

# REED SWITCH

## ORD2211

Lamp Load (12 V – 3.4 W Lamp Switching)

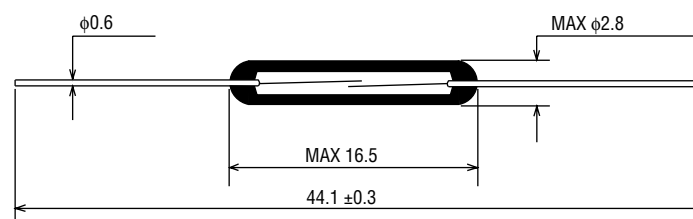
### GENERAL DESCRIPTION

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 an operating system and electrical circuits coaxially. Reed switches are suited to applications in radio frequency.
- (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)



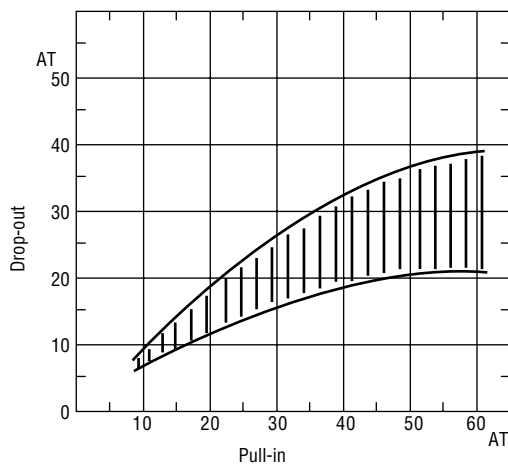
### APPLICATIONS OF REED SWITCHES

1. Automotive electronic devices
2. Control equipment
3. Communication equipment
4. Measurement equipment
5. Household appliances

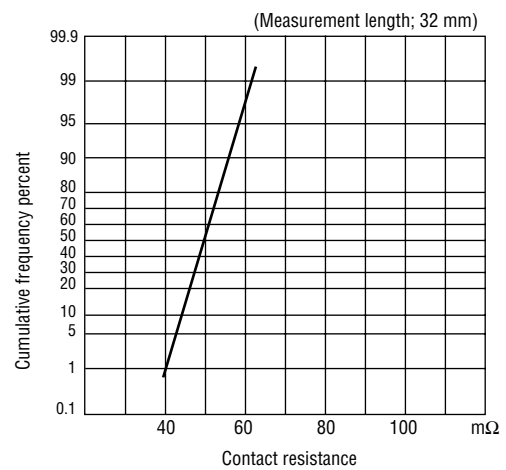
**ELECTRICAL CHARACTERISTICS**

| Parameter                 | Symbol | Condition | Rated Value     |      |                                   | Unit |
|---------------------------|--------|-----------|-----------------|------|-----------------------------------|------|
|                           |        |           | Min.            | Typ. | Max.                              |      |
| Pull-in Value             | PI     | —         | 20              | —    | 60                                | AT   |
| Drop-out Value            | DO     | —         | 8               | —    | —                                 | AT   |
| Contact Resistance        | CR     | —         | —               | —    | 100                               | mΩ   |
| Breakdown Voltage         | —      | PI≥20     | 200             | —    | —                                 | VDC  |
| Insulation Resistance     | —      | —         | 10 <sup>9</sup> | —    | —                                 | Ω    |
| Electrostatic Capacitance | —      | —         | —               | —    | 0.3                               | pF   |
| Contact Rating            | —      | —         | —               | —    | 50<br>(12 V-3.4 W Lamp)           | VA   |
| Maximum Switching Voltage | —      | —         | —               | —    | 100 <sup>DC</sup> / <sub>AC</sub> | V    |
| Maximum Switching Current | —      | —         | —               | —    | 0.5<br>(Inrush Current 3 A)       | A    |
| Maximum Carry Current     | —      | —         | —               | —    | 2.5                               | A    |

