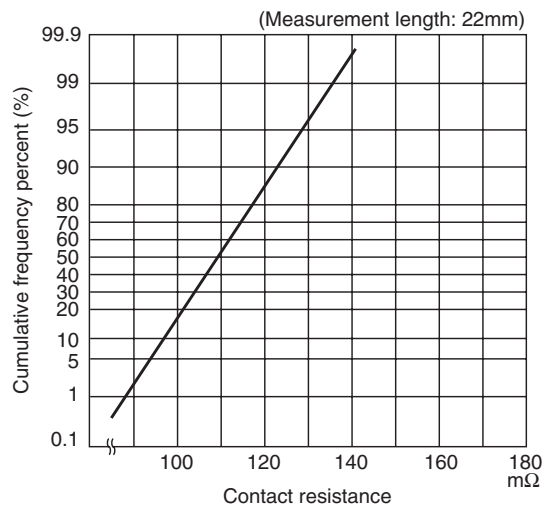
Parameter	Rated value	Unit
Pull-in Value (PI)	10~30	AT
Drop-out Value (DO)	5min	AT
Contact resistance (CR)	200max	mΩ
Breakdown voltage	250min	VDC
Insulation resistance	10 ⁹ min	Ω
Electrostatic capacitance	0.4max	pF
Contact rating	10	VA
Maximum switching voltage	100 ($\frac{DC}{AC}$)	V
Maximum switching current	1.0	A
Maximum carry current	0.5	A

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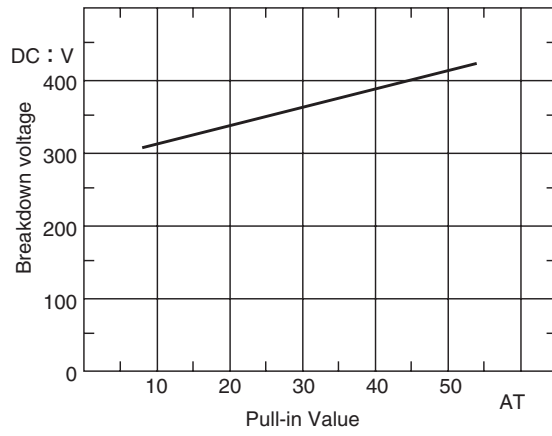
(1) Drop-out Value vs. Pull-in Value



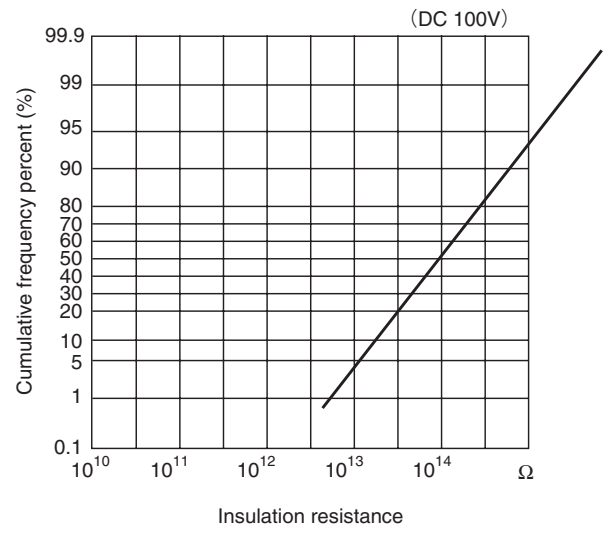
(2) Contact resistance



(3) Breakdown voltage

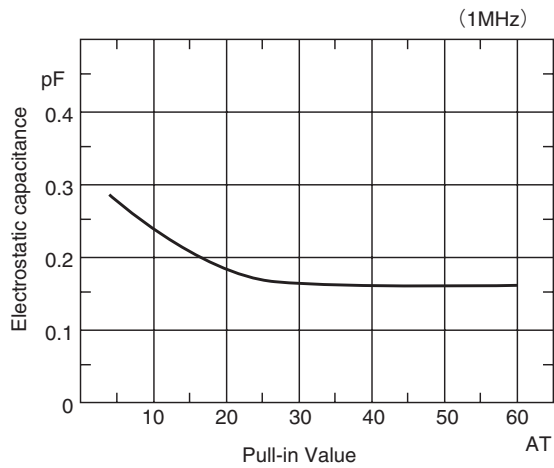


(4) Insulation resistance



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(5) Electrostatic capacitance

