E2R0014-37-21

REED SWITCH

ORD221

General Purpose Miniature Offset (Medium-level Load 100 V Max.)

GENERAL DESCRIPTION

The ORD221 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 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

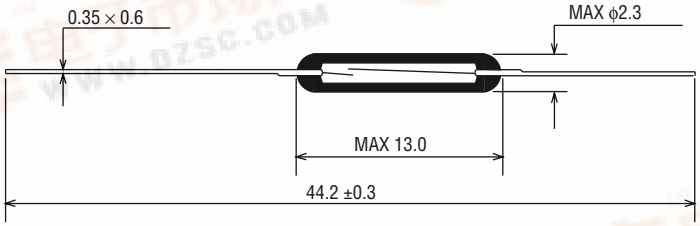
(3) The structure comprises an operating system and electrical circuits coaxially. Reed switches are suited to applications in radio frequency.

(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)



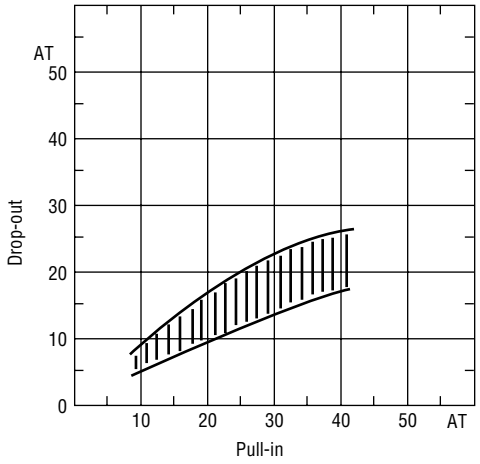
APPLICATIONS OF REED SWITCHES

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

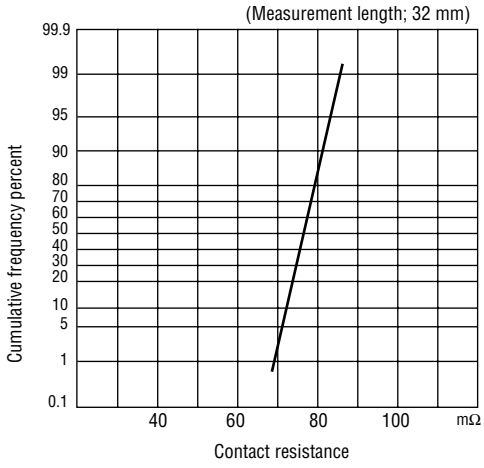
ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Condition	Rated Value			Unit
			Min.	Typ.	Max.	
Pull-in Value	PI	—	10	—	30	AT
Drop-out Value	DO	—	5	—	—	AT
Contact Resistance	CR	—	—	—	100	mΩ
Breakdown Voltage	—	PI>20	200	—	—	VDC
Breakdown Voltage	—	PI<20	150	—	—	VDC
Insulation Resistance	—	—	10^9	—	—	Ω
Electrostatic Capacitance	—	—	—	—	0.3	pF
Contact Rating	—	—	—	—	10	VA
Maximum Switching Voltage	—	—	—	—	100^{DC}_{AC}	V
Maximum Switching Current	—	—	—	—	0.3	A
Maximum Carry Current	—	—	—	—	1.0	A