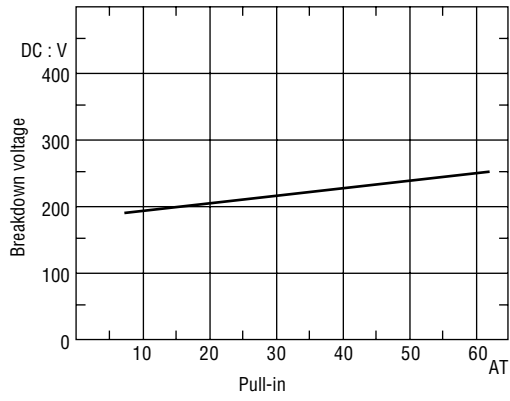
(1) Drop-out vs. Pull-in



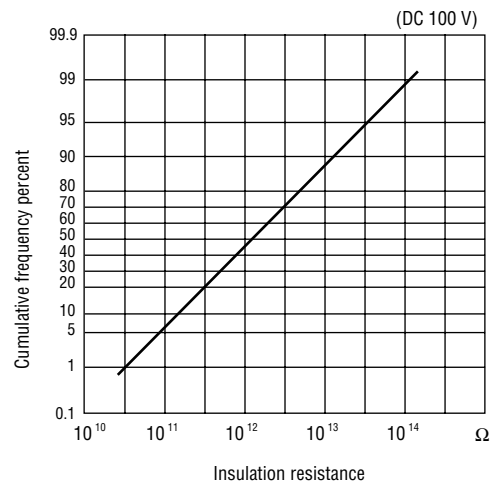
(2) Contact resistance



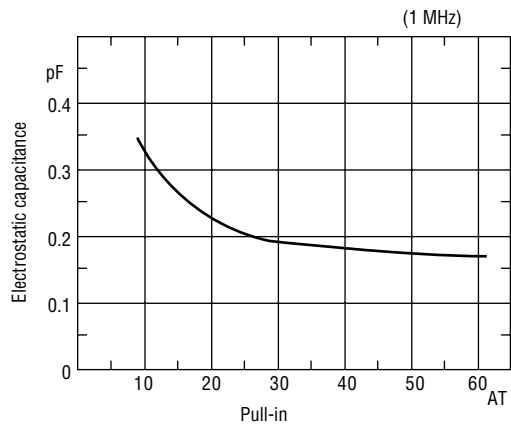
(3) Breakdown voltage



(4) Insulation resistance



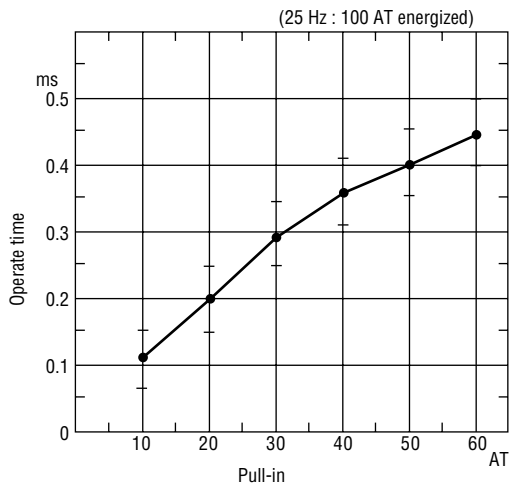
(5) Electrostatic capacitance



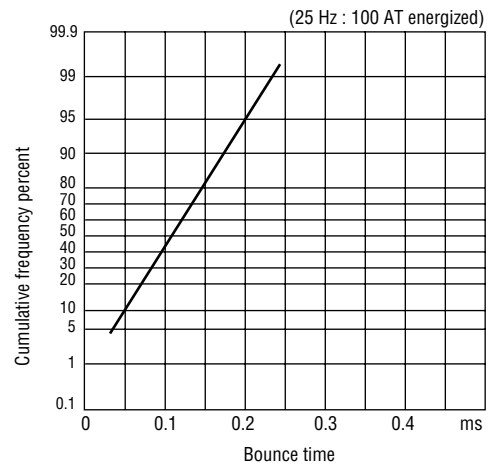
**OPERATING CHARACTERISTICS**

| Parameter                   | Rated Value |      |      | Unit |
|-----------------------------|-------------|------|------|------|
|                             | Min.        | Typ. | Max. |      |
| Operate Time                | —           | —    | 0.6  | ms   |
| Bounce Time                 | —           | —    | 0.4  | ms   |
| Release Time                | —           | —    | 0.05 | ms   |
| Resonant Frequency          | 4100        | 4600 | 5100 | Hz   |
| Maximum Operating Frequency | —           | —    | 500  | Hz   |