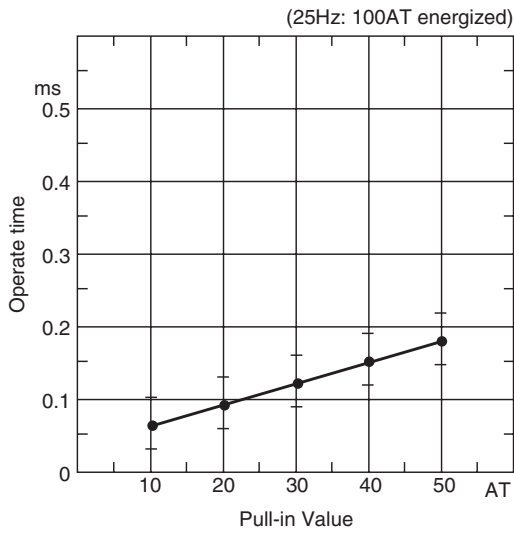


■ OPERATING CHARACTERISTICS

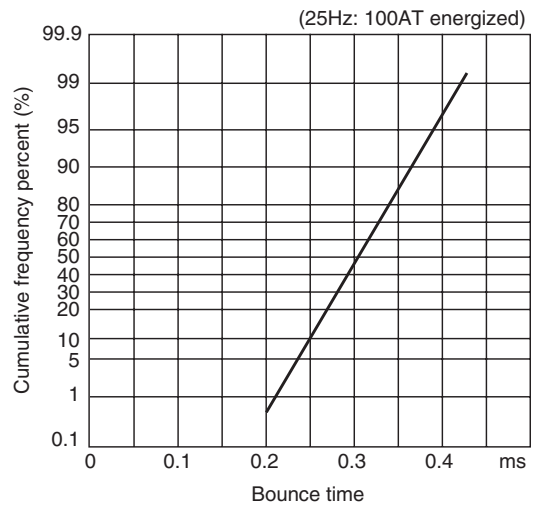
Parameter	Rated value	Unit
Operate time	0.3max	ms
Bounce time	0.3max	ms
Release time	0.05max	ms
Resonant frequency	13000±2000	Hz
Maximum operating frequency	500	Hz

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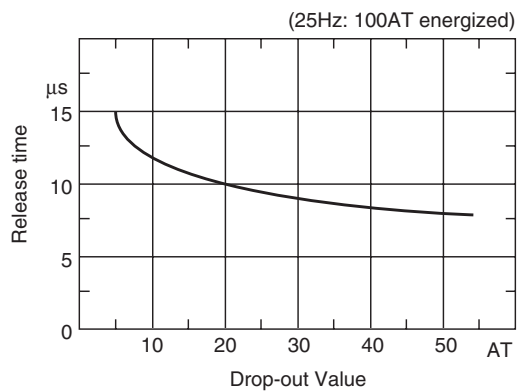
(1) Operate time