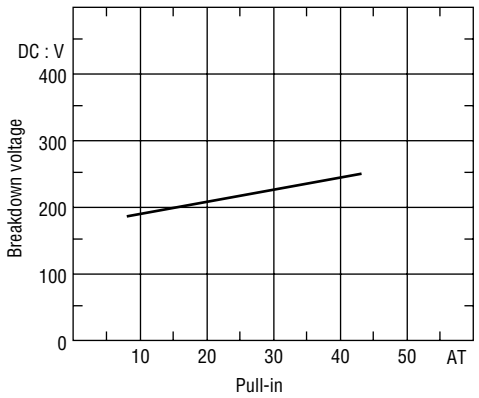
(1) Drop-out vs. Pull-in



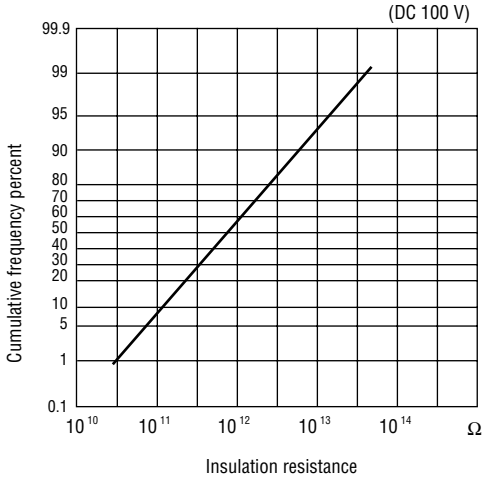
(2) Contact resistance



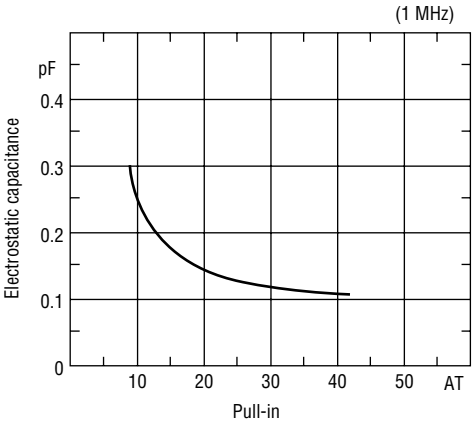
(3) Breakdown voltage



(4) Insulation resistance



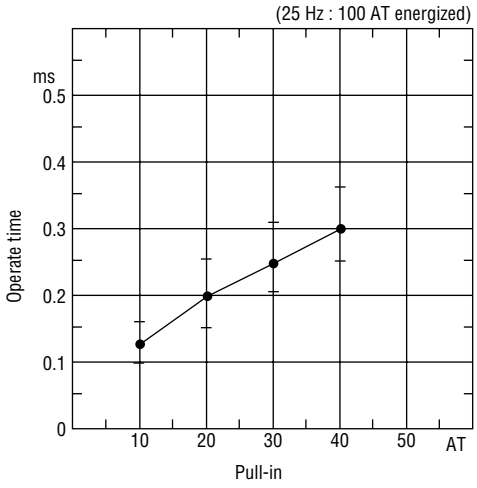
(5) Electrostatic capacitance



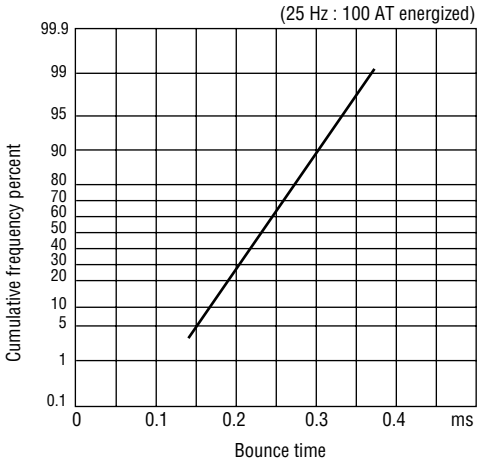
OPERATING CHARACTERISTICS

Parameter	Rated Value			Unit
	Min.	Typ.	Max.	
Operate Time	—	—	0.4	ms
Bounce Time	—	—	0.5	ms
Release Time	—	—	0.05	ms
Resonant Frequency	2500	2750	3000	Hz
Maximum Operating Frequency	—	—	500	Hz

