

# REED SWITCH

## ORD2211

Lamp Load

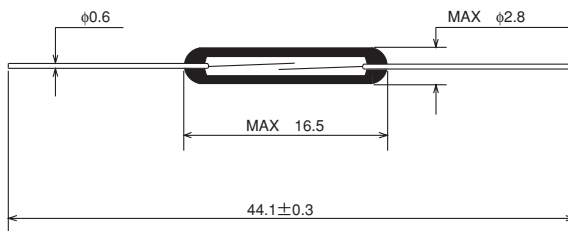
### ■ GENERAL DESCRIPTION

The ORD2211 is a single-contact reed switch designed for direct opening or closing lamps of 12 V - 3.4 W. 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.

### ■ EXTERNAL DIMENSIONS (Unit: mm)



### ■ APPLICATIONS

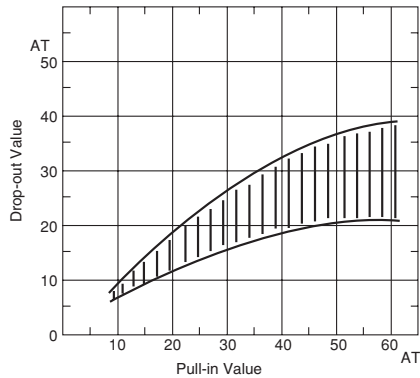
- Automotive electronic devices
- Control equipment
- Communication equipment
- Measurement equipment
- Household appliances

■ ELECTRICAL CHARACTERISTICS

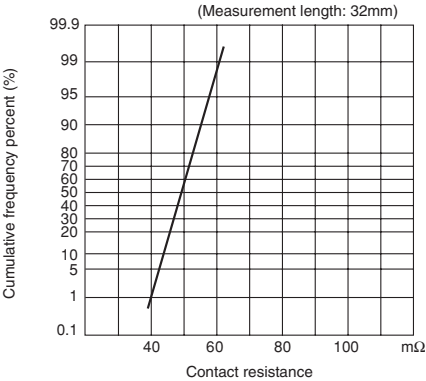
| Parameter                 | Rated value                     | Unit |
|---------------------------|---------------------------------|------|
| Pull-in Value (PI)        | 20~60                           | AT   |
| Drop-out Value (DO)       | 8min                            | AT   |
| Contact resistance (CR)   | 100max                          | mΩ   |
| Breakdown voltage         | 200min (PI≥20)                  | VDC  |
| Insulation resistance     | 10 <sup>9</sup> min             | Ω    |
| Electrostatic capacitance | 0.3max                          | pF   |
| Contact rating            | 50 (12V-3.4W lamp)              | VA   |
| Maximum switching voltage | 100 ( $\frac{V_{DC}}{V_{AC}}$ ) | V    |
| Maximum switching current | 0.5 (Inrush 3A)                 | A    |
| Maximum carry current     | 2.5                             | A    |

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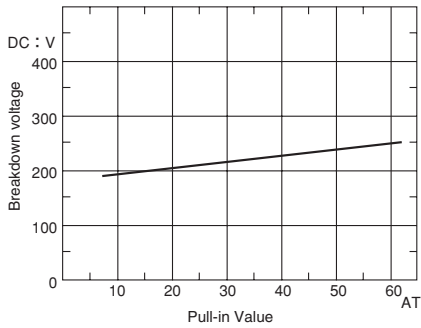
(1) Drop-out Value vs. Pull-in Value



