

# REED SWITCH

## ORD229

High Breakdown Voltage, High Power (AC 200 V Switching)

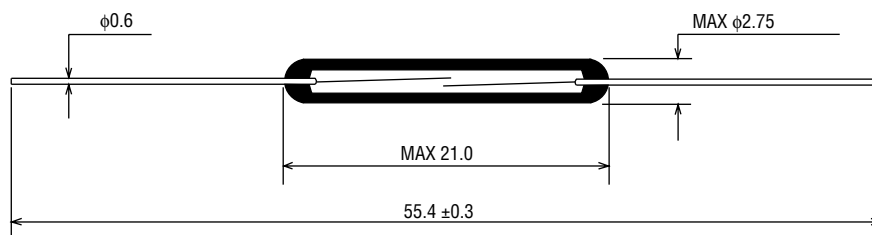
### GENERAL DESCRIPTION

The ORD229 is a single-contact reed switch designed for high breakdown voltage of 600 VDC and high power of AC 70 VA and DC 50 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)



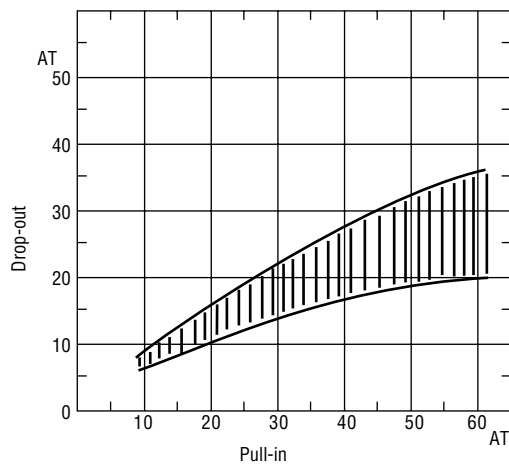
### APPLICATIONS OF REED SWITCHES

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

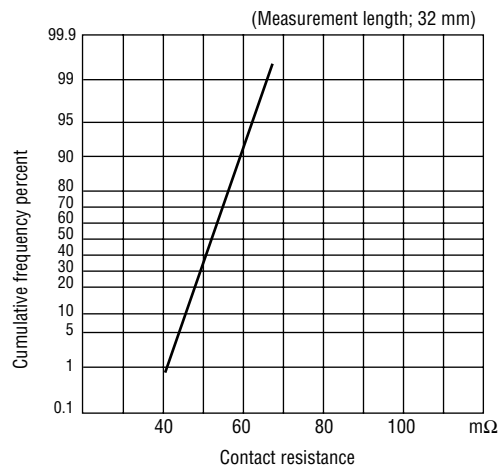
**ELECTRICAL CHARACTERISTICS**

| Parameter                 | Symbol | Condition   | Rated Value      |      |             | Unit |
|---------------------------|--------|-------------|------------------|------|-------------|------|
|                           |        |             | Min.             | Typ. | Max.        |      |
| Pull-in Value             | PI     | —           | 20               | —    | 50          | AT   |
| Drop-out Value            | DO     | —           | 6                | —    | —           | AT   |
| Contact Resistance        | CR     | —           | —                | —    | 100         | mΩ   |
| Breakdown Voltage         | —      | PI>35       | 600              | —    | —           | VDC  |
| Breakdown Voltage         | —      | PI 20 to 35 | 500              | —    | —           | VDC  |
| Insulation Resistance     | —      | —           | 10 <sup>10</sup> | —    | —           | Ω    |
| Electrostatic Capacitance | —      | —           | —                | —    | 0.5         | pF   |
| Contact Rating            | —      | —           | —                | —    | 50          | W    |
| Contact Rating            | —      | —           | —                | —    | 70          | VA   |
| Maximum Switching Voltage | —      | —           | —                | —    | 300 AC      | V    |
| Maximum Switching Voltage | —      | —           | —                | —    | 350 DC      | V    |
| Maximum Switching Current | —      | —           | —                | —    | DC0.7/AC0.5 | A    |
| Maximum Carry Current     | —      | —           | —                | —    | 2.5         | A    |