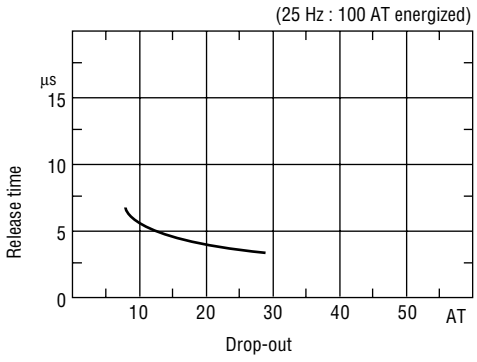
(1) Operate time



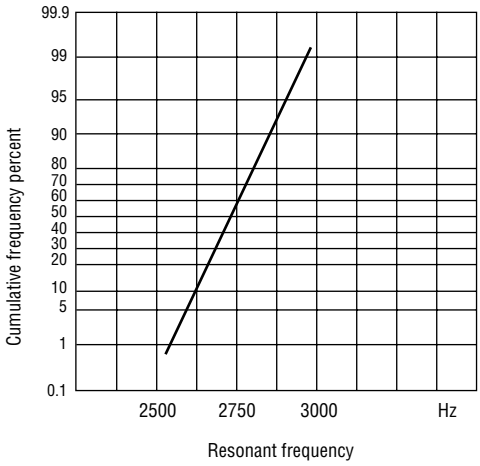
(2) Bounce time



(3) Release time

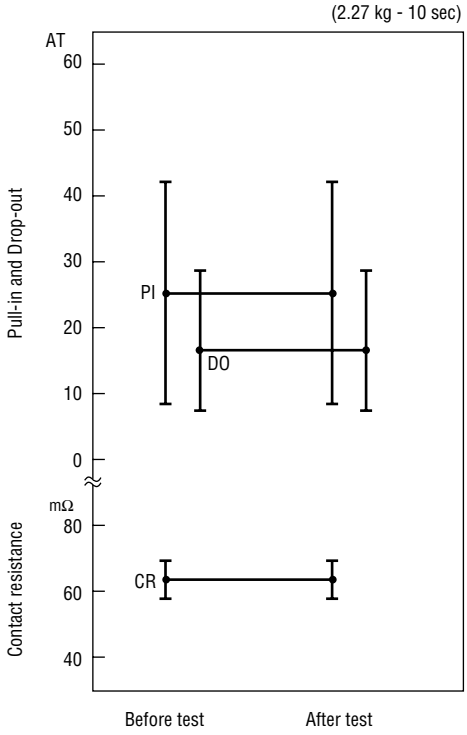


(4) Resonant frequency

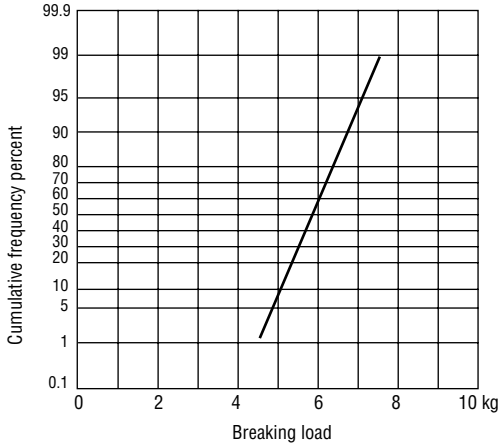


MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)

