CITEL 2CP

Type 1 AC power Surge Protector

DS150E

Iimp 15 kA

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 (e.g. : 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).

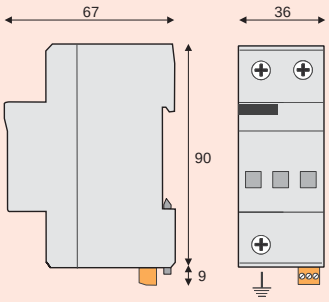
This SPD is designed to withstand a 15 kA lightning current (10/350 µs impulse). It is based on «multi-MOV» diagram : this technology allows a very discharge capability and the best behaviour possible on AC network (no follow current).

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

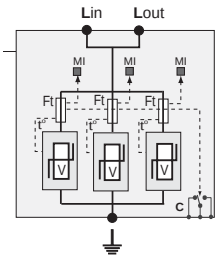
The SPD is DIN rail compatible and is featured with double terminal for line wire to allow improved connection to AC network.

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

Dimensions and Diagram



DS150E



V : High-energy varistor network
Ft : Thermal fuse
C : Remote signaling contact
t° : Thermal disconnection system
MI : Disconnection indicator

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	Uc	400 Vac	300 Vac	150 Vac
TOV withstand	U_T	400 Vac	300 Vac	150 Vac
Operating current *Leakage current at Uc*	Ic	< 2 mA	< 2 mA	< 2 mA
Follow current	If	none	none	none
Nominal discharge current *15 x 8/20 µs impulses*	In	60 kA	70 kA	70 kA
Maximum discharge current *max. withstand 8/20 µs*	Imax	140 kA	140 kA	140 kA
Max. lightning current by pole *max. withstand 10/350 µs*	Iimp	15 kA	15 kA	15 kA
Residual voltage (at Iimp)	Ures	1.5 kV	0.9 kV	0.5 kV
Protection level (at In)	Up	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 mm² / 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 61643-1	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		

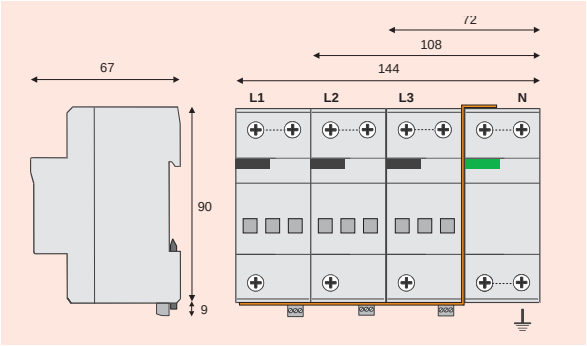
Note 1: Rating in compliance with nominal discharge current. In order to increase service continuity, higher rating can be used (up to 200 A). For further information, please consult product instructions.

CITEL-2CP - Tel. +33-1 41 23 50 23 - Fax. +33-1 41 23 50 09 - Email : issy@citel2cp.com - Web : http://www.citel2cp.com

Type 1 AC power Multipolar Surge Protector

DS152E
DS153E
DS154E

Dimensions and Diagram



DS150E AC surge protectors are designed to be connected in multi-pole configuration to protect single phase, 3-phase and 3-phase+Neutral AC networks. They are sometimed associated with a dedicated N/PE SPD (DS100EG, «Gas tube» technology surge protector).

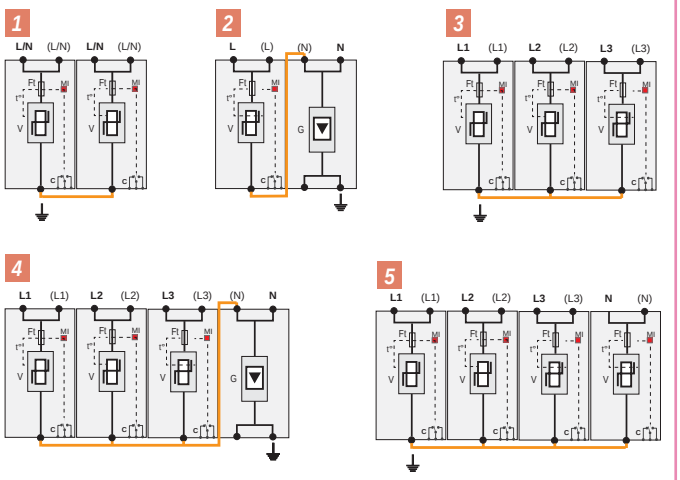
2 configurations are available:

Common mode : CT1 Configuration

The DS150E are connected between active wires (Phase(s) and Neutral) and earthing network (PE).

Common and differential mode : CT2 Configuration

The DS150E are connected between Phase(s) and Neutral) for differential mode protection. A specific surge protector DS100EG is connected between Neutral to PE for common mode protection. This CT2 version provides an enhanced protection efficiency.



Part number	Network	AC system	Protection mode		Iimp total	Up L/PE	Up L/N	Diagram
			common	differential				
DS154E-300/G	230/400 V 3-phase+N	TT-TN	●	●	50 kA	2 kV	2 kV	4
DS154E-120/G	120/208 V 3-phase+N	TT-TN	●	●	50 kA	1.5 kV	1 kV	
DS154E-400	230/400 V 3-phase+N	IT	●		60 kA	2.5 kV	-	5
DS154E-300	230/400 V 3-phase+N	TT-TN	●		60 kA	2 kV	-	
DS154E-120	120/208 V 3-phase+N	TT-TN	●		60 kA	1 kV	-	
DS153E-400	400 V 3-phase	IT-TT	●		45 kA	2.5 kV	-	3
DS153E-300	400 V 3-phase	TNC	●		45 kA	2 kV	-	
DS153E-120	208 V 3-phase	TNC	●		45 kA	1 kV	-	
DS152E-300/G	230 V single phase	TN	●	●	30 kA	2 kV	2 kV	2
DS152E-120/G	120 V single phase	TN	●	●	30 kA	1.5 kV	1 kV	
DS152E-400	230V single phase	TT-IT	●		30 kA	2.5 kV	-	1
DS152E-300	230V single phase	TN	●		30 kA	2 kV	-	
DS152E-120	120 V single phase	TN	●		30 kA	1 kV	-	

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