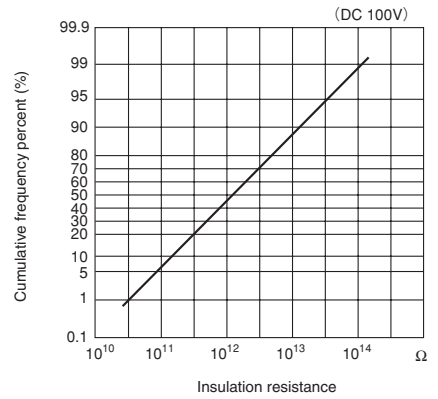
(2) Contact resistance



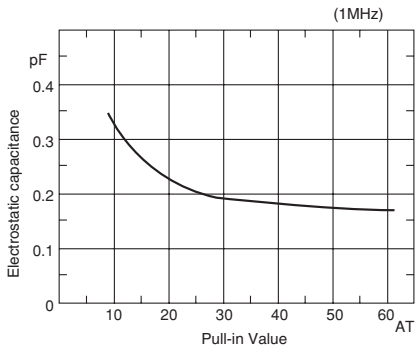
(3) Breakdown voltage



(4) Insulation resistance



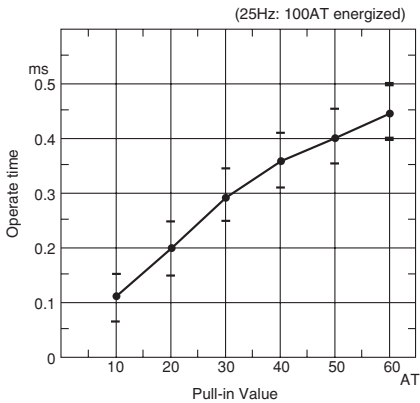
(5) Electrostatic capacitance



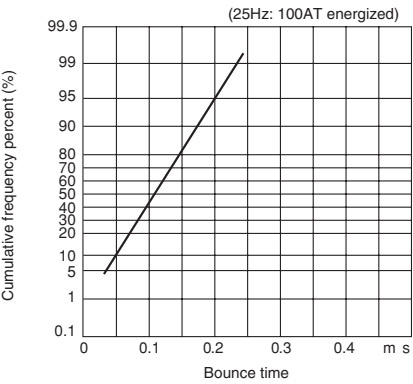
■ OPERATING CHARACTERISTICS

| Parameter                   | Rated value | Unit |
|-----------------------------|-------------|------|
| Operate time                | 0.6max      | ms   |
| Bounce time                 | 0.4max      | ms   |
| Release time                | 0.05max     | ms   |
| Resonant frequency          | 4600±500    | Hz   |
| Maximum operating frequency | 500         | Hz   |