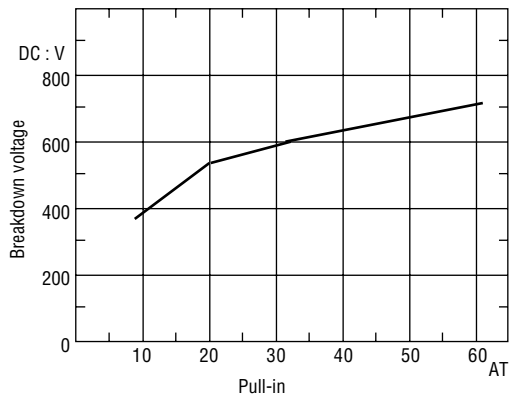
(1) Drop-out vs. Pull-in



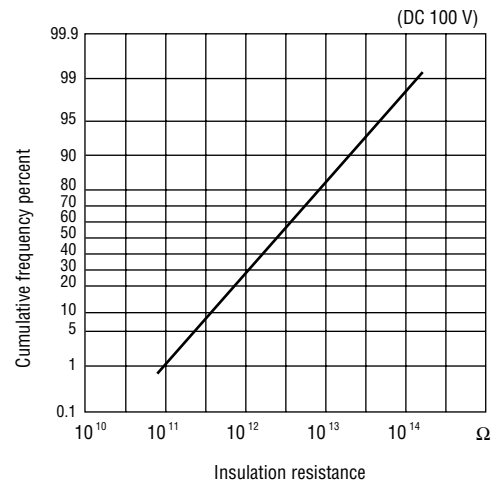
(2) Contact resistance



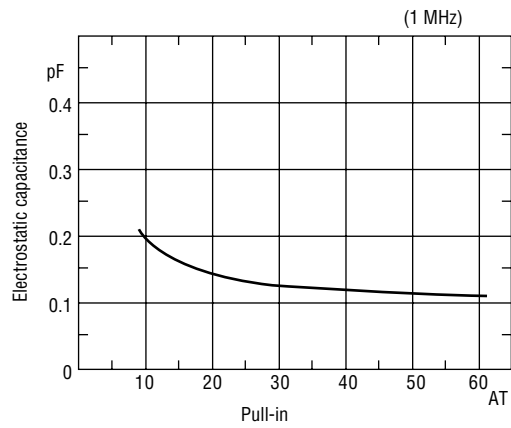
(3) Breakdown voltage



(4) Insulation resistance



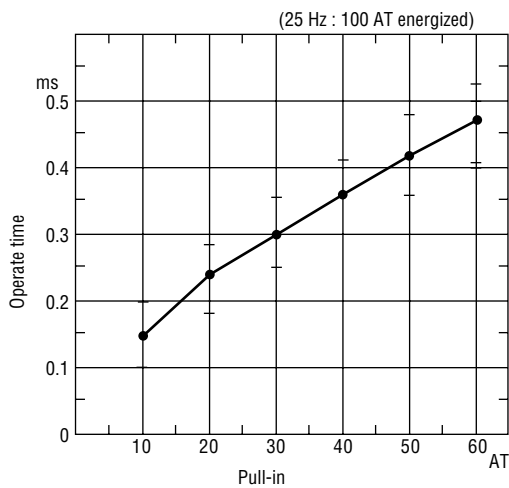
(5) Electrostatic capacitance



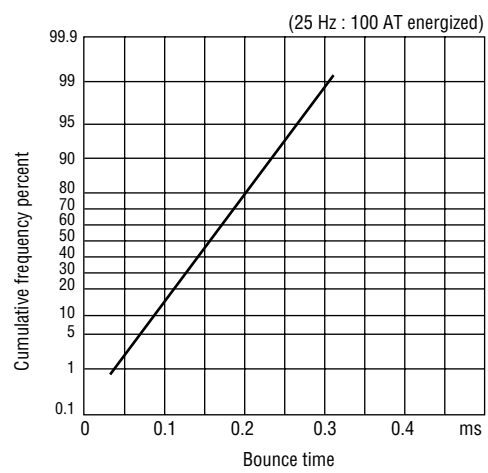
**OPERATING CHARACTERISTICS**

| Parameter                   | Rated Value |      |      | Unit |
|-----------------------------|-------------|------|------|------|
|                             | Min.        | Typ. | Max. |      |
| Operate Time                | —           | —    | 0.6  | ms   |
| Bounce Time                 | —           | —    | 0.5  | ms   |
| Release Time                | —           | —    | 0.05 | ms   |
| Resonant Frequency          | 2250        | 2500 | 2750 | Hz   |
| Maximum Operating Frequency | —           | —    | 500  | Hz   |

