

## HSF3-40-100-275

**Hybrid Surge Filter**

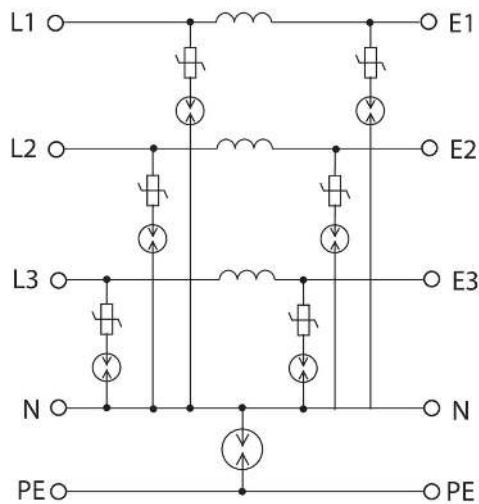
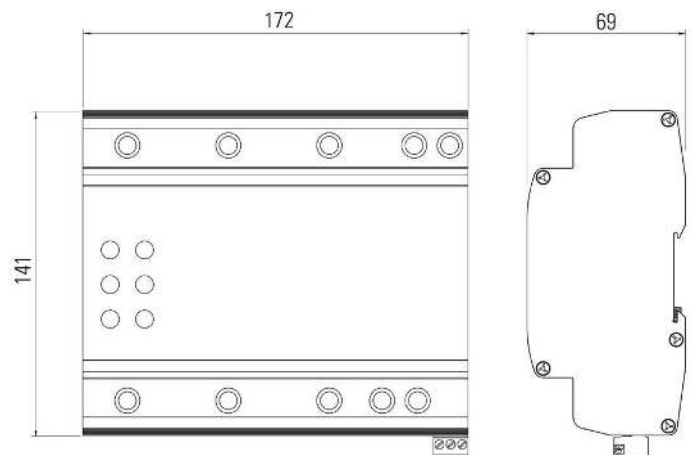
The Novaris HSF is a hybrid surge filter with primary and secondary hybrid surge protection components plus a low pass filter. The hybrid design means the filter can continuously withstand phase to phase voltage between its phase and neutral terminals yet its performance equals that of other Novaris surge filters. This makes it ideal for applications where voltage regulation is poor and power line faults common.

**All Mode Protection**

Protection is provided for all combinations of lines (L-N, L-PE, N-PE) ensuring the maximum level of protection is achieved at all times.

**Safe Metal Enclosure**

Novaris surge protection products are housed in safe, all metal enclosures. Under extreme fault conditions they will not catch fire or explode.

**Wiring****Dimensions****Standards**

IEC 61643-11:2011  
AS/NZS 1768:2007  
UL 1449 3rd edition  
IEEE 62.41.2:2002

SPD connected to low-voltage power systems - Type 1+2  
A.C. power system SPD - Cat C, B  
Low voltage SPD - Type 2  
Low voltage SPD - Cat B

## Product Datasheet

## Electrical Specifications

|                               |            |                 |
|-------------------------------|------------|-----------------|
| Connection type               |            | Series          |
| Modes of protection           |            | L-N, L-PE, N-PE |
| Number of ports               |            | 2               |
| Number of phases              |            | 3               |
| Location                      |            | Indoor          |
| Nominal voltage               | $U_0$      | 230VAC          |
| Short circuit withstand level | $I_{SSCR}$ | 25kA            |
| Maximum backup fuse           |            | 40A             |

## Electrical (L-N) Specifications

|                                       |           |               |
|---------------------------------------|-----------|---------------|
| Maximum load current                  | $I_L$     | 40A           |
| Maximum continuous voltage AC         | $U_c$     | 480VAC        |
| Maximum voltage drop (% of $U_0$ )    |           | <1%           |
| 3dB frequency @ 50Ω                   |           | ≤88.5kHz      |
| Maximum discharge current (8/20 μs)   | $I_{max}$ | 100kA         |
| Nominal discharge current (8/20 μs)   | $I_n$     | 40kA          |
| Lightning impulse current (10/350 μs) | $I_{imp}$ | 12.5kA        |
| Voltage protection level (3kA 8/20μs) | $U_p$     | <650V         |
| Response time                         | $t_A$     | Instantaneous |

## Electrical (N-PE) Specifications

|                                       |           |        |
|---------------------------------------|-----------|--------|
| Maximum continuous voltage            | $U_c$     | 255VAC |
| Maximum discharge current (8/20 μs)   | $I_{max}$ | 60kA   |
| Lightning impulse current (10/350 μs) | $I_{imp}$ | 15kA   |
| Nominal discharge current (8/20 μs)   | $I_n$     | 50kA   |
| Voltage protection level (1kV/μs)     | $U_p$     | <700V  |
| Voltage protection level (In)         | $U_p$     | <1300V |
| Response time                         | $t_A$     | <100ns |
| Voltage withstand (200ms)             | $U_T$     | 1200V  |
| Follow current interrupt rating       | $I_n$     | 100A   |

## Indication Specifications

|                 |  |                                |
|-----------------|--|--------------------------------|
| Display         |  | LED power and thermal failure  |
| Alarm           |  | SPDT power and thermal failure |
| Alarm isolation |  | 4kV                            |

## Mechanical Specifications

|                                |  |                    |
|--------------------------------|--|--------------------|
| Minimum operating temperature  |  | -40°C              |
| Maximum operating temperature  |  | 70°C               |
| Minimum operating humidity     |  | 5%                 |
| Maximum operating humidity     |  | 95%                |
| Mounting method                |  | TS35 DIN Rail      |
| Environmental rating           |  | IP20               |
| Enclosure material             |  | Aluminium          |
| Enclosure finish               |  | Black powdercoat   |
| Terminal capacity - power      |  | 16mm <sup>2</sup>  |
| Terminal screw torque - power  |  | 2Nm                |
| Terminal capacity - alarms     |  | 2.5mm <sup>2</sup> |
| Terminal screw torque - alarms |  | 0.5Nm              |
| Length                         |  | 141mm              |
| Width                          |  | 172mm              |
| Height                         |  | 69mm               |

## Other Specifications

Product Code HSF3-40-100-275

## Shipping Specifications

Weight 1.9kg