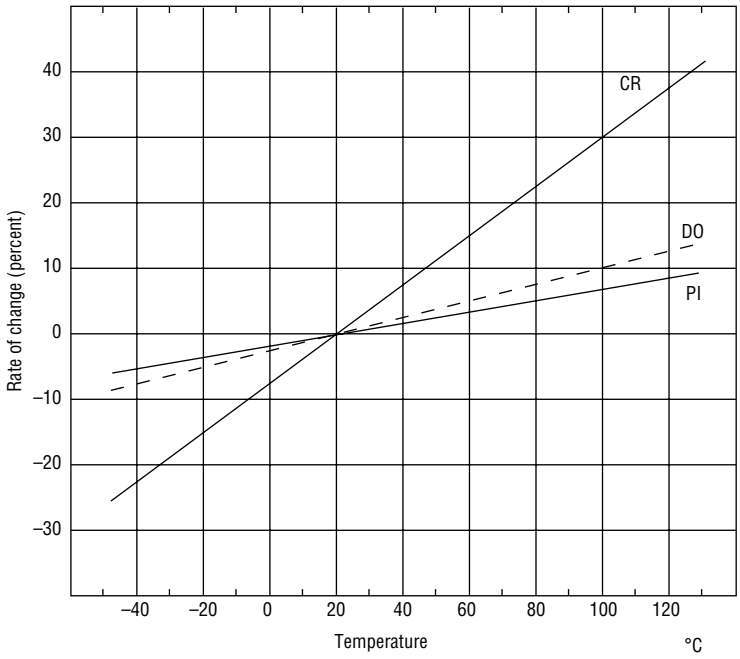


(2) Lead tensile strength

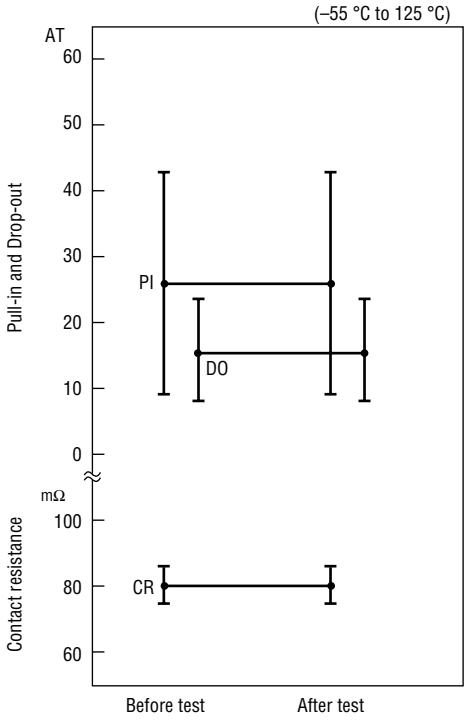


ENVIRONMENTAL CHARACTERISTICS

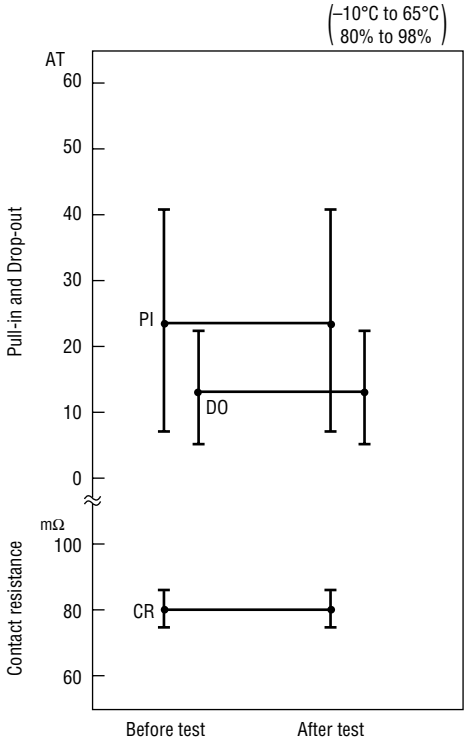
(1) Temperature characteristics



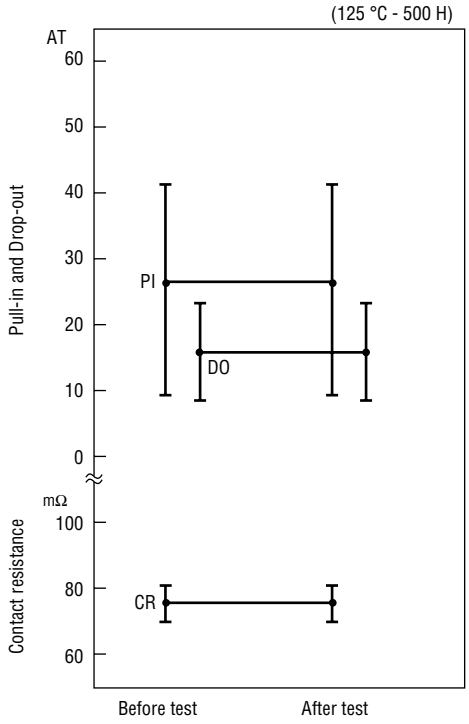
(2) Temperature cycle



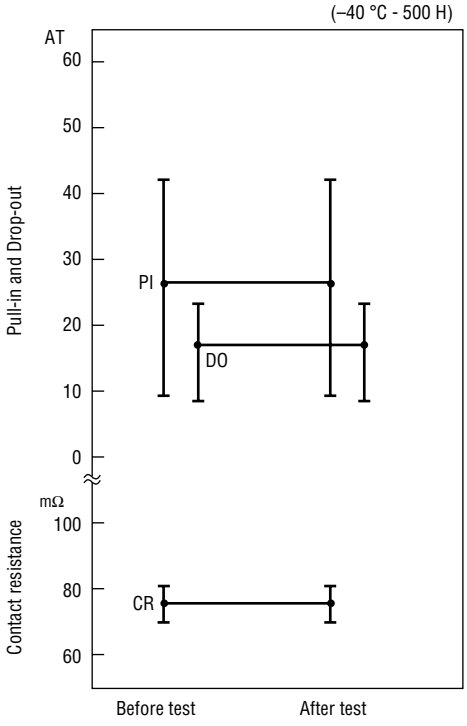