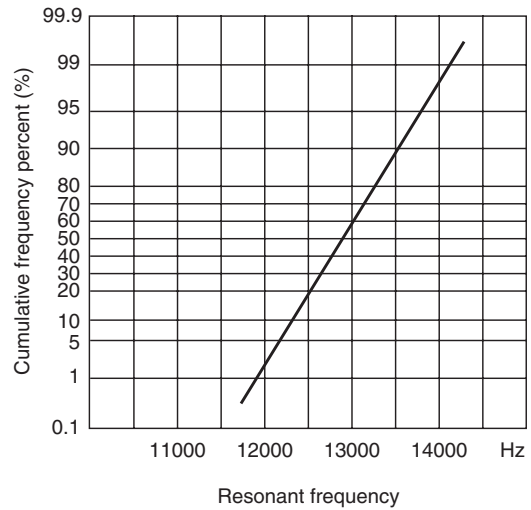
(2) Bounce time



(3) Release time

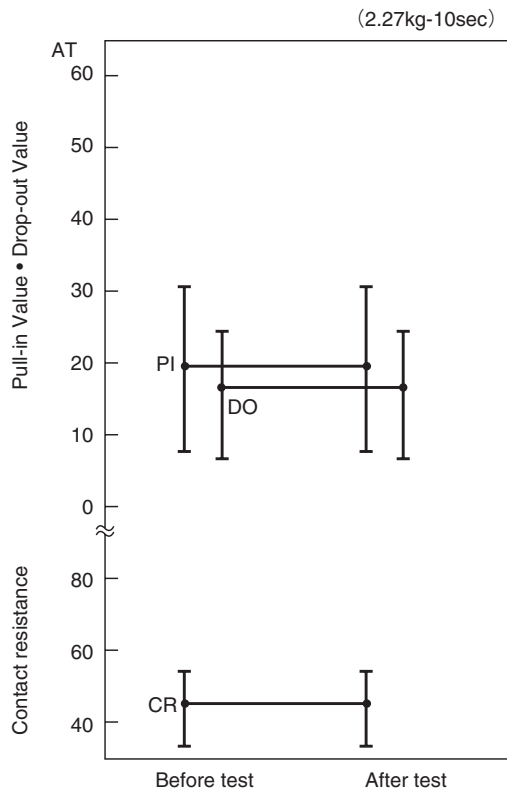


(4) Resonant frequency

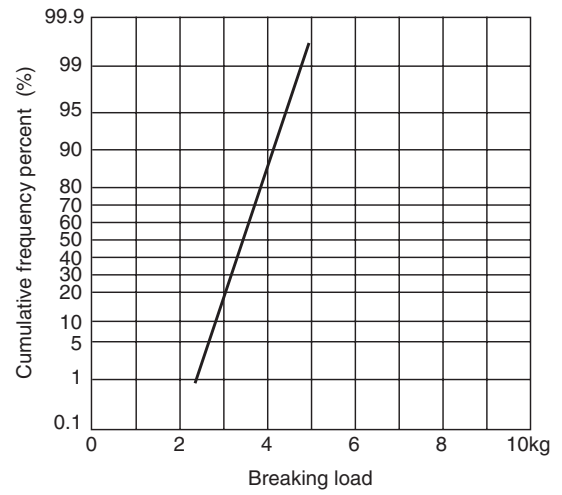


■ MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)