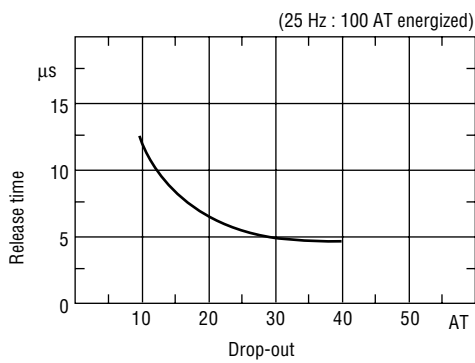
(1) Operate time



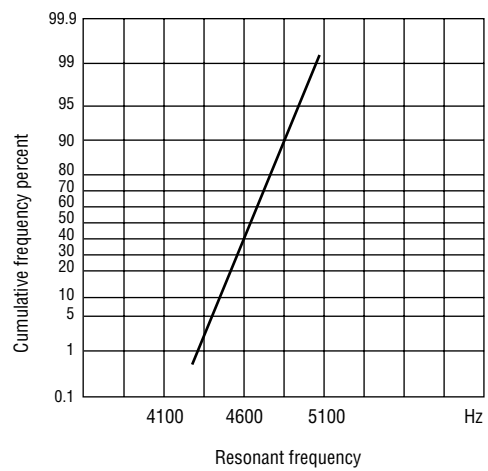
(2) Bounce time



(3) Release time

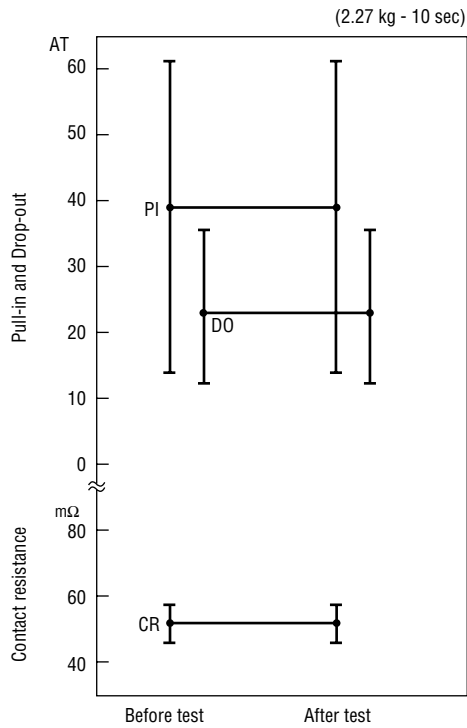


(4) Resonant frequency

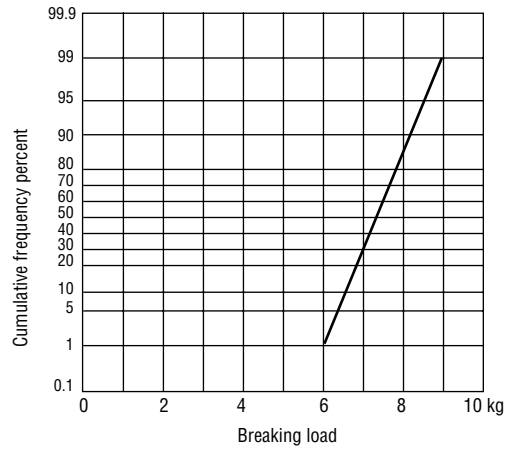


## MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)

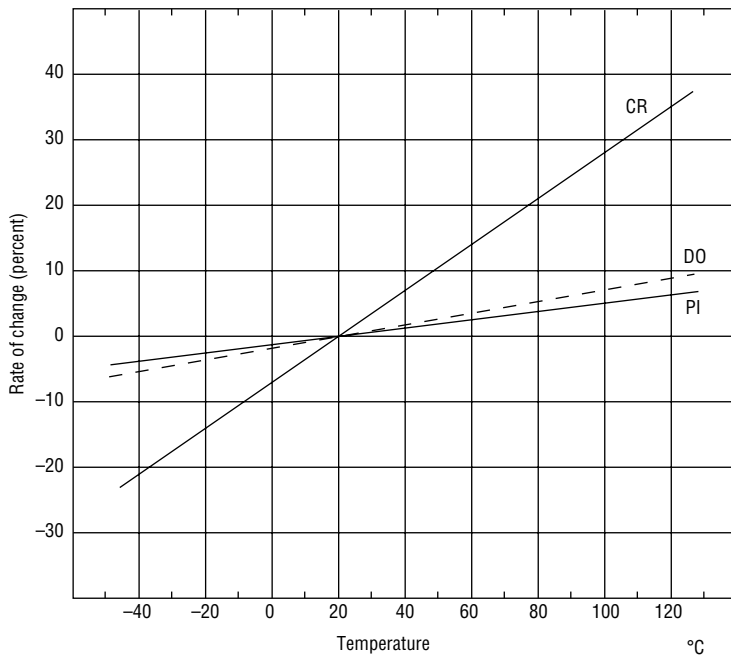


(2) Lead tensile strength

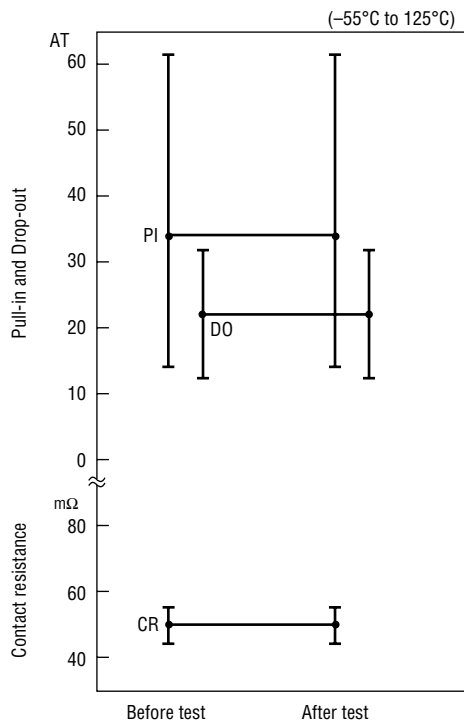


## ENVIRONMENTAL CHARACTERISTICS

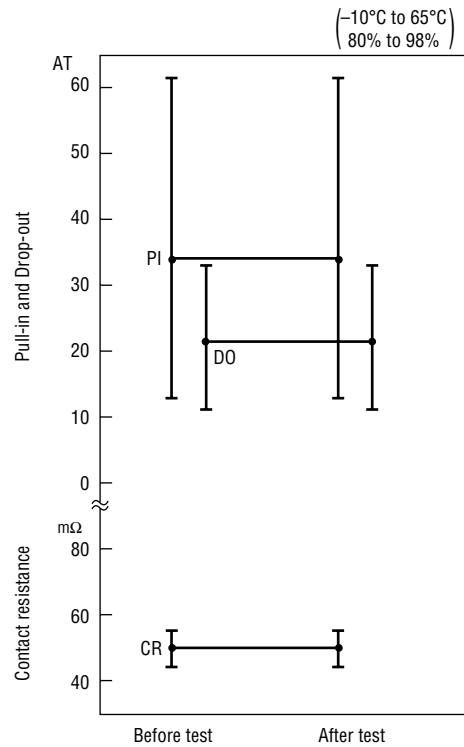
(1) Temperature characteristics



