

# 1-phase Type 2 AC power Surge Protector DS240



The DS240 Type 2 surge protectors are compact devices designed to protect single phase networks at the main switchboard. They provide a common mode protection.

DS240 are available for 230V or 120V AC network and the different distribution systems (TN, TT, IT).

This SPD is based on high energy varistor equipped with thermal disconnector and failure indicator, to comply with standards. Version with a remote signalling for disconnection indication is also available (DS240S).

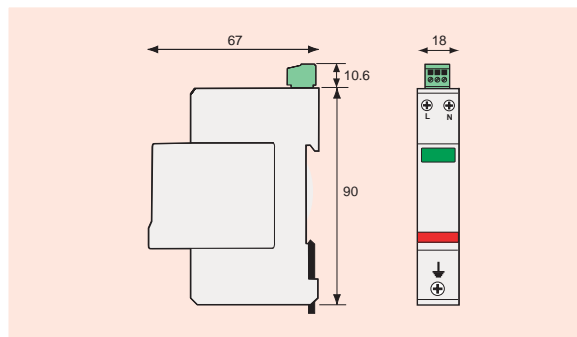
The DS240 is DIN rail compatible and is built with a plug-in module and a fixed base, which allows an easy and fast maintenance.

Surge protection of 3-Phase AC network is also possible by association of two DS240s (L1 and L2 connected on the first one, L3 and N connected on the second one, and earthing interconnection of both SPDs).

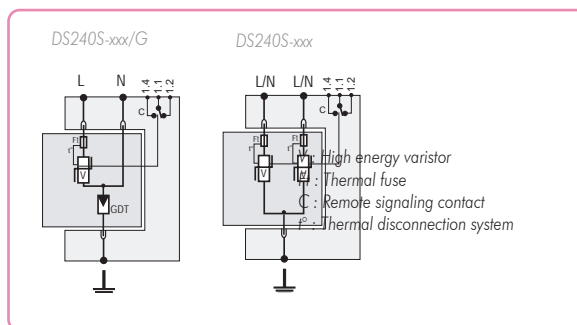
- Compact single-phase Type 2 SPD
- Discharge currents : I<sub>n</sub> : 20 kA / I<sub>max</sub> : 40 kA
- Common/Differential mode
- Pluggable module
- Remote signalling contact (option)
- Complies with EN 61643-11 and IEC 61643-1

Part number available	Network	Neutral configuration	Protection mode		Remote signaling
			common	differential	
DS240-230/G	230 V Single phase	TT-TN	●	●	
DS240S-230/G	230 V Single phase	TT-TN	●	●	●
DS240-400	230 V Single phase	IT	●		
DS240S-400	230 V Single phase	IT	●		●
DS240-230	230 V Single phase	TN	●		
DS240S-230	230 V Single phase	TN	●		●
DS240-120/G	120 V Single phase	TT-TN	●	●	
DS240S-120/G	120 V Single phase	TT-TN	●	●	●
DS240-120	120 V Single phase	TT-TN	●		
DS240S-120	120 V Single phase	TT-TN	●		●

## Dimensions (in mm)



## Electrical diagram



## Characteristics

CITEL part number	DS240-400	DS240-230/G	DS240-120/G
Single-phase network	230 V	230 V	120 V
Neutral configuration	TT-TN-IT	TN	TN
Max. operating voltage	U <sub>c</sub> 400 Vac	255 Vac	150 Vac
Temporary overvoltage withstand	U <sub>T</sub> 400 Vac	255 Vac	150 Vac
Operating current	I <sub>c</sub> < 1 mA	< 1 mA	< 1 mA
<i>Leakage current at U<sub>c</sub></i>			
Protection mode(s)	MC (2)	MC/MD (2)	MC/MD (2)
Nominal discharge current	I <sub>n</sub> 20 kA	20 kA	20 kA
<i>15 x 8/20 μs impulses</i>			
Maximum discharge current	I <sub>max</sub> 40 kA	40 kA	40 kA
<i>max. withstand 8/20 μs</i>			
Protection level (at I <sub>n</sub> )	U <sub>p</sub> 1.8 kV	1.5/1.25 kV (2)	1.5/0.9 kV (2)
Residual voltage at 5 kA	1.3 kV	0.9 kV	0.6 kV
Admissible short-circuit current	10000 A	10000 A	10000 A
<b>Associated disconnection devices</b>			
Thermal disconnector	internal		
Fuses	Fuses type gG - 50 A max. (see Note 1)		
Installation ground fault breaker	Type «S» or delayed		
<b>Mechanical characteristics</b>			
Dimensions	see diagram		
Connection	by screw terminals : 1,5-10 mm <sup>2</sup> (L/N) or 2,5-25 mm <sup>2</sup> (PE)		
Disconnection indicator	2 mechanical indicators		
Remote signaling of disconnection	Option DS240S - output on changeover contact		
Mounting	symmetrical rail 35 mm		
Operating temperature	-40/+85 °C		
Protection class	IP20		
Housing material	Thermoplastic UL94-V0		
<b>Standards compliance</b>			
NF EN 61643-11	France	Parafoudre Basse Tension - Essais Classe II	
IEC 61643-1	International	Low Voltage SPD - Test Class II	
EN 61643-11	Europe	Low Voltage SPD - Test Class 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 125 A). For further information, please consult product instructions.

**Note 2 :** MC = Common mode (L/PE or N/PE) / MD = Differential mode (L/N)