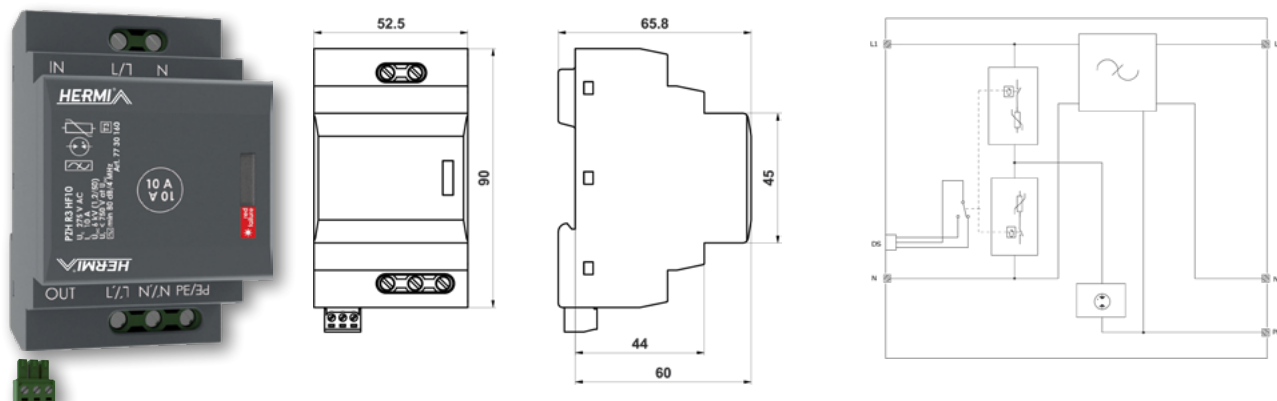


# Surge Arrester TYPE 3

TYPE  
3

VARISTOR &amp; EMC / EMI FILTER

TYPE 3 / CLASS III / TN-C-S / TN-S / CE



## PZH R3 HF10, PZH R3 HF10 S, PZH R3 HF16, PZH R3 HF16 S

PZH R3 HF\* (Hermi Surge Arrester Filter) is a two-stage surge arrester. It features a high-frequency filter integrated between the two stages. PZH R3 HF\* contains an improved thermal fuse which ensures timely disconnection of the PZH R3 HF\* from the power grid during overheating and thus prevents damage to the PZH R3 HF\*. Activation of the thermal fuse is signalled by an integral indicator light with the option to utilize its switching contact for remote fault signalling (S). Due to the new design of the thermal fuse, the protective voltage level is 100 V lower than in the previous series of filters. The PZH R3 HF\* S is a type T3 two-port surge arrester and has been tested according to standards IEC 61643-11:2011 and CISPR 17:2011. According to standard IEC 62305:2010, it is installed in the boundary between zones LPZ 2 - LPZ 3, where it limits induced overvoltage and residual overvoltage in power lines. PZH R3 HF\* are designed to be mounted on a 35 mm DIN rail using a metal clip.

**Manufacturer's recommendation:** Install the PZH R3 HF\* as close to the device to be protected as possible (no further than 5 m). A Hermi T1 and T2 lightning and surge arrester must be installed before the PZH R3 HF\*.

| TYPE                                                                                                          |          | PZH R3 HF10, PZH R3 HF10 S                                                                            | PZH R3 HF16, PZH R3 HF16 S      |
|---------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------|---------------------------------|
| Test class according to EN 61643-11 ed.2 (IEC 61643-11:2011)                                                  |          | TYPE 3, CLASS III                                                                                     |                                 |
| System                                                                                                        |          | TN-C-S, TN-S                                                                                          |                                 |
| Max. continuous operating voltage                                                                             | $U_c$    | 275 V AC                                                                                              |                                 |
| Rated load current                                                                                            | $I_L$    | 10 A                                                                                                  | 16 A                            |
| Combined impulse                                                                                              | $U_{oc}$ | 4 kV (L/N, L/PE); 10 kV (N/PE)                                                                        |                                 |
| Voltage protection level at $U_{oc}$                                                                          | $U_p$    | < 750 V (L/N); < 1 kV (L/PE); < 1,5 kV (N/PE)                                                         |                                 |
| Nominal discharge current $I_n$ (8/20)                                                                        | $I_n$    | 3 kA (L/N, L/PE); 5 kA (N/PE)                                                                         |                                 |
| Temporary overvoltage (TOV)                                                                                   | $U_T$    | 337 V/5 s (L/N); 1200 V/0,2 s (N/PE)                                                                  |                                 |
| Response time                                                                                                 | $t_A$    | < 25 ns (L/N); < 100 ns (L/PE, N/PE)                                                                  |                                 |
| Asymmetrical attenuation of filter (band-stop filter)                                                         |          | min. 80 dB at 4 MHz; min. 40 dB (0,15 ÷ 30 MHz)                                                       |                                 |
| Power loss at winding temp. 20 °C                                                                             |          | < 2,2 W                                                                                               | < 3,5 W                         |
| Back-up fuse                                                                                                  |          | 10 A                                                                                                  | 16 A                            |
| LPZ                                                                                                           |          | 2-3                                                                                                   |                                 |
| Housing material                                                                                              |          | Polyamid PA6, UL94 V-0                                                                                |                                 |
| Degree of protection of enclosure                                                                             |          | IP20                                                                                                  |                                 |
| Operating temperature range                                                                                   | 9        | -40 °C ... +55 °C                                                                                     |                                 |
| Cross-section of the connected conductors                                                                     |          | 2,5 - 4 mm <sup>2</sup>                                                                               |                                 |
| Tightening moment of clamps                                                                                   |          | 0,5 Nm                                                                                                |                                 |
| The mounting method / operating position                                                                      |          | DIN rail 35 mm / any                                                                                  |                                 |
| Failure signalisation                                                                                         |          | optical function signalization target clear - ok<br>optical function signalization target red - fault |                                 |
| Potential free signal contact (S)<br>(recommended cross-section of remote monitoring max. 1 mm <sup>2</sup> ) |          | AC: 250 V / 1,5 A, DC: 250 V / 0,1 A                                                                  |                                 |
| Lifetime                                                                                                      |          | min. 100 000 h                                                                                        |                                 |
| Weight                                                                                                        |          | 180 g                                                                                                 |                                 |
| Article number                                                                                                |          | <b>77 30 160, 77 30 170 (S)</b>                                                                       | <b>77 30 161, 77 30 171 (S)</b> |