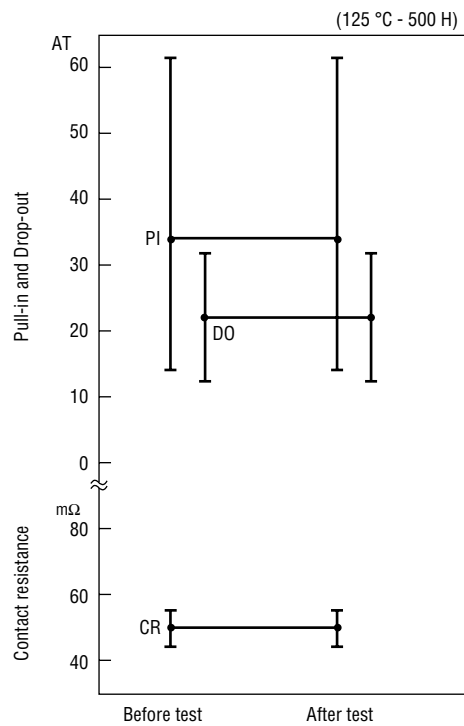
(2) Temperature cycle



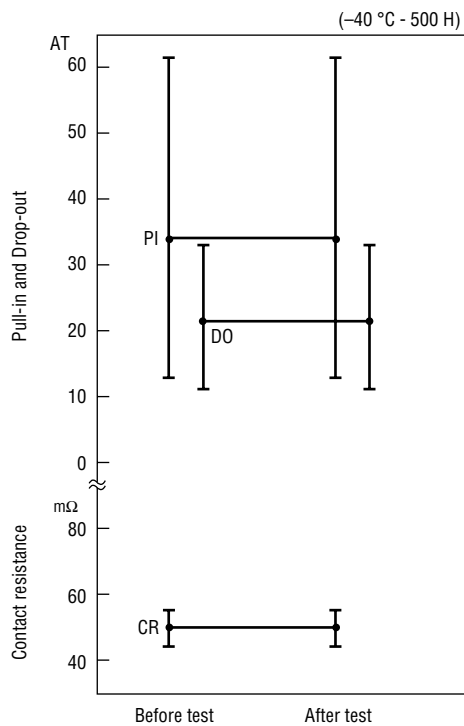
(3) Temperature and humidity cycle



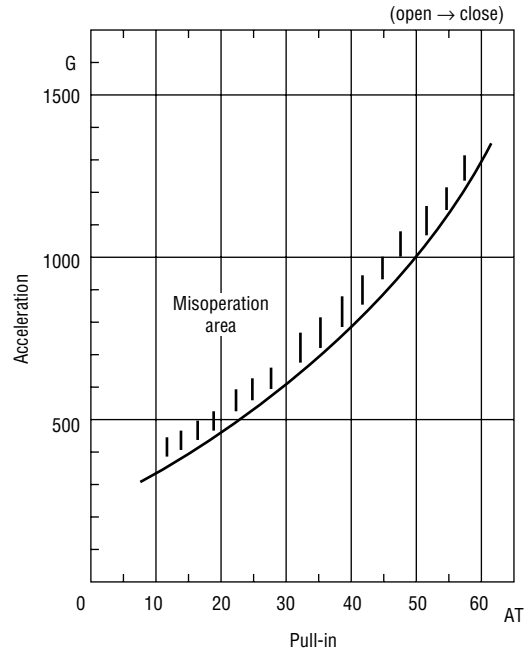
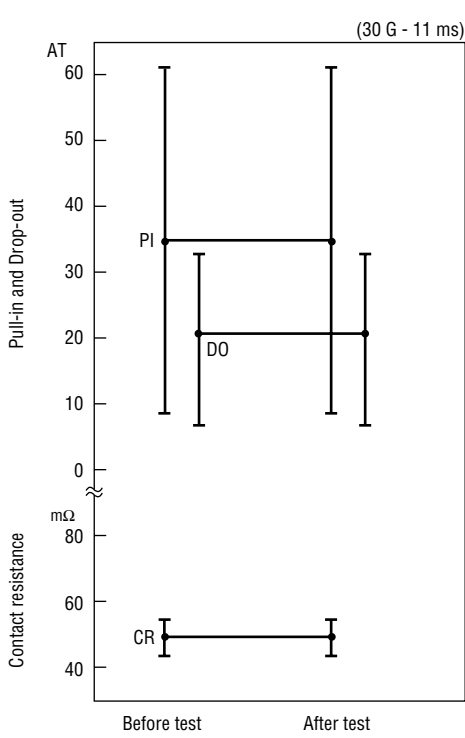
(4) High temperature storage test



