

# 3R150AL1-01 Ceramic Surge Arresters

## SPECIFICATION



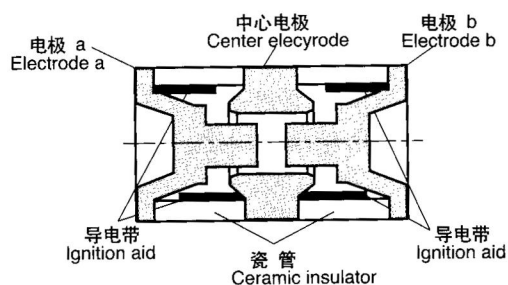
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## Basic Construction, work principle, Applications of 3R Ceramic Arrester.

### 1. Basic Construction:



三极管基本结构  
Basic construction of 3-electrode arrester

As shown in Figure 1: 3R ceramic gas discharge transistor consists of two terminal electrodes a, b, a center electrode and a two ceramic tube. Metallization of alumina ceramic tube and electrode welding seal, pipes is filled with inert gas. At the end of the center electrode electrode surface, the inner wall of the effective emission surface coated with electronic powder, alumina ceramic tube wall painted on a group of conductive pipe, promoting pipe quick start, and the recoverable.

### 2. Work Principle:

Because of the thunder and lightning, cable and communication line accident collide, such reasons as reaction or electrostatic discharge, both lines or both ends of the equipment protected produce the unusually high voltage, while the voltage exceeds the discharge voltage of discharge tube, the discharge tube will be puncturing and discharging at the speed of delicate grade, keep the surge voltage in a low electric potential, to protect the equipment and the circuit. After the unusually voltage is got rid of, discharge tube can resumed high impedance automatically, the equipment protected can work normally.

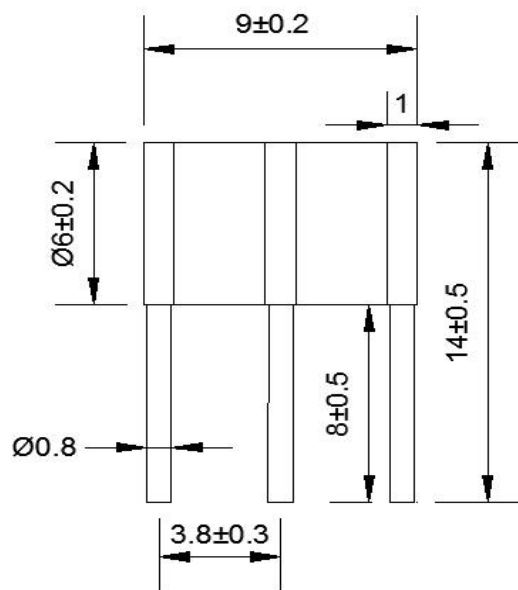
### 3. Application:

The main application of this product is in over-voltage protection of telecommunication equipment, and product is applied to the protection of the telephone, the fax, the computer, signal line, alternating current circuit, cable TV and coaxial cable, etc.

### 3R ceramic gas discharge tube dimensions.

#### 1. External dimension

3R ceramic gas discharge transistor dimensions as shown in the figure:



## 2. Electrical Characteristics of 3R Ceramic Arrester

DC spark-over voltage	150 ± 20	V %
Impulse spark-over voltage		
at 100V/ μ s - for 99% of measured values	< 500	V
-typical values of distribution	< 400	V
at 1 kV/ μ s - for 99% of measured values	< 600	V
-typical values of distribution	< 500	V
Service life		
10 operations 50Hz, 1s <sup>1)</sup>	10	A
10 operations [5x (+)&5x(-)] 8/20 μ s <sup>1)</sup>	10	kA
1 operations 10/350 μ s <sup>1)</sup>	1	kA
300 operations(alternating polarity) 10/1000 μ s <sup>1)</sup>	100	A
Insulation resistance at 50 Vdc	> 10	G Ω
Capacitance at 1 MHz	< 1.5	pF
Arc voltage at 1 A	~10	V
Glow to arc transition current	~1	A
Glow voltage	~80	V
Weight	~0.9	g
Operation and storage temperature	-40...+90	°C
Marking, blue	3R150 3R -Three Electrode 150 -Nominal voltage	

Type	DC spark-over voltage 100V/s  V	Impulse spark over voltage  V  1KV/us	Impulse dicharge current 10/1000us 300times  A	Impulse dicharge current 8/20us 10times  KA	AC dicharge current 50Hz 1s 5times  A	Holdover  voltage  V	Lnstlation  resistance  $\Omega$	Capacitance   pF
3R150AL2	150 $\pm$ 20%	$\leq$ 600	100	10	10	135	$\geq 10^{10}$	< 1

3. Marking: Brand 3R150

4. 3R ceramic gas discharge tube packing:

1).100 of small bulk packaging:

Company to design a 160mm× 155mm ×10mm blister packaging boxes, each box can be installed 3R ceramic discharge transistor 100, 100 inner tube can use this package installed, topical paper tape banding can be more than

2).5000 large volume packaging:

The discharge tube filled with plastic packaging, 10 per box with adhesive tape binding, 5 bundles of discharge Tube ( 5000 only) into a 443mm x 215 mmx 216mm not with carton packaging sealed box for shipment. More than

More than 3.100, 5000 the following, according to the number of users requirements, use of blister packaging boxAfter strapping into the packaging carton.

5. 3R ceramic gas discharge tube working environment conditions:

Temperature: -40°C ~+85 °C

Relative humidity:

maximum 95% ( 40 °C)

6. Company Introduction

Our company is the domestic professional factories of gas, the semiconductor discharges and semiconductor diode. The products strictly meet the standard of ITU-TK12, K28, REA and GB9043, YD/T940. Semiconductor diode meets the standard of IEC. We have been awarded the certificated of ISO9001: 2000 Quality System and UL, TUV safety certificate.

We will be strict to our quality management according to our objective “Prevent beforehand, improve continuously, Creating magnificent”, hunting for remarkable. We will manufacture the products with high quality to our customers depending on our long history experience and special technology. We will continuously improve our sales services and innovate new products for the satisfactions of our customers.



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