

# REED SWITCH

## ORD211

Ultra-miniature

### ■ GENERAL DESCRIPTION

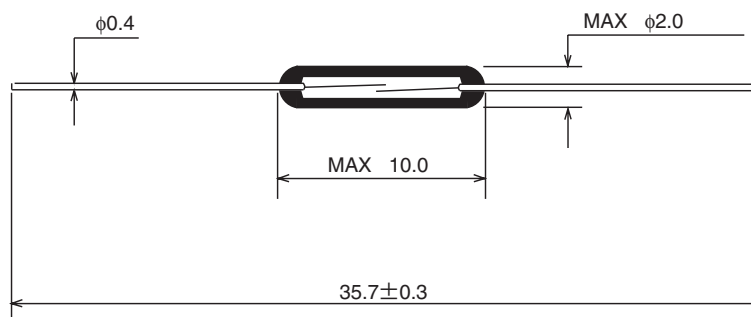
The ORD211 is a small single-contact reed switch designed for general control of low-level loads less than 24 V. The contacts are sealed within the glass tube with inert gas to maintain contact reliability.

### ■ FEATURES

- (1) Reed contacts 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.

3

### ■ EXTERNAL DIMENSIONS (Unit: mm)



### ■ APPLICATIONS

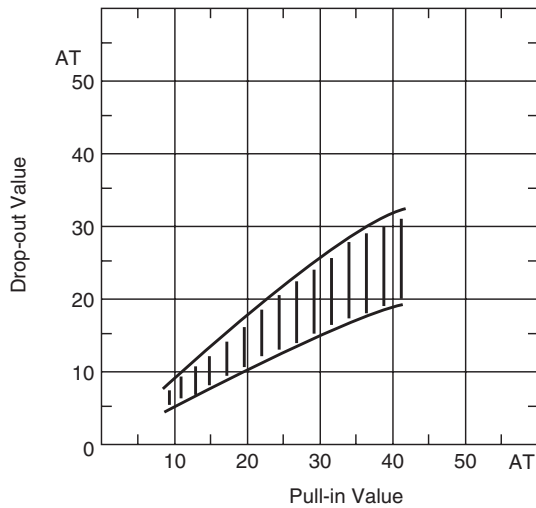
- Automotive electronic devices
- Control equipment
- Communication equipment
- Measurement equipment
- Household appliances

■ ELECTRICAL CHARACTERISTICS

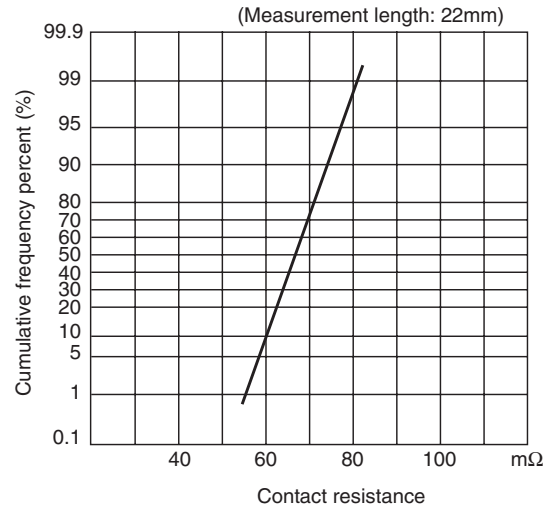
Parameter	Rated value	Unit
Pull-in Value (PI)	10~40	AT
Drop-out Value (DO)	5min	AT
Contact resistance (CR)	100max	mΩ
Breakdown voltage	150min	VDC
Insulation resistance	10 <sup>9</sup> min	Ω
Electrostatic capacitance	0.2max	pF
Contact rating	1.0	VA
Maximum switching voltage	24 ( $\frac{DC}{AC}$ )	V
Maximum switching current	0.1	A
Maximum carry current	0.3	A