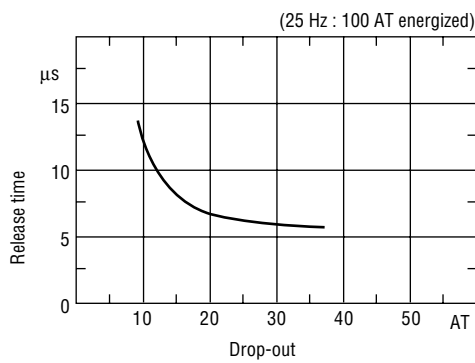
(1) Operate time



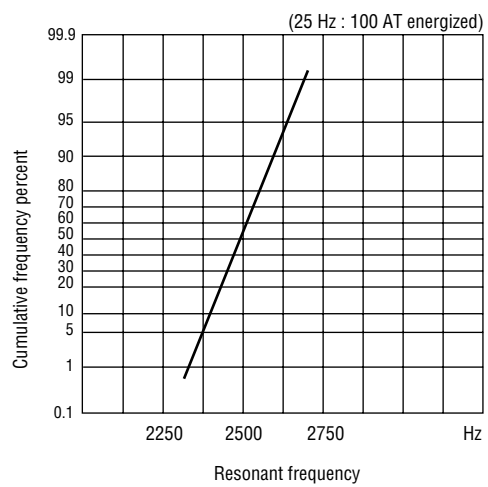
(2) Bounce time



(3) Release time

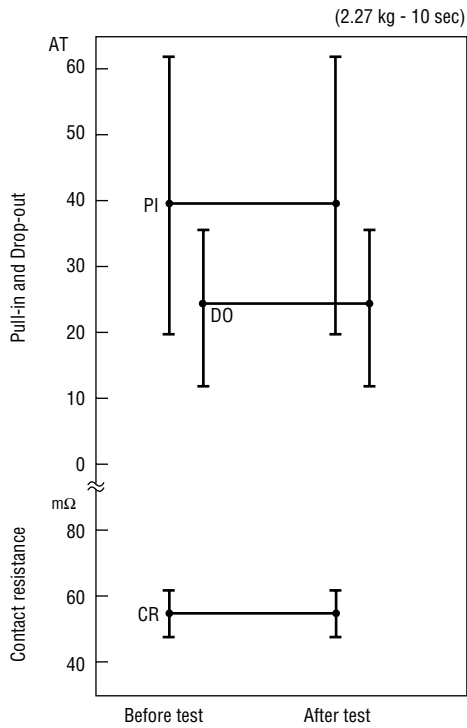


(4) Resonant frequency

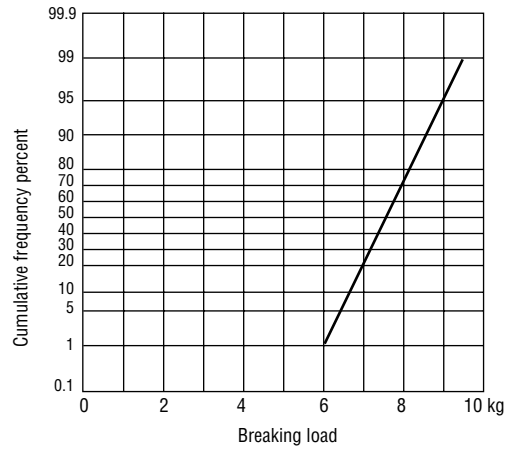


## MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)

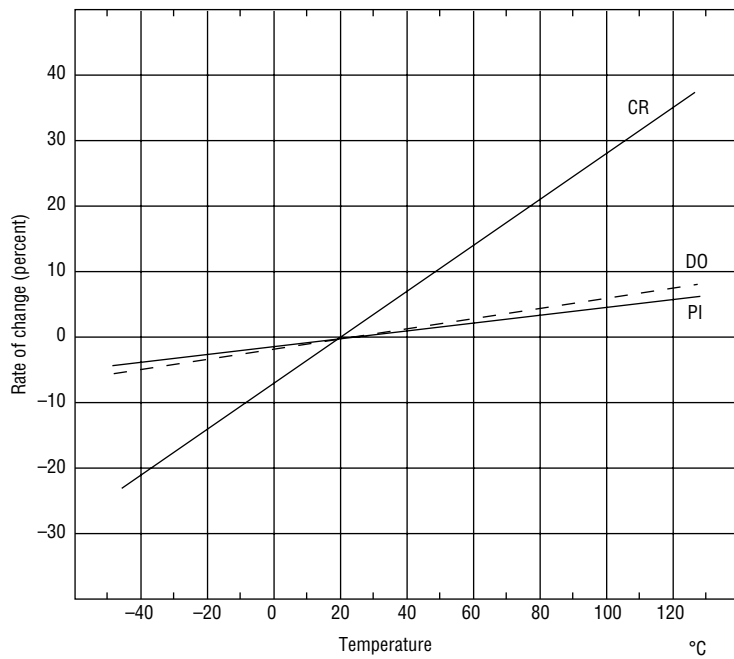


(2) Lead tensile strength

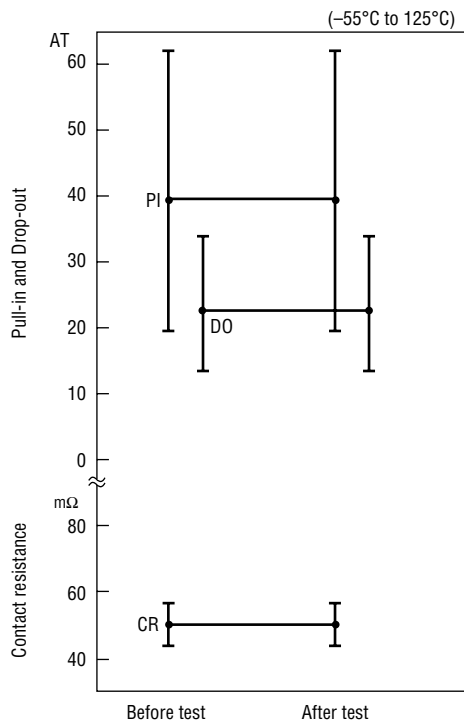


## ENVIRONMENTAL CHARACTERISTICS

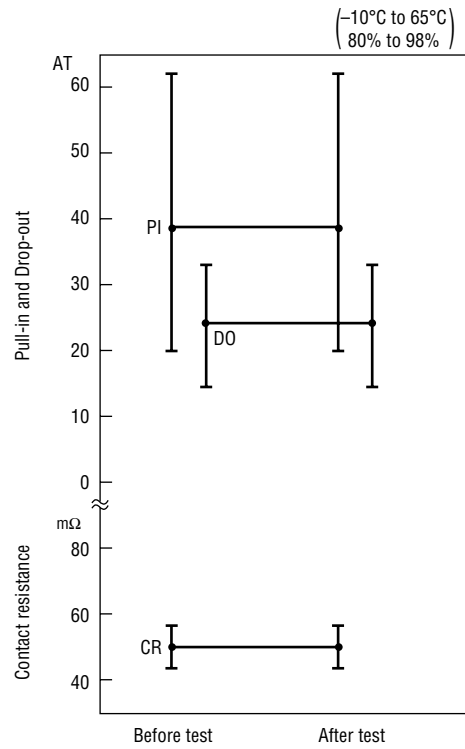
(1) Temperature characteristics