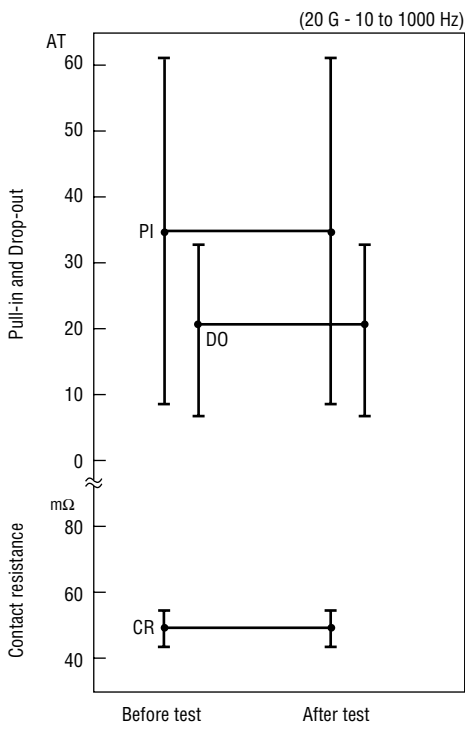
(5) Low temperature storage test



(6) Shock test



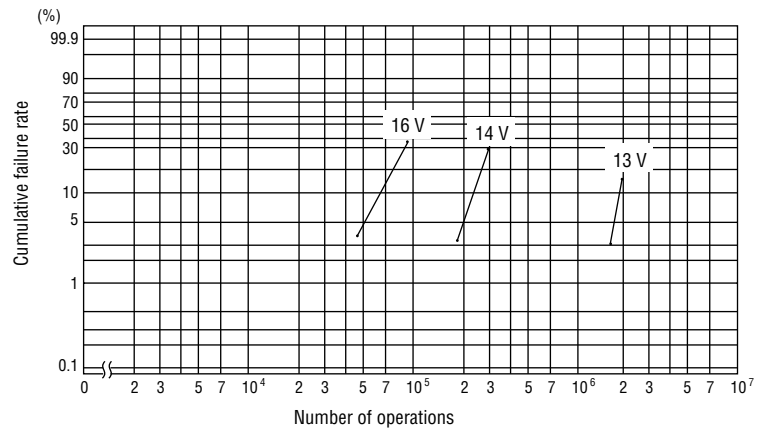
(7) Vibration test



**LIFE EXPECTANCY DATA: ORD2211**

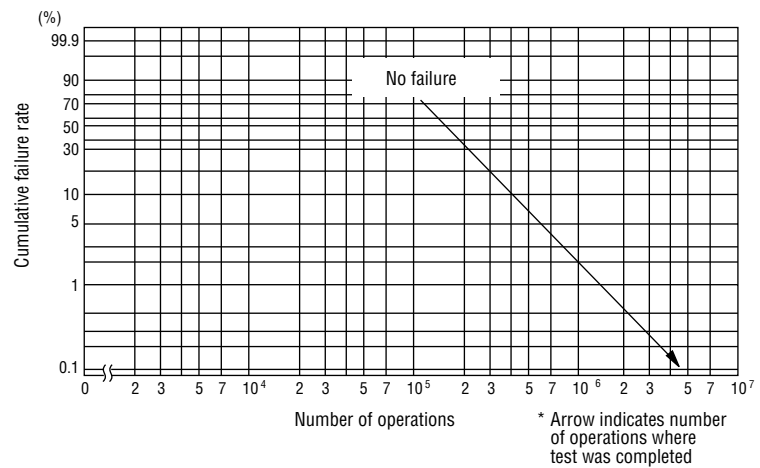
Load conditions

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



Load conditions

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



Load conditions

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