3

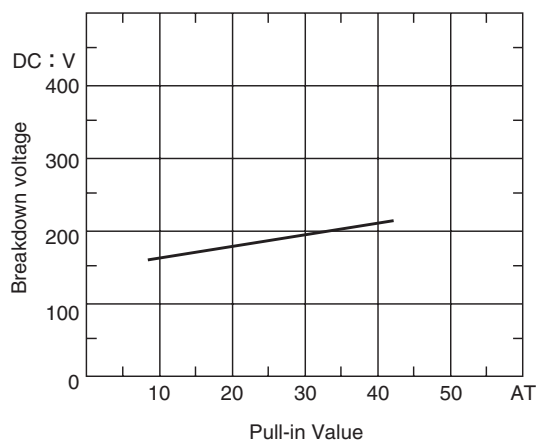
(1) Drop-out Value vs. Pull-in Value



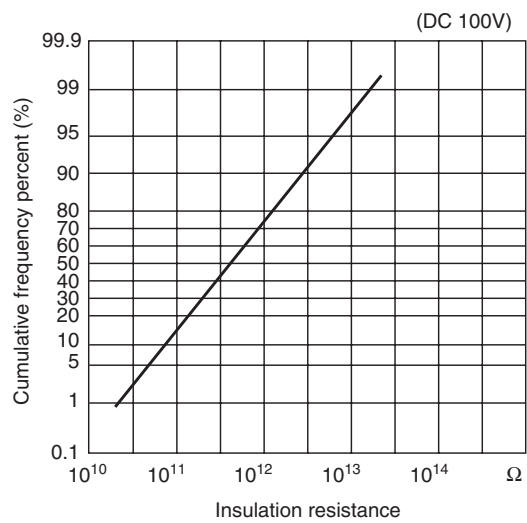
(2) Contact resistance



(3) Breakdown voltage

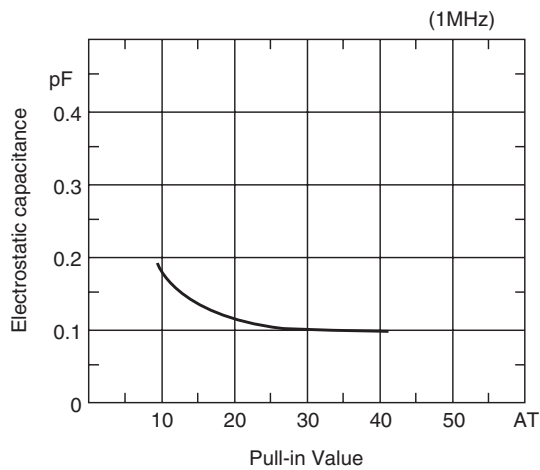


(4) Insulation resistance



3

(5) Electrostatic capacitance

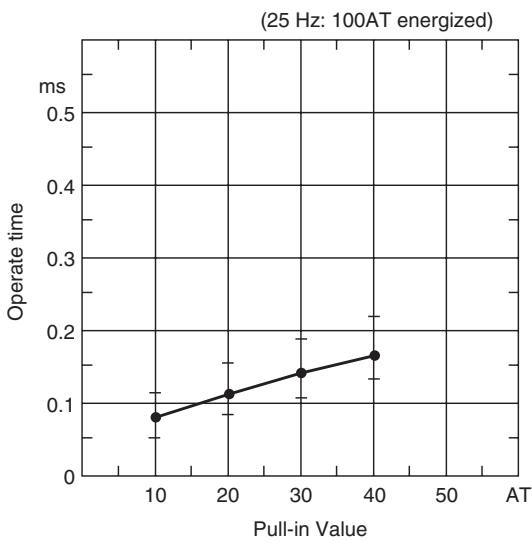


■ OPERATING CHARACTERISTICS

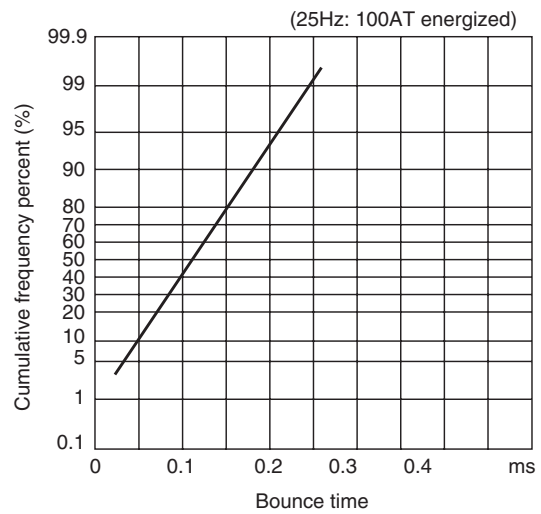
Parameter	Rated value	Unit
Operate time	0.3max	ms
Bounce time	0.3max	ms
Release time	0.05max	ms
Resonant frequency	7500±500	Hz
Maximum operating frequency	500	Hz