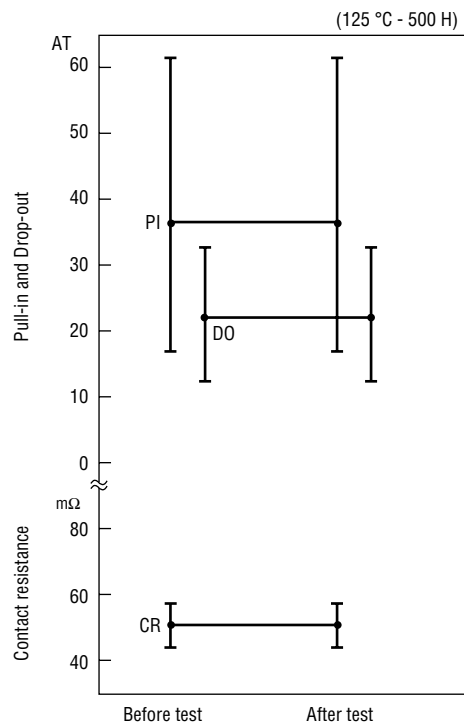
(2) Temperature cycle



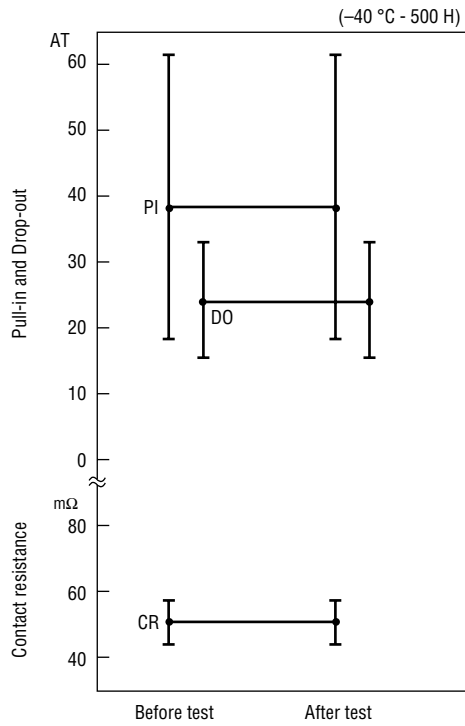
(3) Temperature and humidity cycle



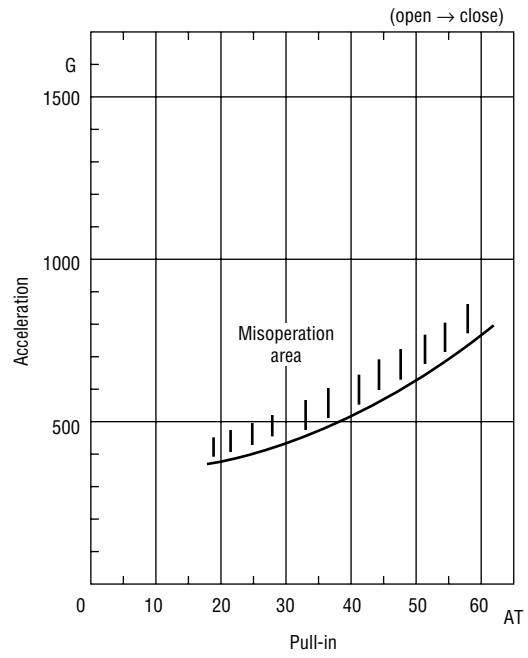
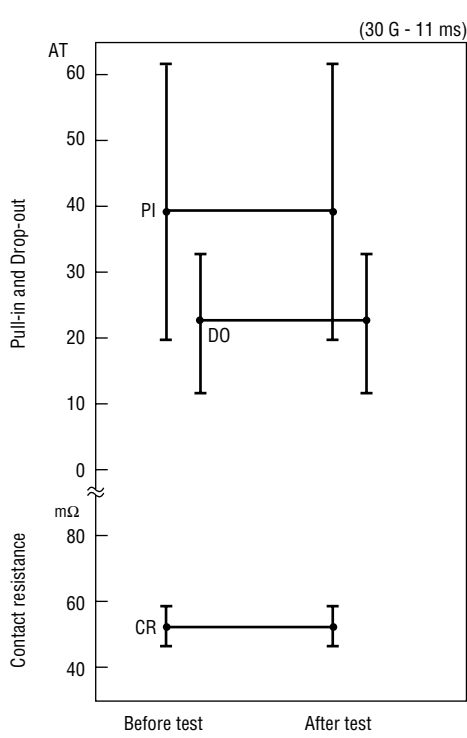
(4) High temperature storage test



