

# REED SWITCH

## ORD213

### Super Ultraminiature

#### ■ GENERAL DESCRIPTION

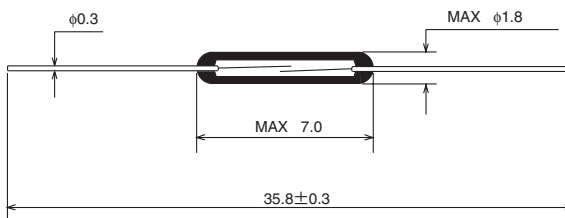
The ORD213 is a small single-contact reed switch designed for general control of low-level loads less than 24 V. The reed contacts are sealed within the glass tube within inert gas to maintain contact reliability.

#### ■ 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.

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#### ■ EXTERNAL DIMENSIONS (Unit: mm)



#### ■ APPLICATIONS

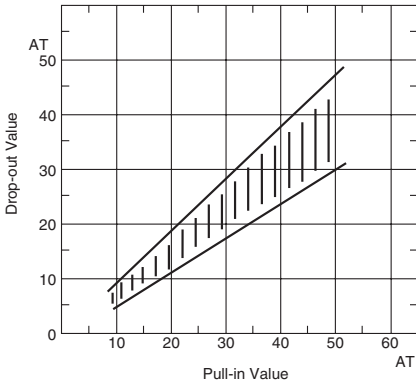
- Automotive electronic devices
- Control equipment
- Communication equipment
- Measurement equipment
- Household appliances

■ ELECTRICAL CHARACTERISTICS

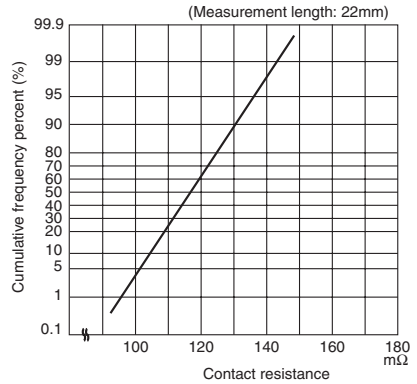
Parameter	Rated value	Unit
Pull-in Value (PI)	10~40	AT
Drop-out Value (DO)	5min	AT
Contact resistance (CR)	200max	mΩ
Breakdown voltage	150min	VDC
Insulation resistance	10 <sup>9</sup> min	Ω
Electrostatic capacitance	0.4max	pF
Contact rating	1.0	VA
Maximum switching voltage	24 ( $\frac{DC}{AC}$ )	V
Maximum switching current	0.1	A
Maximum carry current	0.3	A

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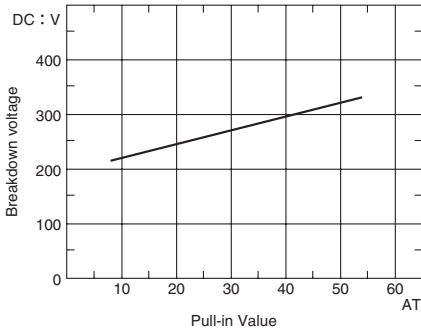
(1) Drop-out Value vs. Pull-in Value