3

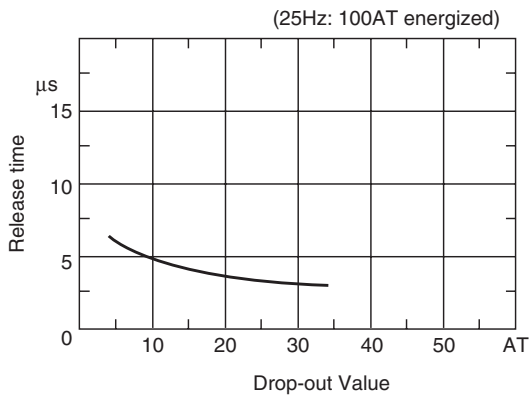
(1) Operate time



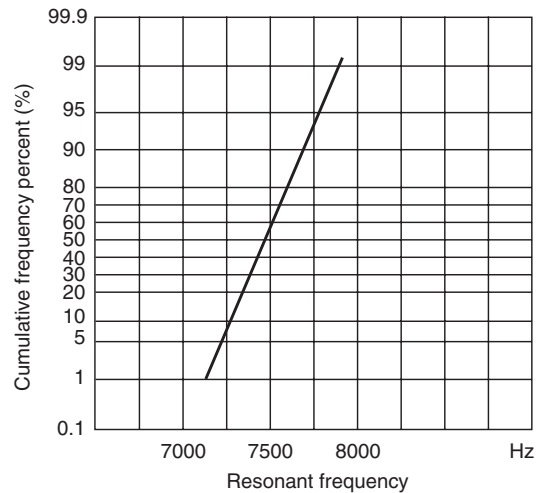
(2) Bounce time



(3) Release time

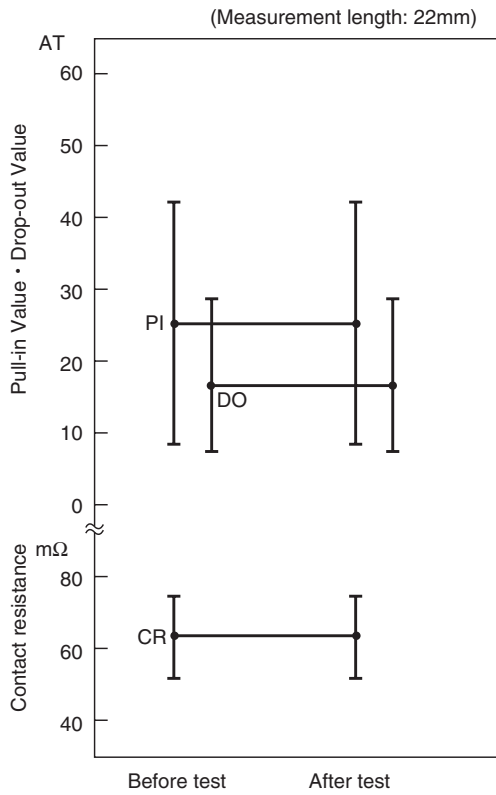


(4) Resonant frequency

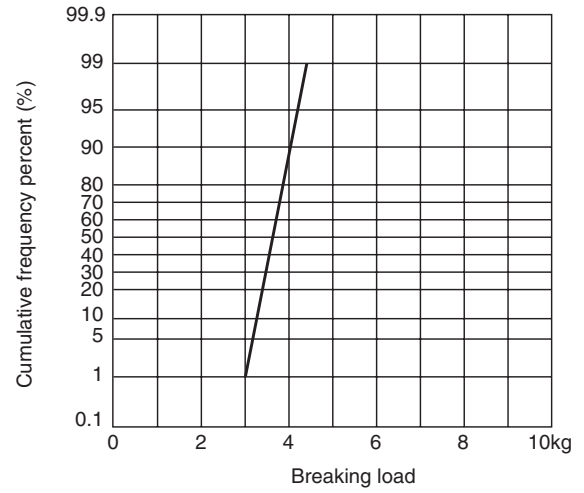


■ MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)