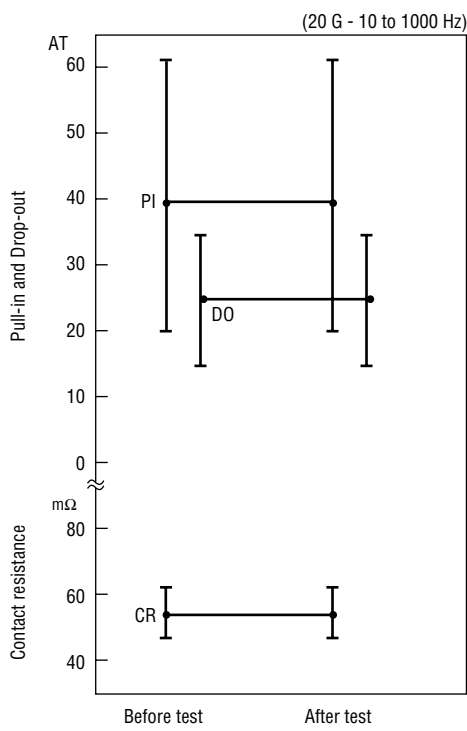
(5) Low temperature storage test



(6) Shock test



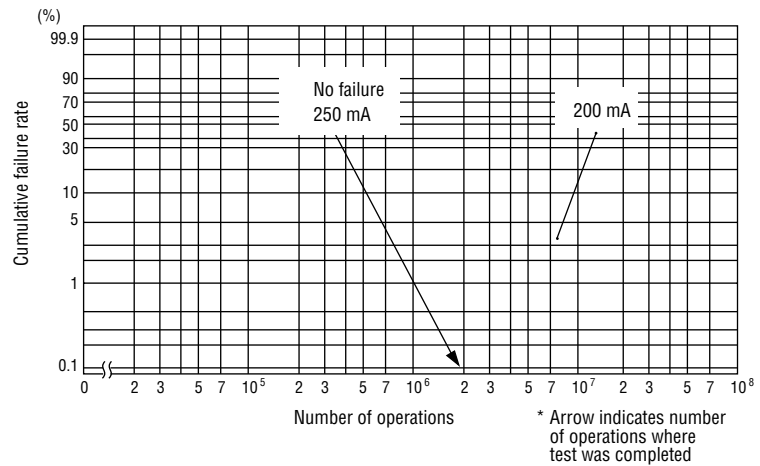
(7) Vibration test



**LIFE EXPECTANCY DATA: ORD229**

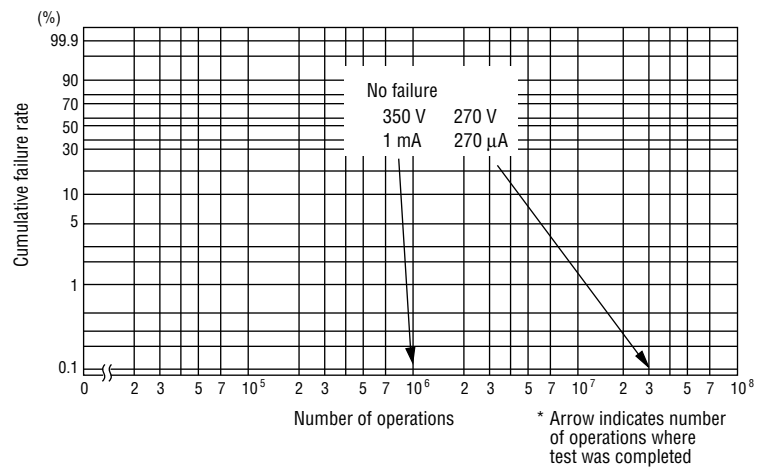
Load conditions

Voltage : 200 VAC  
 Current : 200 mA, 250 mA  
 Load : Resistive load



Load conditions

Voltage : 350 VDC, 270 VDC  
 Current : 1 mA, 270  $\mu$ A  
 Load : Resistive load



Load conditions

Voltage : 100 VDC, 50 VDC  
 Current : 0.5 A, 1.0 A, 0.5 A  
 Load : Resistive load