(3) Temperature and humidity cycle



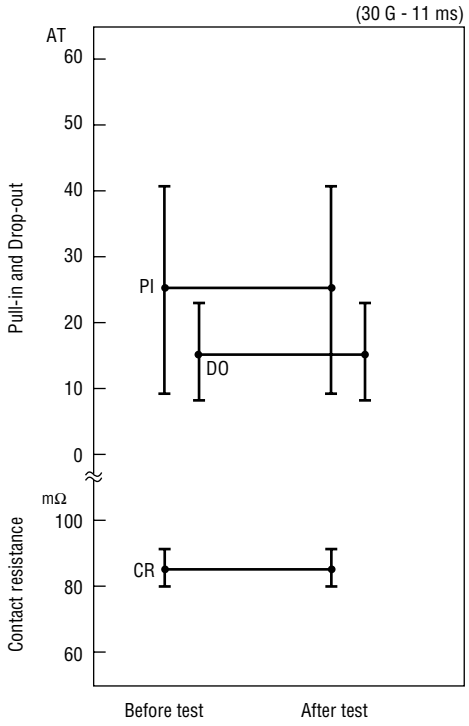
(4) High temperature storage test

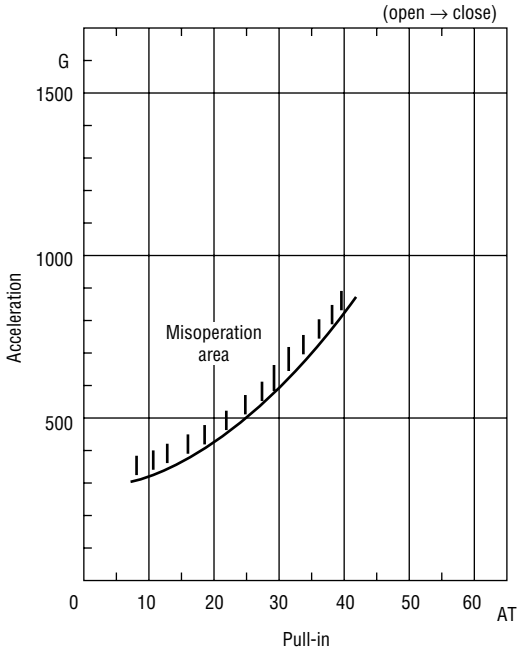


(5) Low temperature storage test

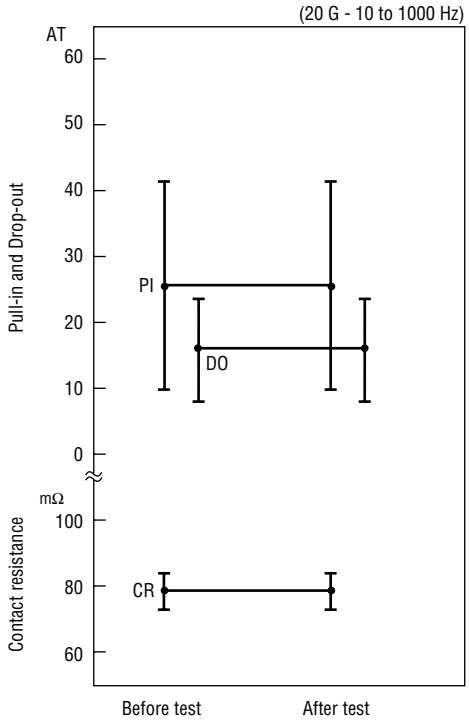


(6) Shock test





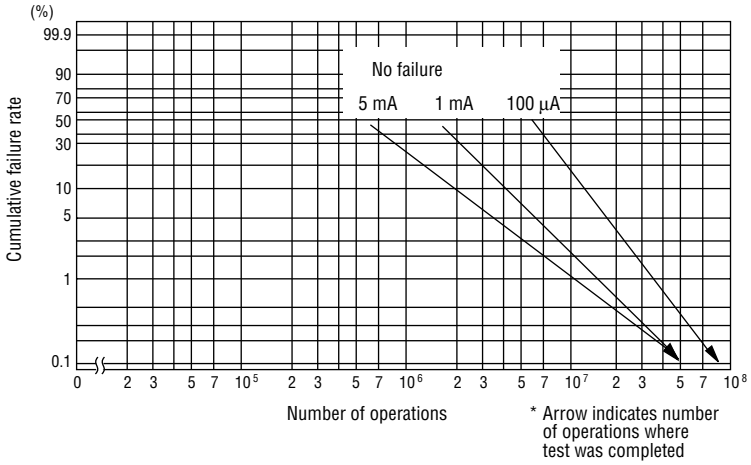
(7) Vibration test