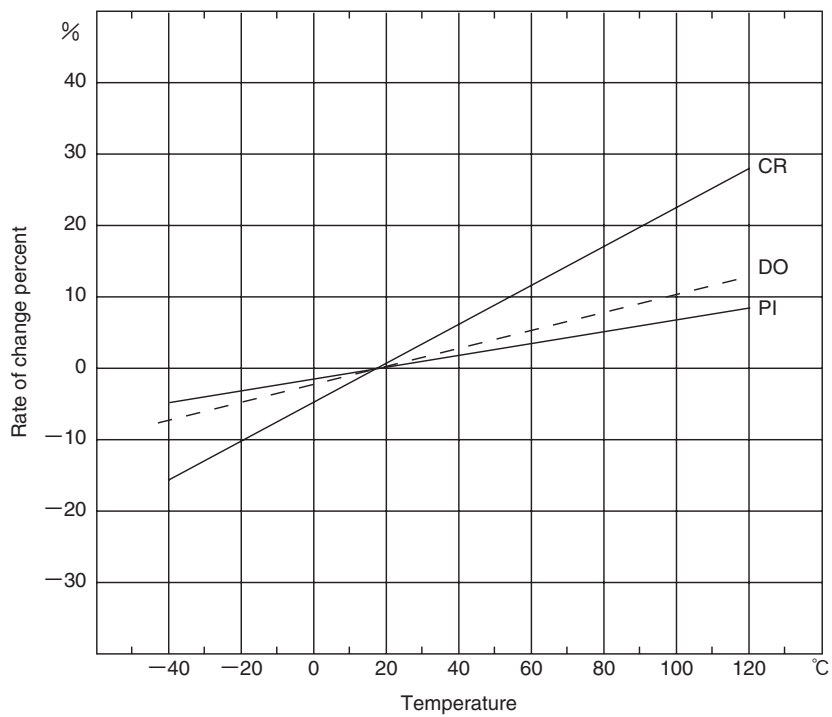
(2) Lead tensile strength



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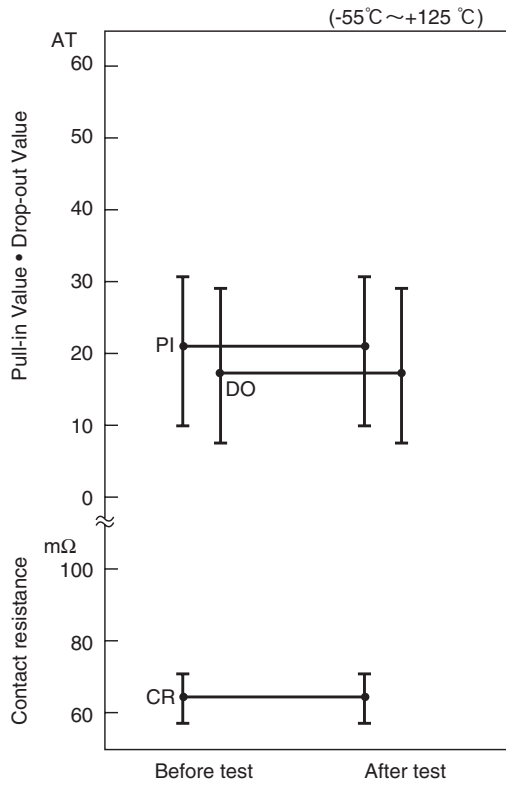
■ ENVIRONMENTAL CHARACTERISTICS