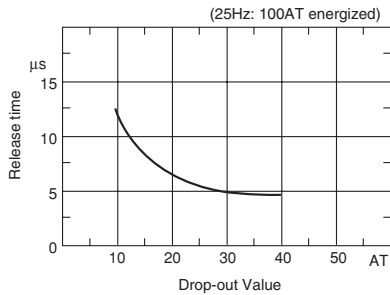
(1) Operate time



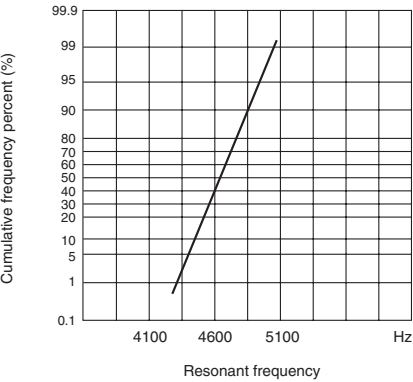
(2) Bounce time



(3) Release time

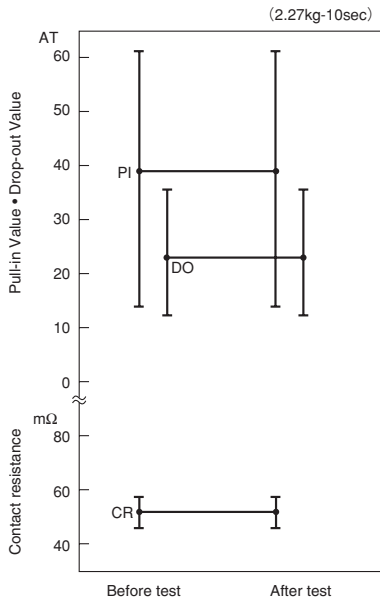


(4) Resonant frequency

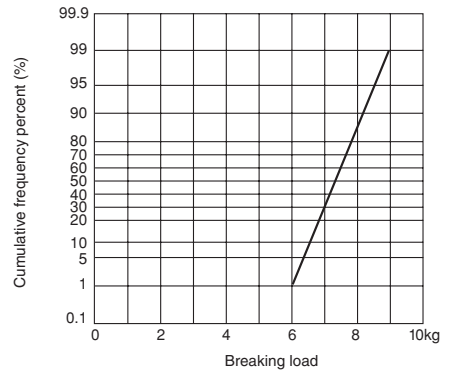


# MECHANICAL CHARACTERISTICS

## (1) Lead tensile test (static load)

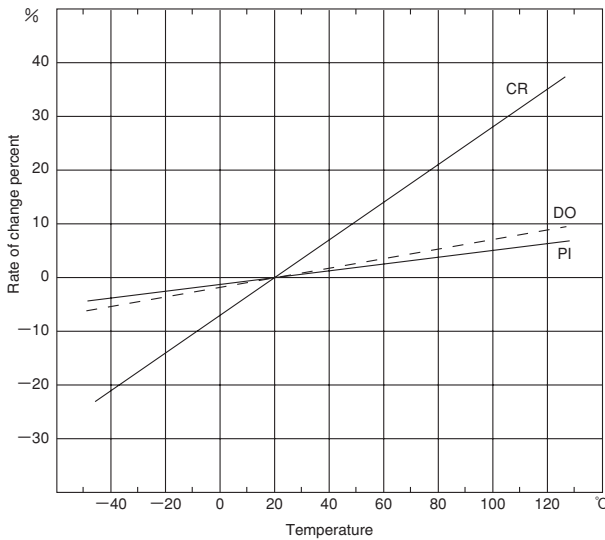


## (2) Lead tensile strength



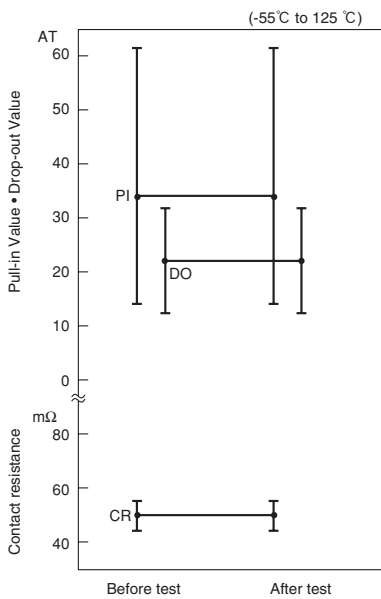
# ENVIRONMENTAL CHARACTERISTICS

## (1) Temperature characteristics

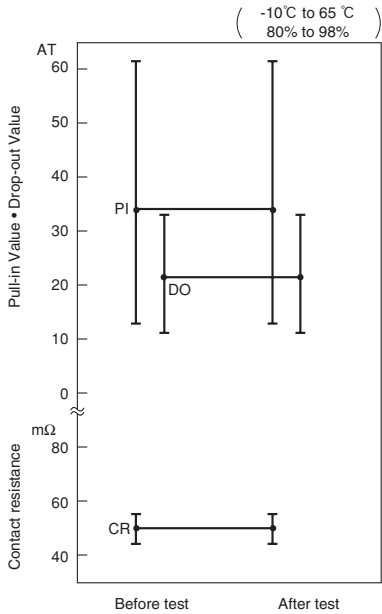


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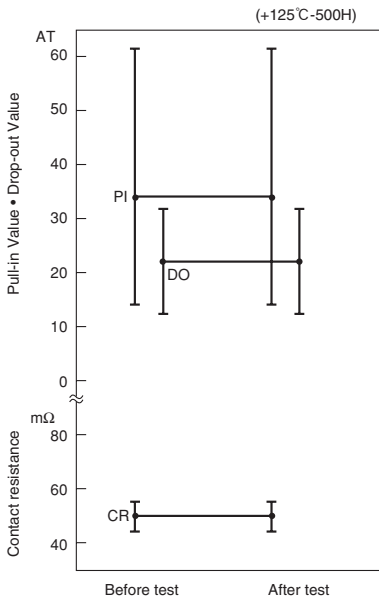
(2) Temperature cycle