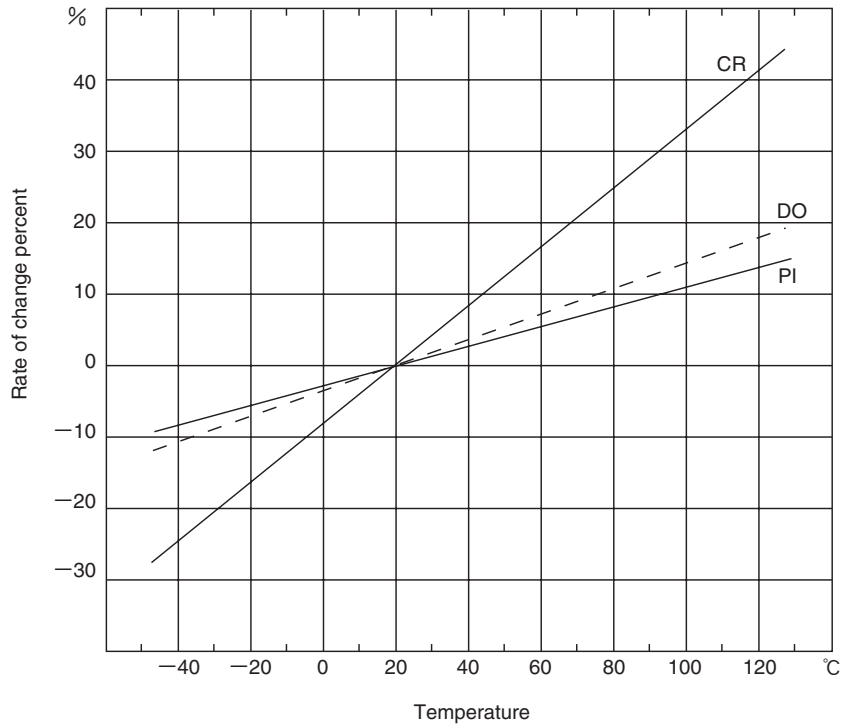
(2) Lead tensile strength



3

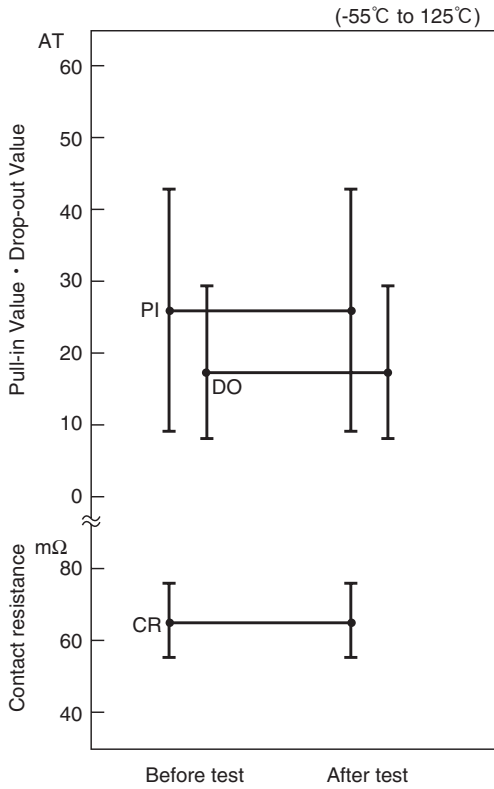
■ ENVIRONMENTAL CHARACTERISTICS

(1) Temperature characteristics

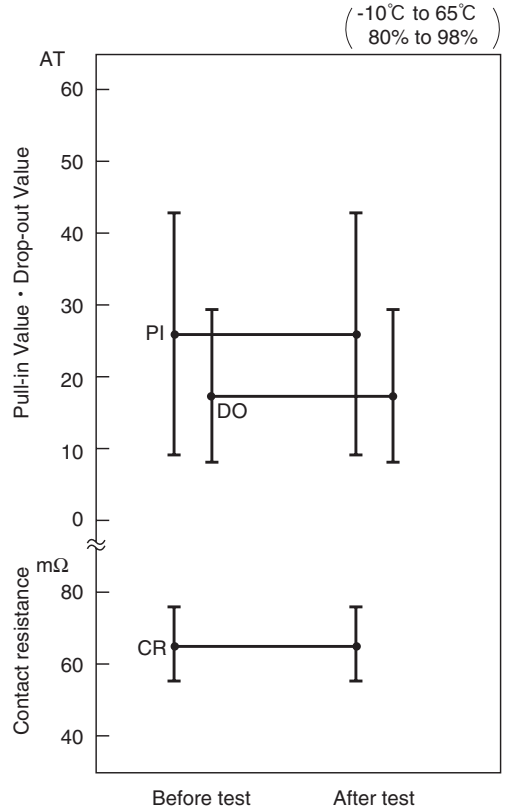


3

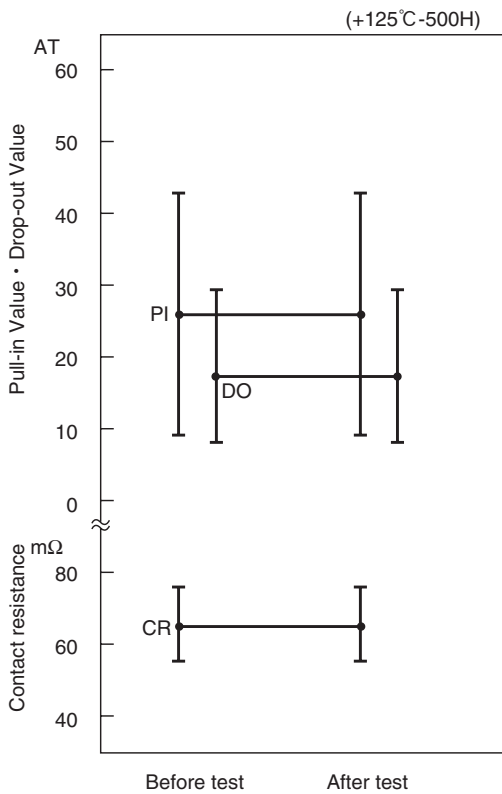