(1) Temperature characteristics

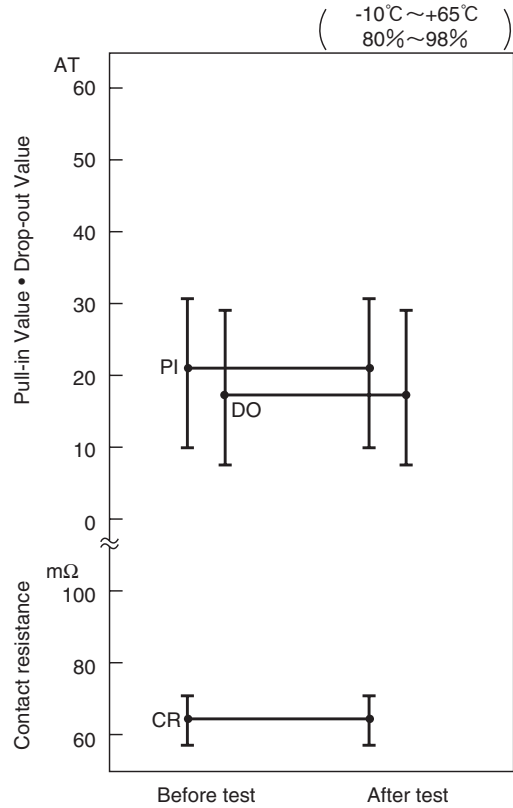


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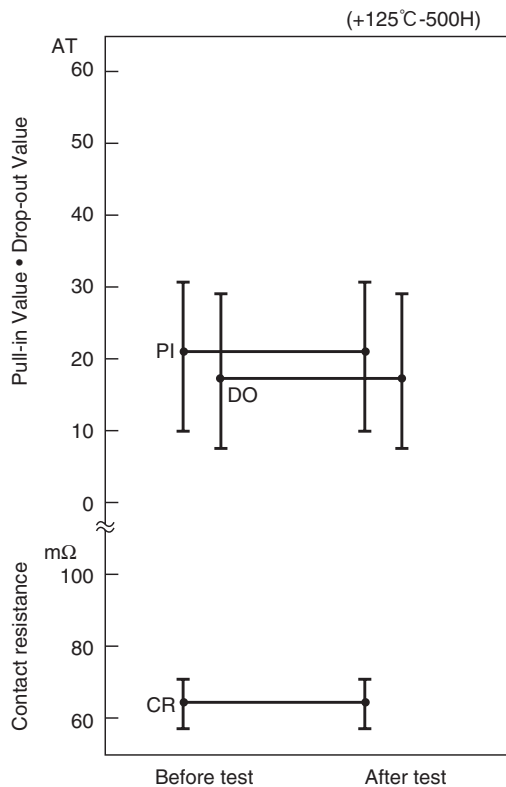
(2) Temperature cycle