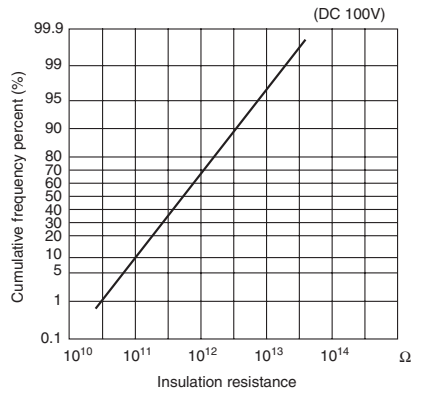
(2) Contact resistance



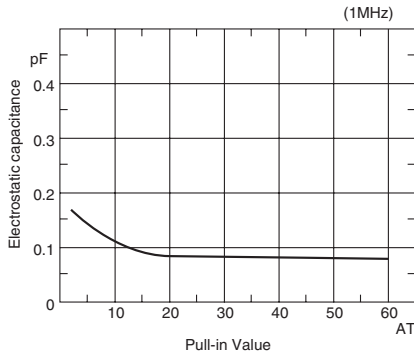
(3) Breakdown voltage



(4) Insulation resistance



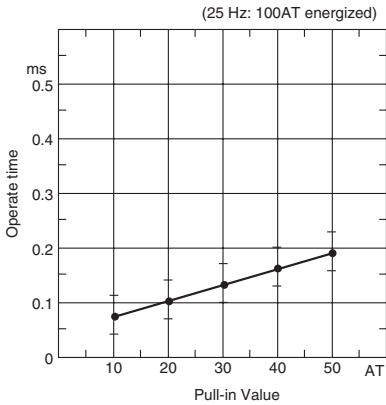
(5) Electrostatic capacitance



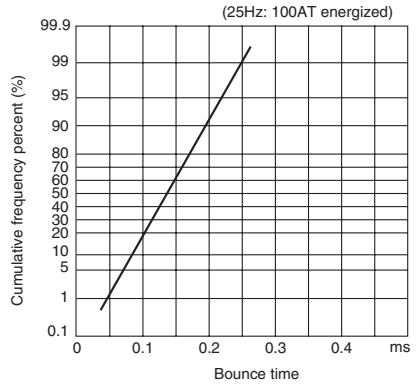
■ OPERATING CHARACTERISTICS

Parameter	Rated value	Unit
Operate time	0.3max	ms
Bounce time	0.3max	ms
Release time	0.05max	ms
Resonant frequency	11000±2000	Hz
Maximum operating frequency	500	Hz

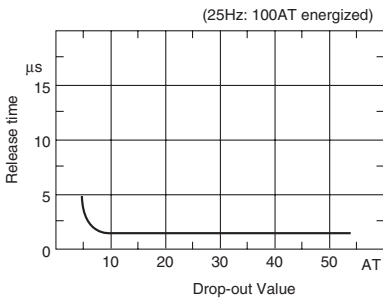
(1) Operate time



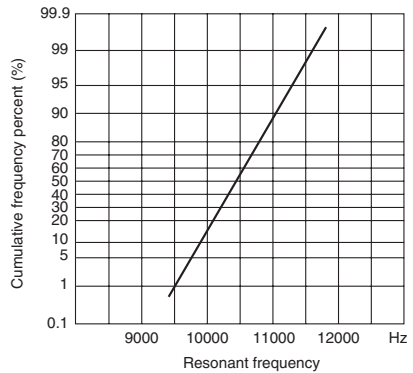
(2) Bounce time



(3) Release time



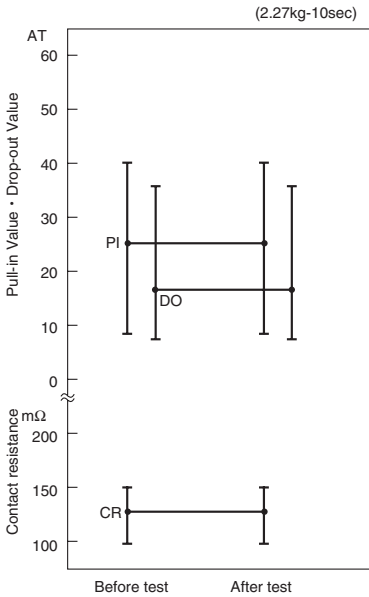
(4) Resonant frequency



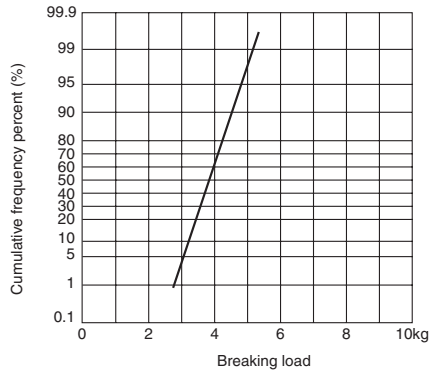
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■ MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)



