

Type 1 AC power Surge Protector

DS150E



The DS150E is a Heavy Duty Type 1 AC Surge Protector Device (SPD) designed to be connected at the entrance of the electrical installation. This SPD provides an efficient protection against direct and indirect effects and is particularly useful in a high lightning density area where the risk of heavy surge current or even direct strike is high (i.e. : buildings equipped with lightning rods).

The DS150E is a one-pole SPD and can be used in common mode (DS150Es connected between L/PE and N/PE) or common and differential mode (DS150Es connected between L/N and 1 x DS100EG between N/PE). See pages A20 and A21.

This SPD is designed to withstand a 15 kA lightning current (10/350 μ s impulse). It is based on «multi-MOV» diagram : this technology allows a very discharge capability and the best behaviour possible on AC network (no follow current).

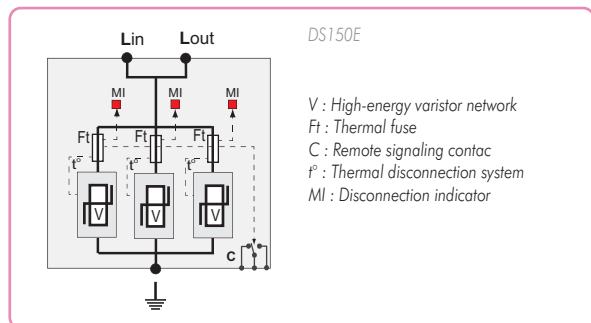
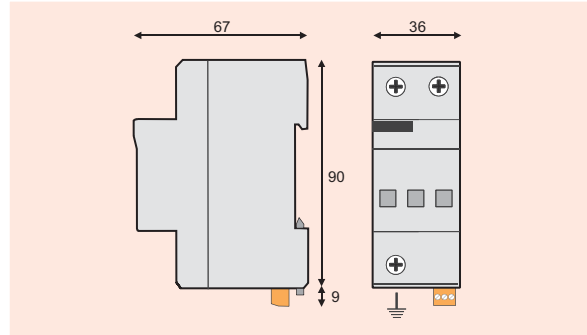
To meet standards, the DS150E includes a thermal disconnection mechanism, fault indicator and an internal microswitch for remote signalling.

DS150E features redundancy diagram to keep protection partially active in case of failure to give time for maintenance.

The SPD is DIN rail compatible and is featured with double terminal for line wire to allow improved connection to AC network.

- **Type 1 High-energy Surge Protector**
- **Iimp : 15 kA on 10/350 μ s impulse**
- **I_{max} : 140 kA on 8/20 μ s impulse**
- **Internal disconnections, status indicators and remote signalling**
- **Redundancy**
- **IEC 61643-11, EN 61643-11 and UL 1449 ed.2**

Dimensions and Diagram



Characteristics

| CITEL part number | DS150E-400 | DS150E-300 | DS150E-120 |
|---|--|--|------------|
| Network | 230/400V | 230/400V | 120/208V |
| Connection mode | L/PE | L/N | L/N, L/PE |
| AC system | IT, TT, TN | TT, TN | TT, TN |
| Max. operating voltage | U _c 400 Vac | 300 Vac | 150 Vac |
| TOV withstand | U _T 400 Vac | 300 Vac | 150 Vac |
| Operating current | I _c < 2 mA | < 2 mA | < 2 mA |
| Leakage current at U _c | | | |
| Follow current | I _f none | none | none |
| Nominal discharge current | I _n 70 kA | 70 kA | 70 kA |
| 15 x 8/20 μ s impulses | | | |
| Maximum discharge current | I _{max} 140 kA | 140 kA | 140 kA |
| max. withstand 8/20 μ s | | | |
| Max. lightning current by pole | I _{imp} 15 kA | 15 kA | 25 kA |
| max. withstand 10/350 μ s | | | |
| Residual voltage (at I _{imp}) | U _{res} 1,5 kV | 0,9 kV | 0,5 kV |
| Protection level (at I _n) | U _p 2,5 kV | 2 kV | 1 kV |
| Admissible short-circuit current | 25000 A | 25000 A | 25000 A |
| Associated disconnection devices | | | |
| Thermal disconnector | internal | | |
| Fuses | Fuses type gG - 125 A max. (see Note 1) | | |
| Installation ground fault breaker | Type «S» or delayed | | |
| Mechanical characteristics | | | |
| Dimensions | see diagram | | |
| Connection | by screw terminals : 6-35 mm ² / by bus | | |
| Disconnection indicator | 3 mechanical indicators | | |
| Remote signaling of disconnection | output on changeover contact | | |
| Mounting | symmetrical rail 35 mm | | |
| Operating temperature | -40/+85 °C | | |
| Protection class | IP20 | | |
| Housing material | Thermoplastic PEI UL94-5VA | | |
| Standards compliance | | | |
| NF EN 61643-11 | France | Parafoudre Basse Tension - Essais Classe I et II | |
| IEC 61643-11 | International | Low Voltage SPD - Test Class I and II | |
| EN 61643-11 | Europe | Low Voltage SPD - Test Class I and II | |
| UL1449 ed.2 | USA | Low Voltage TVSS | |

Note 1 : Rating in compliance with nominal discharge current. In order to increase service continuity, higher rating can be used (up to 200 A). For further information, please consult product instructions.