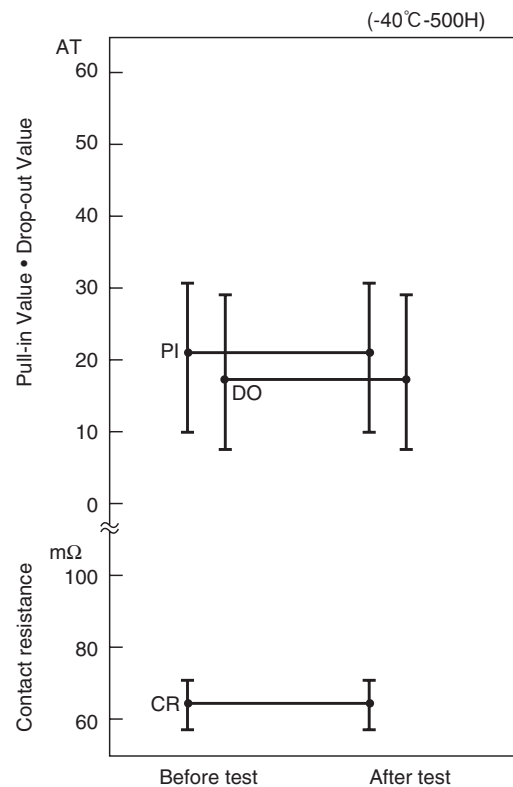
(3) Temperature and humidity cycle



(4) High temperature storage test

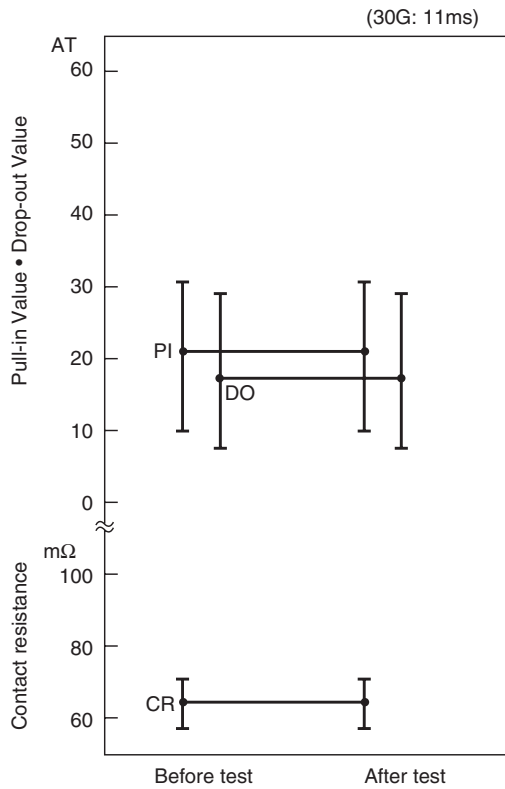


(5) Low temperature storage test

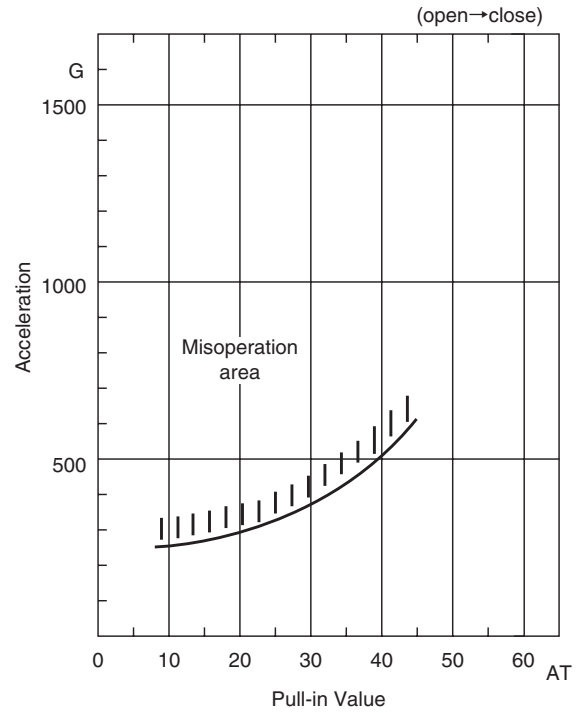


(6) Shock test

1) Electrical characteristics

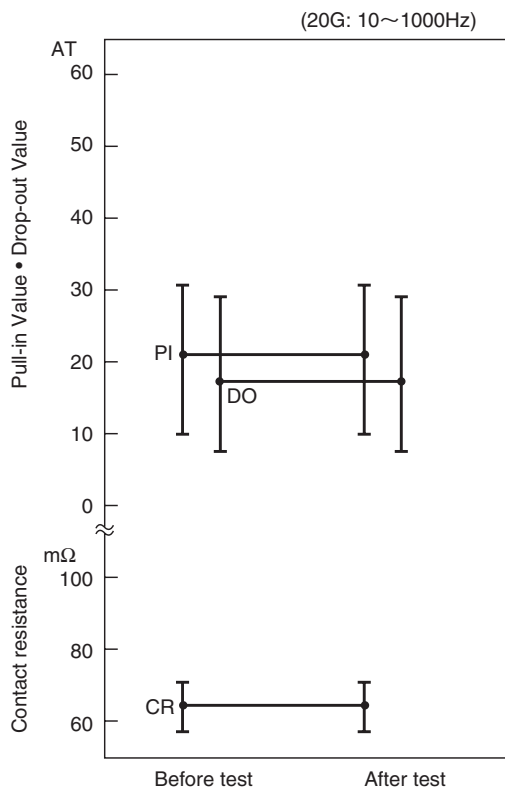


2) Misoperation area



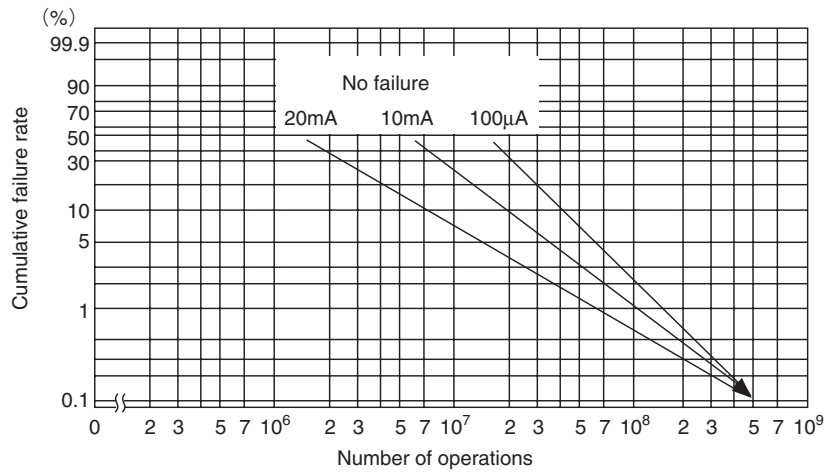
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(7) Vibration test



■ LIFE EXPECTANCY DATA: ORD311

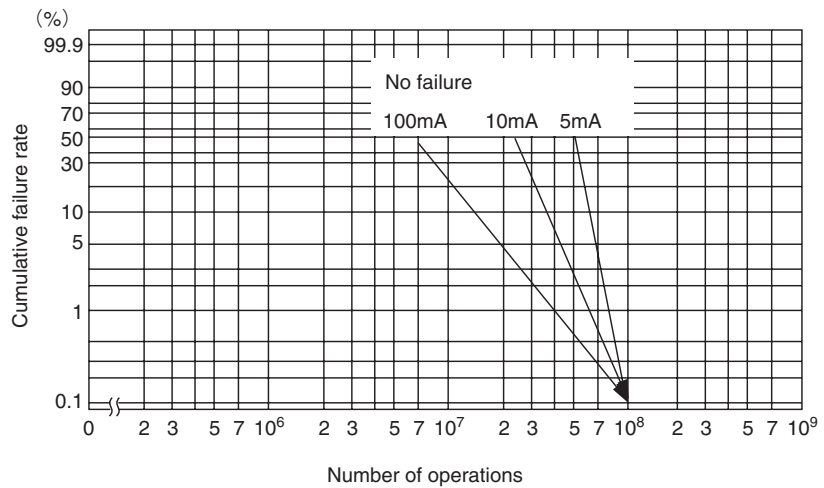