LIFE EXPECTANCY DATA: ORD221

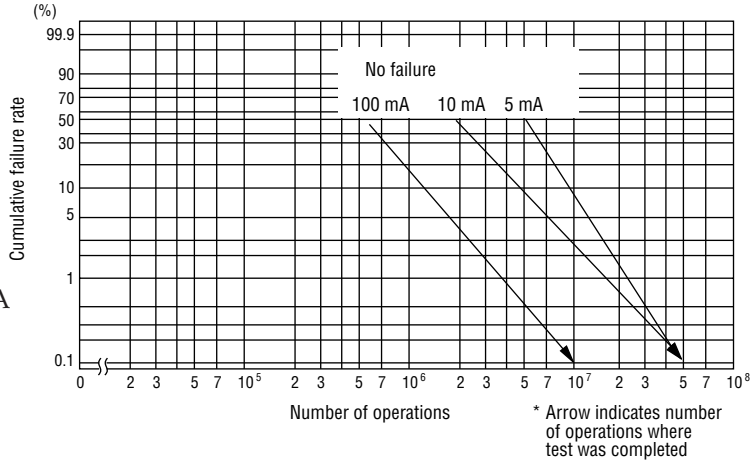
Load conditions

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



Load conditions

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



Load conditions

Voltage : 24 VDC
Current : 10 mA, 100 mA, 200 mA
Load : Resistive load