NAR ELECTRICAL GROUP LTD
SWITCH ON YOUR POTENTIAL

SURGE PROTECTION DEVICES

Today's residential, commercial and industrial set-ups are heavily reliant on the continuous and efficient running of electrical and electronic systems. Over-voltage surges are a major cause of failure of these equipment.

Such transient over-voltage surges are often generated due to direct/indirect effects of lightning strikes, switching of utility grid or capacitor banks, electrical accidents, turning on/off of nearby heavy load machines, AC chillers, motors, pumps, circuit-breaker tripping etc.

Surges can cause destruction of electronic circuitry components, logic failures and breakdowns. Loss of operation, loss of service, loss of data, and loss of production can be huge and by far higher than the cost of damaged equipment. Long term exposure to lower level transient over-voltages can also lead to premature ageing of equipment.

Havells offers a comprehensive range of Surge Protection Devices designed to protect your installation by limiting transient over-voltages and diverting surge currents to ground.

Features:

- Visual as well as Remote end-of-life indicators.
- Simple, Professional Installation of Arrester Modules
- High Terminal Capacity - 35 mm^2 for Ease of Installation.
- Bi-stable Snap-pusher for Easy Installation and Extractioin from DIN-rail.
- Finger Touch-Proof IP 20.
- TUV Tested and approved. CE compliant.

Range

AC SPD's

Type 1+2

Type 2

DC SPD's

Type 1+2

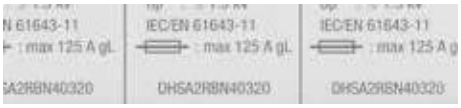
Type 2

Dataline SPD

6 V, 12 V, 24 V, 48 V

Remote Signaling Contact

- Option to remotely monitor the status of the surge protector.
- Simplified cabling thanks to a single terminal for monitoring all poles.



Satisfactory operation

Cartridge must be replaced

End of Life Indicator

Green shows the satisfactory operation and Red indicates that Cartridge must be replaced.

Pluggable Cartridges

- Faulty cartridges can be replaced without changing the entire SPD.
- Cartridges can be replaced with mains voltage ON.
- All cartridges are marked with characteristics for ease of maintenance.

Dedicated Protection of the Neutral

The 1 P+N and 3 P+N SPDs with dedicated protection of the neutral pole discharge the common and differential mode overvoltages that may occur in installations with TT and TNS systems, when there is a voltage surge.

Type 1+2 AC Surge Protection Devices

These are very compact SPDs which protect both from overvoltage surges due to direct lightning strikes (10/350 µs waveform) as well as indirect lightning strikes and switching surges (8/20 µs waveform). They are an integrated solution, equivalent to an automatically coordinated Type 1 and Type 2 SPDs.

They are used as the first step of protection in incoming power supply panels and areas with exposure to the atmosphere, where installations are usually provided with an external lightning protection system.

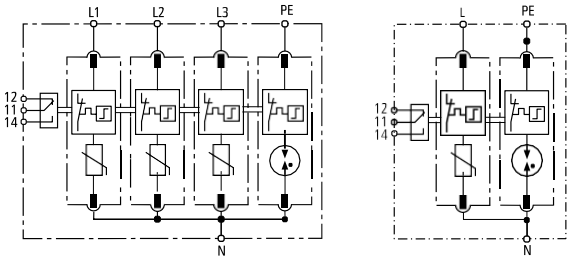
Configuration
SPN, TPN

Specification
IEC 61643-11: 2011, EN 61643-11: 2012

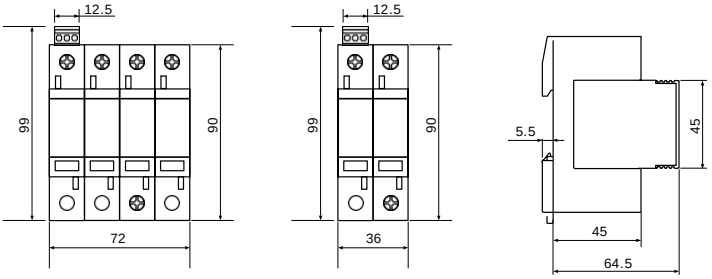
Features
- Tested and approved by TUV.
- High Discharge Current (Imax 50 kA (L – N) 70 kA (N – E)).
- Compact Size Integrated Type-1 & Type-2 protection in small module width (Ideal in all reduced-size spaces).
- Better Protection due to reduced Up(Voltage protection level 1.5 kV).
- Both Common & DIfferential Mode Protection.

Technical Specification	
Standard Compliance	IEC/EN 61643-11
Type / Class	Type 1+2 / Class I+II
Max Continuous Operating AC Voltage Uc	320 V (L - N), 255 V (N - PE)
Lightning Impulse (10/350 microsecond) Iimp	12.5 kA
Nominal Discharge Current (8/20 microsecond) In	20 kA (L - N), 40 kA (N - PE)
Max Discharge Current (8/20 microsecond) Imax	50 kA (L - N), 70 kA (N - PE)
Voltage Protection Level Up	<1.5 kV
Voltage Protection Level 5 kA Up	<1.2 kV
Max Backup Fuse	125 A gL/gG
Temporary Overvoltage Charactersitcs (5 second) Ut	335 V
Residual Current At Uc - Ipe	<100 µA
Response Time	<25 ns
Short Circuit Current Rating ISCCR	3 kA
Follow Current extinguishing Capability [N-PE] a.c. Ifi	100 Arms
Number of Ports	One Port SPD
Location	Indoor
Humidity	5-95%
Operating Temperature Range	–40 °C - 80 °C
Operating State/Fault Indication	Green/Red
Cross-section Area	4-35 Sq. mm
For Mounting on	35 mm Din Rail
Enclosure Material	Thermoplastic UL94-V0
Degree of Protection	IP20

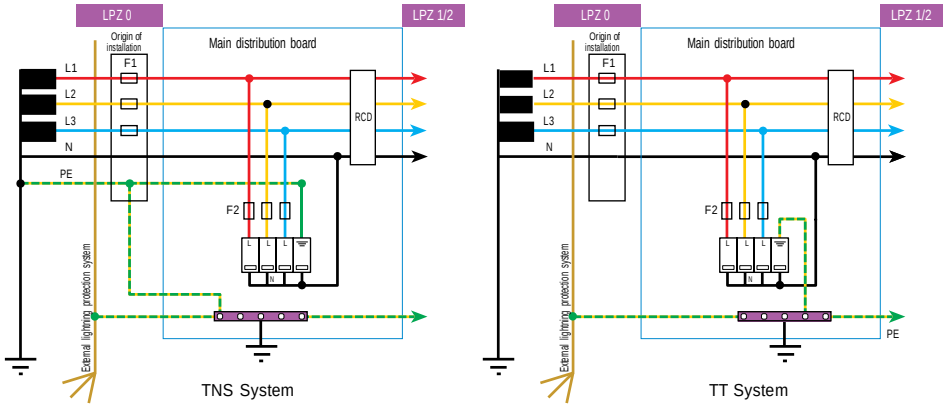
Circuit Diagram:



Dimensions:



Connections:



F1: Overcurrent protection device
F2: Backup protection