(2) Temperature cycle



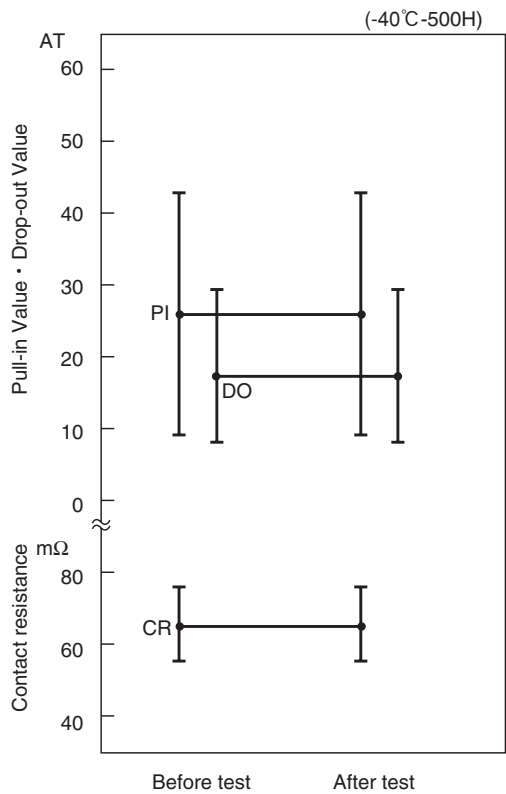
(3) Temperature and humidity cycle



(4) High temperature storage test

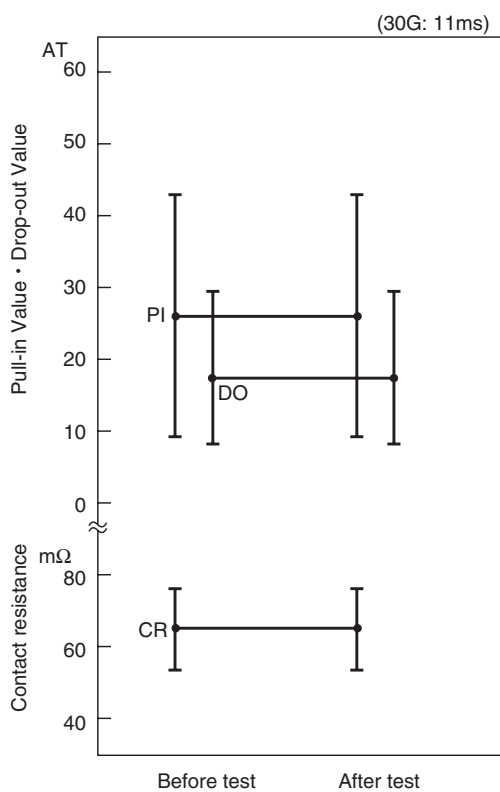


(5) Low temperature storage test

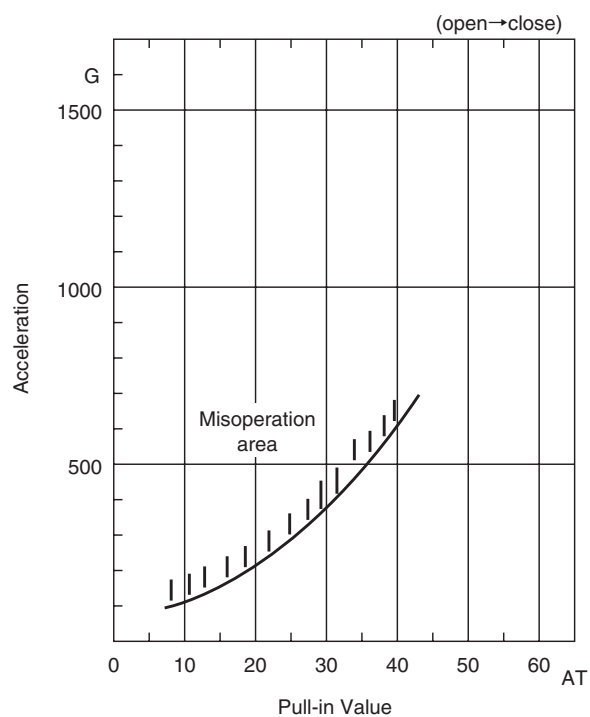


