



HSAF16/120VDC S

- Two-port surge arresters type T3 with high-frequency filters for serial connection.
- Intended for protection of electronic appliances against the effects of switching, induced and residual overvoltage in DC power supply systems.
- Contain an improved thermal fuse, which ensures timely disconnection of HSAF*VDC S from the power grid during the MOV's overheating and thus prevents damage to the HSAF*VDC S.
- Installed at the boundaries of LPZ 2 – LPZ 3, as close to the device to be protected as possible (no further than 5 m).
- In front of HSAF*VDC S must be installed a lightning current and surge arrester T1 and T2 from HAKEL company.
- **S** indication specifies a version with remote monitoring.

| Type | | HSAF16/120VDC S |
|--|-------------|-------------------------|
| Test class according to EN 61643-11:2012 (IEC 61643-11:2011) | | T3 |
| System | | DC |
| Rated operating DC voltage | U_N | 120 V |
| Maximum continuous operating voltage DC | U_C | 144 V |
| Rated load current | I_L | 16 A |
| Open circuit voltage of the combination wave generator (+/-, ±/PE) | U_{OC} | 6 kV |
| Voltage protection level at U_{OC} (+/-) | U_p | < 0.9 kV |
| Voltage protection level at U_{OC} (±/PE) | U_p | < 0.6 kV |
| Nominal discharge current for class II test (8/20) +/-, ±/PE | I_n | 3 kA |
| Total discharge current (8/20) ±->PE | I_{Total} | 6 kA |
| Asymmetrical attenuation of filter at $f = 4$ MHz | | > 80 dB |
| Asymmetrical attenuation of filter at $f = 0.15 \div 30$ MHz | | > 35 dB |
| Response time (+/-) | t_A | < 25 ns |
| Response time (±/PE) | t_A | < 100 ns |
| Power dissipation | P_Z | < 3.5 W |
| Maximal back-up fuse | | 16 A gL/gG |
| Residual current | I_{PE} | ≤ 1 800 μA |
| Short-circuit current rating at maximum back-up fuse | I_{SCCR} | 6 kA _{rms} |
| Lightning protection zone | | LPZ 2-3 |
| Housing material | | Polyamid PA6, UL94 V-0 |
| Degree of protection | | IP20 |
| Operating temperature | θ | -40 ÷ 55 °C |
| Humidity range | RH | 5 ÷ 95 % |
| Recommended cross-section of connected conductors | S | 2.5 mm ² |
| Clamp fastening range (solid conductor) | | 0.2 ÷ 6 mm ² |
| Clamp fastening range (stranded conductor) | | 0.2 ÷ 4 mm ² |
| Tightening moment | | 1,2 Nm |
| Installation | | On DIN rail 35 mm |

| Type | | HSAF16/120VDC S |
|--|---|--|
| Modular width | | 4 TE |
| Operating position | | Any |
| Product placement environment | | Internal |
| Signalling at the device | | Optic |
| Importance of local signalling | | OK – red light off FAULT – red light on |
| Remote signalling | | Yes |
| Potential free signal contact (S) (recommended cross-section of remote monitoring max. 1 mm ²) | | AC: 250 V / 1.5 A, DC: 250 V / 0.1 A |
| Includes EMI / EMC filter | | Yes |
| Modular design | | No |
| Lifetime | | > 100 000 h |
| Designed according to standards | | |
| 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 |
| Safety of Flammability of Plastic Materials | | UL 94 |
| Application standards | | |
| 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 | 180 g |
| Mass (including the packaging) | m | 204 g |
| Packaging dimensions (H x W x D) | | 60 x 113 x 73 mm |
| Packaging value | V | 0.5 dm ³ |
| ETIM group | | EG000021 |
| ETIM class | | EC000942 |
| Customs tariff no. | | 85363010 |
| EAN code | | 8590681161579 |
| Art. number | | 30 265 |



The link in the QR code leads to the online presentation of the HSAF16/120VDC 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