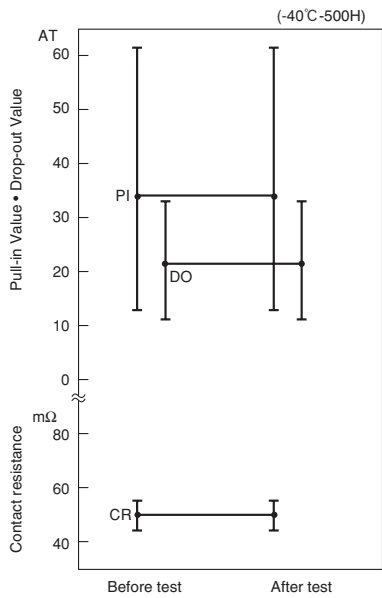
(3) Temperature and humidity cycle



(4) High temperature storage test

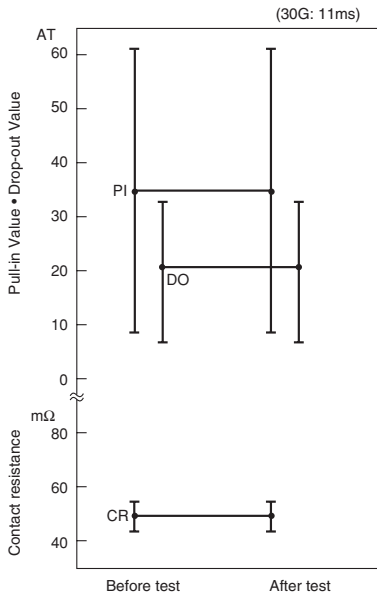


(5) Low temperature storage test

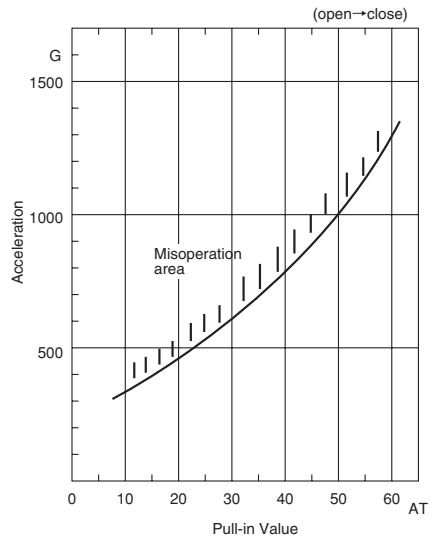


(6) Shock test

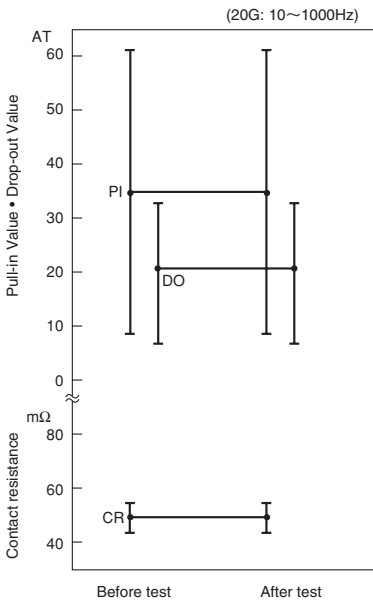
1) Electrical characteristics



2) Misoperation area

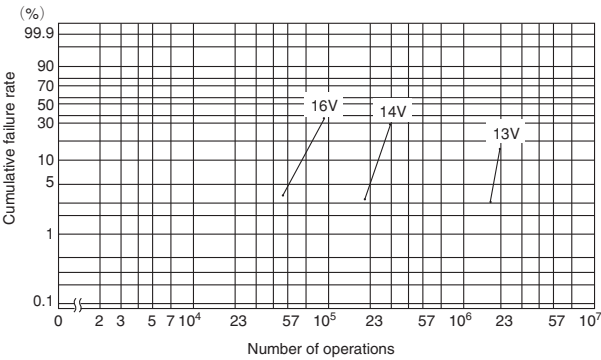


(7) Vibration test

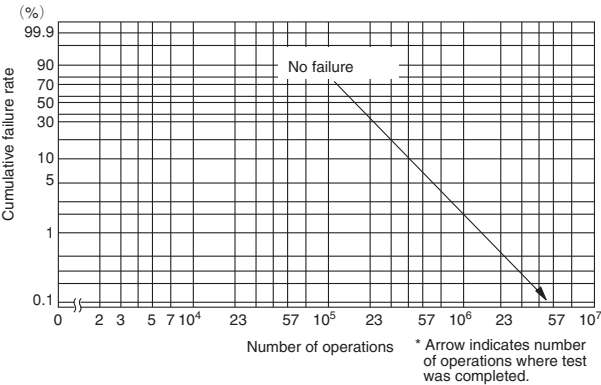


■ LIFE EXPECTANCY DATA: ORD2211

Load conditions  
Voltage: 13, 14, 16 : VDC  
Current: 12V-3.4W Lamp



Load conditions  
Voltage: 50VDC  
Current: 1A  
Load: Resistive load



Load conditions  
Voltage: 6VDC  
Current: 10mA, 50mA  
Load: Resistive load