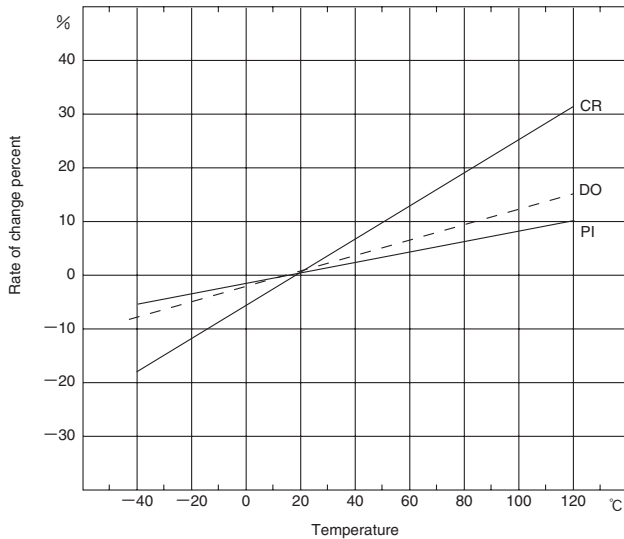
(2) Lead tensile strength



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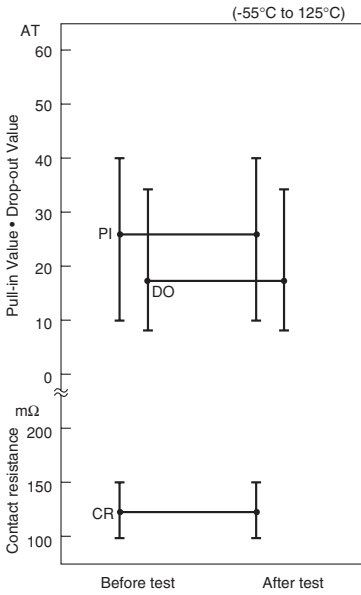
■ ENVIRONMENTAL CHARACTERISTICS

(1) Temperature characteristics

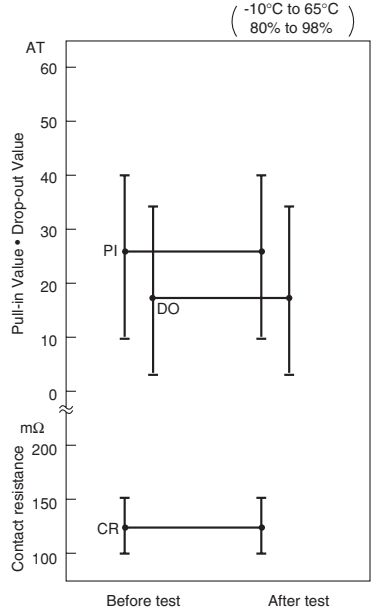


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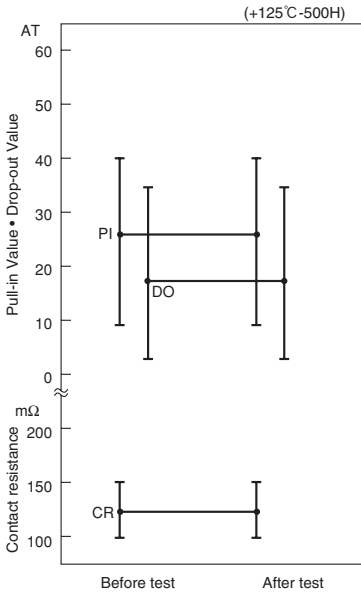
(2) Temperature cycle