Load conditions
 Voltage: 5VDC
 Current: 100µA, 10mA, 20mA
 Load: Resistive load



* Arrow indicates number of operations where test was completed.

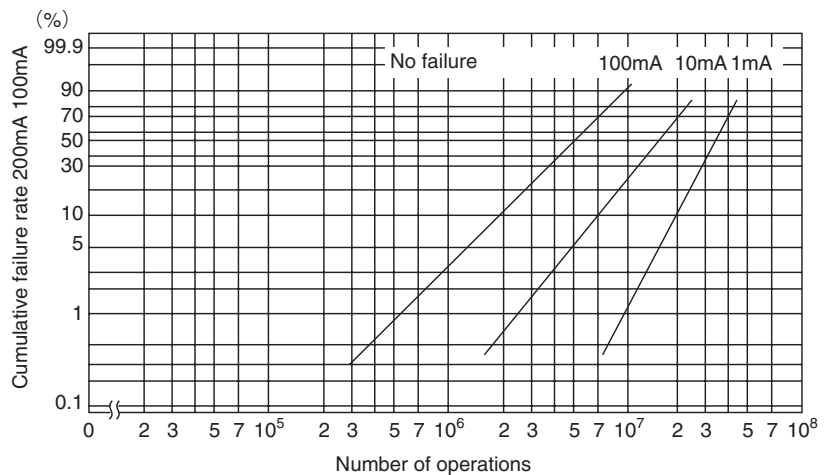
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Load conditions
 Voltage: 12 VDC
 Current: 5mA, 10mA, 100mA
 Load: Resistive load



* Arrow indicates number of operations where test was completed.

Load conditions
 Voltage: 24 VDC
 Current: 1mA, 10mA, 100mA
 Load: Resistive load



* Arrow indicates number of operations where test was completed.