(6) Shock test

1) Electrical characteristics

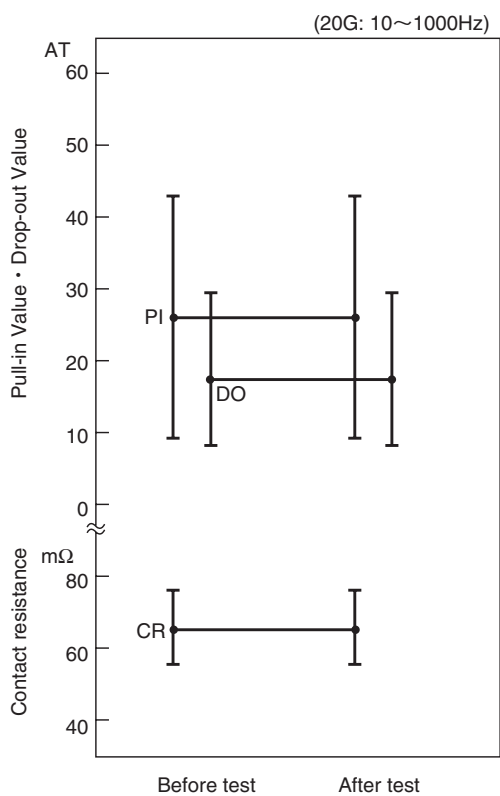


2) Misoperation area



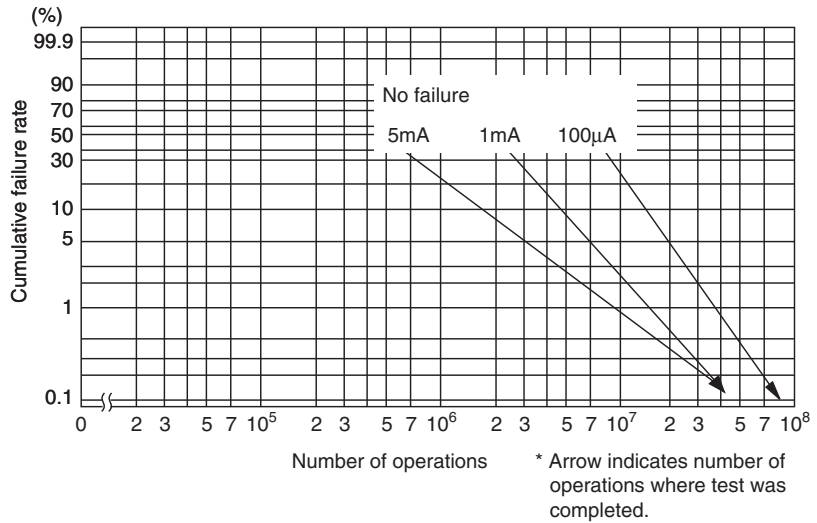
3

(7) Vibration test



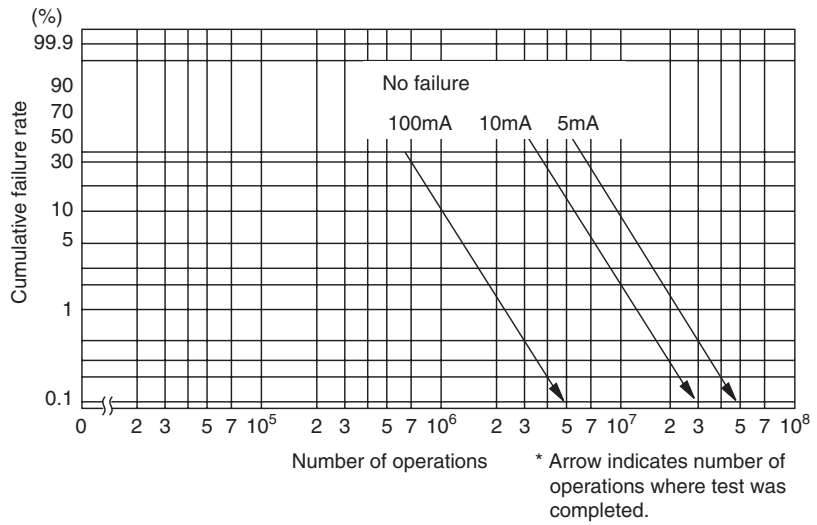
■ LIFE EXPECTANCY DATA: ORD211

Load conditions  
 Voltage: 5VDC  
 Current: 100  $\mu$ A, 1 mA, 5 mA  
 Load: Resistive load



3

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



Load conditions  
 Voltage: 24VDC  
 Current: 1 mA, 10 mA, 50 mA  
 Load: Resistive load