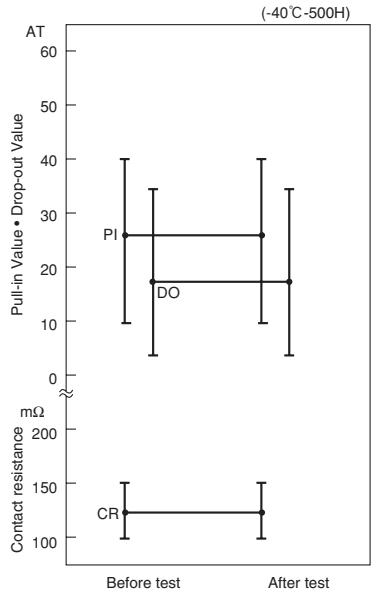
(3) Temperature and humidity cycle



(4) High temperature storage test

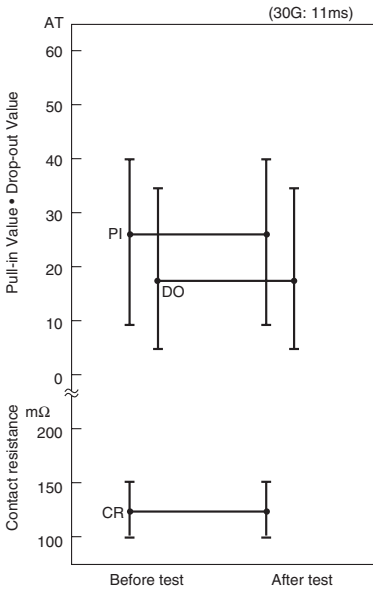


(5) Low temperature storage test

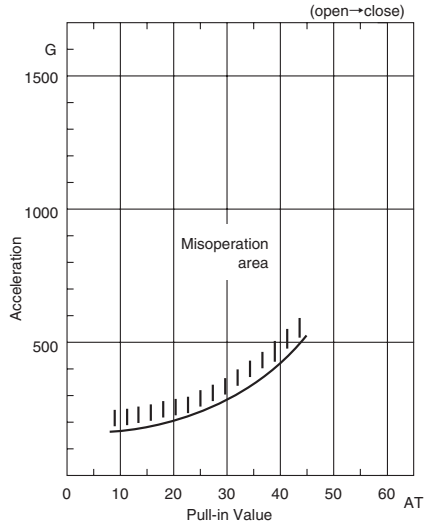


(6) Shock test

1) Electrical characteristics

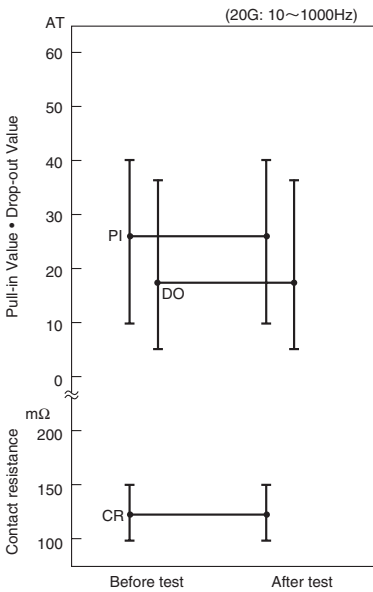


2) Misoperation area



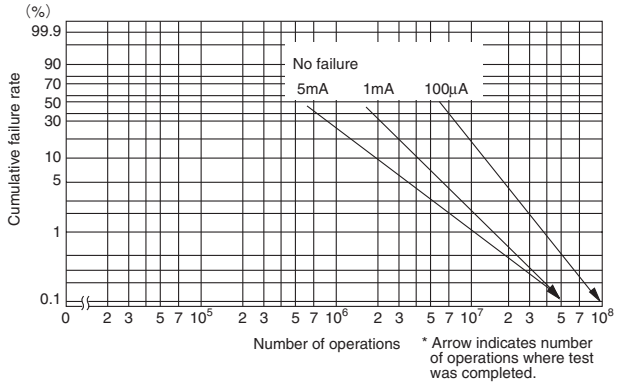
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(7) Vibration test

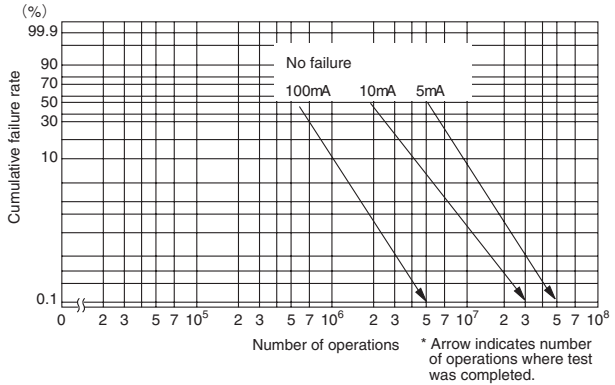


■ LIFE EXPECTANCY DATA: ORD213

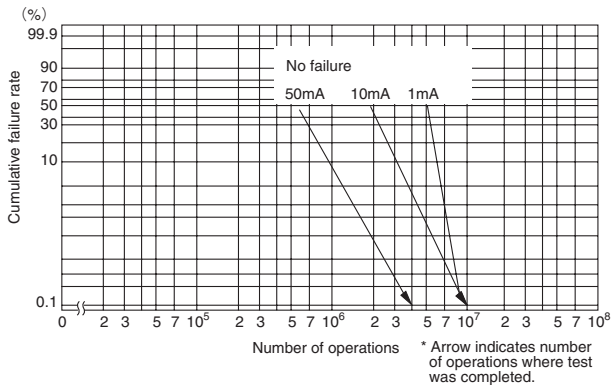
Load conditions  
 Voltage: 5VDC  
 Current: 100 A, 1mA, 5mA  
 Load: Resistive load



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



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



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