

HSAF3/400 S

- Three-phase, two-stage surge arresters type T2+T3 equipped with high-frequency filters for serial connection.
- Intended for protection of electronic appliances against the effects of switching, induced and residual overvoltage generated in LV power supply systems.
- Remote monitoring is solved on the basis of a potential-free swithing contact.
- Any installation position without affecting function and parameters.
- Produced in basic version for mounting straight onto the switchboard's construction by screws M8.
- **S** indication specifies a version with remote monitoring.

| Type | HSAF3/400 S | |
|--------------------------------------------------------------------|--------------------|-----------------------|
| Test class according to EN 61643-11:2012 (IEC 61643-11:2011) | T2, T3 | |
| System | TN-C-S, TN-S | |
| Number of poles | 4 | |
| Rated operating AC voltage | U_N | 230 V |
| Maximum continuous operating voltage AC | U_C | 320 V |
| Rated load current L1, L2, L3 conductors | I_L | 400 A |
| Rated load current N conductor | I_L | 200 A |
| Open circuit voltage of the combination wave generator (L/N, L/PE) | U_{OC} | 6 kV |
| Open circuit voltage of the combination wave generator (N/PE) | U_{OC} | 10 kV |
| Voltage protection level at U_{OC} (L/N) | U_p | < 1.25 kV |
| Nominal discharge current for class II test (8/20) L/N, L/PE | I_n | 20 kA |
| Nominal discharge current for class II test (8/20) N/PE | I_n | 50 kA |
| Maximum discharge current (8/20) | I_{max} | 40 kA |
| Impulse discharge current for class I test (10/350) N/PE | I_{imp} | 50 kA |
| Total discharge current (8/20) L1+L2+L3+N->PE | I_{Total} | 50 kA |
| Asymmetrical attenuation of filter at $f = 1.5$ MHz | > 70 dB | |
| Asymmetrical attenuation of filter at $f = 0.15 \div 30$ MHz | > 30 dB | |
| Temporary overvoltage test (TOV) for $t_T = 5$ s (L/N) | U_T | 337 V |
| Temporary overvoltage test (TOV) for $t_T = 120$ min (L/N) | U_T | 440 V |
| Temporary overvoltage test (TOV) for $t_T = 0.2$ s (N/PE) | U_T | 1 200 V |
| Response time (L/N) | t_A | < 25 ns |
| Response time (L/PE, N/PE) | t_A | < 100 ns |
| Power dissipation at 20 °C | Pz | < 125 W |
| Maximal back-up fuse | 400 A gL/gG | |
| Residual current | I_{PE} | $\leq 5 \mu A$ |
| Follow current interrupt rating (N/PE) | I_{fi} | 0.1 kA _{rms} |
| Lightning protection zone | LPZ 1-2, LPZ 2-3 | |
| Housing material | Steel plate 0.8 mm | |
| Degree of protection | IP20 | |

| Type | | HSAF3/400 S |
|------------------------------------------------------------------------------------------------------------|----|--------------------------------------|
| Operating temperature | θ | -40 ÷ 55 °C |
| Humidity range | RH | 5 ÷ 95 % |
| Recommended cross-section of connected conductors | S | 240 mm ² |
| Clamp fastening range (solid conductor) | | 35 ÷ 240 mm ² |
| Clamp fastening range (stranded conductor) | | 35 ÷ 240 mm ² |
| Tightening moment | | 40 Nm |
| Installation | | Using the M8 screws on the chassis |
| Operating position | | Any |
| Product placement environment | | Internal |
| Signalling at the device | | None |
| Remote signalling | | Yes |
| Potential free signal contact (S) (recommended cross-section of remote monitoring max. 1 mm ²) | | AC: 250 V / 0.5 A, DC: 250 V / 0.1 A |
| Includes EMI / EMC filter | | Yes |
| Modular design | | No |
| Lifetime | | > 100 000 h |

Designed according to standards

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|--------------------------------------------------------------------------------------------|--|-------------------------------|
| Requirements and test methods for SPDs connected to low-voltage power systems | | IEC 61643-11:2011 |
| Methods of measurement of the suppression characteristics of passive EMC filtering devices | | EN 55017:2011 / CISPR 17:2011 |

Application standards

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|--------------------------------------------------------------------------------------|--|----------------------|
| Protection against lightning | | IEC 62305:2010 |
| Selection and erection of electrical equipment – Switchgear and controlgear | | HD 60364-5-53:2022 |
| Selection and application principles for SPDs connected to low-voltage power systems | | CLC/TS 61643-12:2009 |

Ordering, packaging and additional data

| | | |
|----------------------------------|---|--------------------|
| Mass | m | 10 kg |
| Mass (including the packaging) | m | 10.75 kg |
| Packaging dimensions (H x W x D) | | 200 x 600 x 400 mm |
| Packaging value | V | 48 dm ³ |
| ETIM group | | EG000021 |
| ETIM class | | EC000942 |
| Customs tariff no. | | 85363090 |
| EAN code | | 8590681123003 |
| Art. number | | 30 308 |

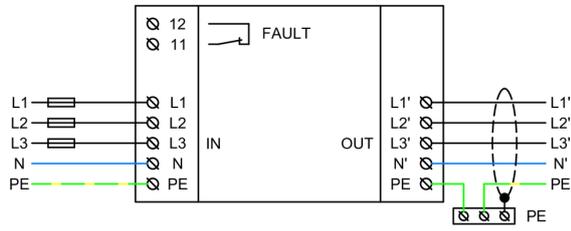


The link in the QR code leads to the online presentation of the **HSAF3/400 S**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit www.hakel.com



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Application wiring diagram (installation)



Internal diagram

