Single Line Arrestor

::: Product Overview :::

Single Line Arrestors are used to protect modern telecommunication equipments from damage caused by transient surge voltage, over single pair cable in MDF Frames or distribution box. Protection unit is made of ceramics gas discharge tube. Overcurrent protection is also available with ceramic gas discharge tube with additional “Fail Safe Mechanism”.
When the protection unit functioning, the fail unit will performs short circuit to ground for inner line and open circuit for outer line, the LED will light and raise the alarm. The short circuit will also create a low resistance path to ground through earth cable and prevent heat from damaging the equipment.

::: Specification :::

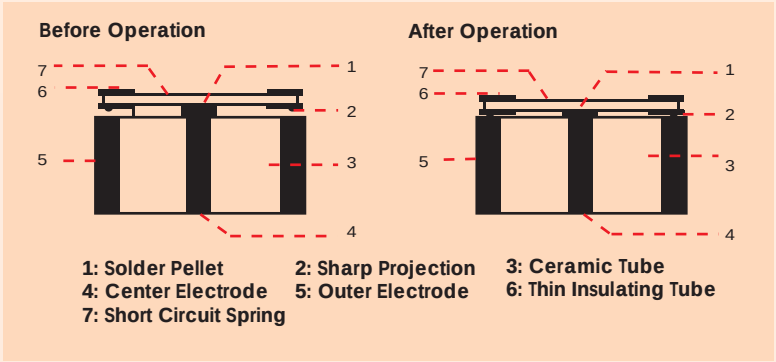
Item	Specification
Nominal DC spark-over	230 V
voltage (100V/s)	±20%
Maximum impulse speak-over voltage (1kV/μs)	800 V
Impulse discharge current (8/20μs, 10times) (a+b)-e	5 kA
Impulse discharge current (10/1000μs, 300times) (a+b)-e	10 A
AC discharge current (50Hz, 1s, 5times)(a+b)-e	10 A
Minimum insulation resistance	1000 MΩ
Maximum capacitance (1kHz)	3 PF
Maximum transverse voltage duration	200 ns

::: Fail-Safe Mechanisme :::

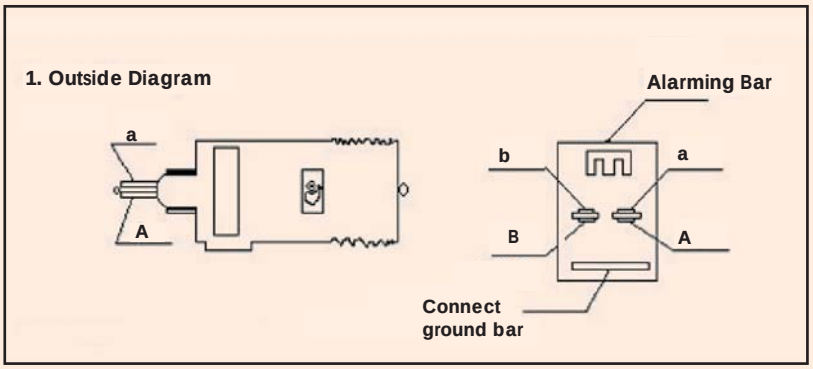
Transient surge voltage can be caused by lightning and equipment. Gas discharge operation normally last a few microseconds and does not generate any significant heat. High surge voltage also can be cause by induction from power cables will last longer time, which result in longer operation time for gas discharge tube and generate significant heat and causing damage or fire to equipment. To prevent, fail safe mechanism is added to gas discharge tube to create a short circuit when overcurrent occurred.

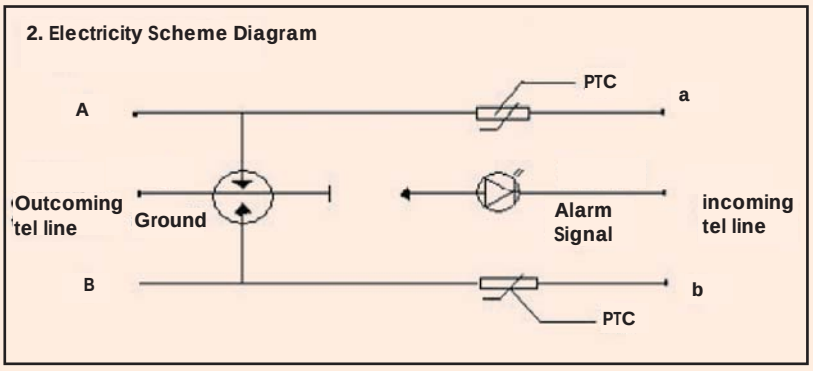
Single line arrestor is a short-circuit spring that is mounted on the center electrode of the gas discharge tube. Prior to operation, a solder pellet is installed between the spring and the center electrode and thin insulation tubes cover sharp projections on both end of the spring. When the prolonged discharge operation causes the temperature of gas discharge tube to the melting point of the solder pellet and thin insulation tube, the short circuit spring will touch the electrodes and cause the short circuit between outer electrodes and center electrode. This makes all the electrodes permanently short circuit, creating a low resistance path to ground through extra cable or device.

::: Fail-Safe Operation :::



::: Arrestor Unit :::





::: Ordering Information :::

Part Number	Description
LTZF-CL1-S1-ARR	Single Line Arrestor
LTZF-CL1-S1F-ARR	Single Line Arrestor With Failed-Safe