

## HSAD16/6VDC

- Two-port surge arresters type T3 for serial connection.
- Intended for protection of electronic appliances against the effects of switching, induced and residual overvoltage in DC power supply systems.
- Contains an improved thermal fuse which ensures timely disconnection of the device from the power grid during overheating and thus prevents damage.
- Activation of the thermal fuse is signalled by an integral indicator light.
- Installed at the boundaries of LPZ 2 LPZ 3, as close as possible to the protected device (no further than 5 m).
- In front of HSAD16/\*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.

Test class according to EN 61643-11:2012 (IEC 61643-11:2011)  System  Rated operating DC voltage  Maximum continuous operating voltage DC  Rated load current  Open circuit voltage of the combination wave generator  Voltage protection level at $U_{OC}$ ( $\pm$ / $PE$ )  Voltage protection level at $U_{OC}$ ( $\pm$ / $PE$ )  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) $\pm$ -> $PE$ Response time ( $\pm$ /-)	U <sub>N</sub> U <sub>C</sub> I <sub>L</sub> U <sub>OC</sub> U <sub>p</sub> U <sub>p</sub>	T3 DC 6 V 7.2 V 16 A 4 kV < 0.2 kV
Rated operating DC voltage  Maximum continuous operating voltage DC  Rated load current  Open circuit voltage of the combination wave generator  Voltage protection level at U <sub>OC</sub> (+/-)  Voltage protection level at U <sub>OC</sub> (±/PE)  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE	U <sub>C</sub> I <sub>L</sub> U <sub>OC</sub> U <sub>p</sub> U <sub>p</sub>	6 V 7.2 V 16 A 4 kV
Maximum continuous operating voltage DC  Rated load current  Open circuit voltage of the combination wave generator  Voltage protection level at U <sub>OC</sub> (+/-)  Voltage protection level at U <sub>OC</sub> (±/PE)  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE	U <sub>C</sub> I <sub>L</sub> U <sub>OC</sub> U <sub>p</sub> U <sub>p</sub>	7.2 V 16 A 4 kV
Rated load current  Open circuit voltage of the combination wave generator  Voltage protection level at U <sub>OC</sub> (+/-)  Voltage protection level at U <sub>OC</sub> (±/PE)  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE	I <sub>L</sub> U <sub>OC</sub> U <sub>p</sub> U <sub>p</sub>	16 A 4 kV
Open circuit voltage of the combination wave generator  Voltage protection level at U <sub>OC</sub> (+/-)  Voltage protection level at U <sub>OC</sub> (±/PE)  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE	U <sub>oc</sub> U <sub>p</sub>	4 kV
Voltage protection level at U <sub>OC</sub> (+/-) Voltage protection level at U <sub>OC</sub> (±/PE) Nominal discharge current for class II test (8/20) Total discharge current (8/20) ±->PE	U <sub>p</sub>	
Voltage protection level at U <sub>OC</sub> (±/PE)  Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE	Up	< 0.2 kV
Nominal discharge current for class II test (8/20)  Total discharge current (8/20) ±->PE		
Total discharge current (8/20) ±->PE		< 0.6 kV
. ,	l <sub>n</sub>	2 kA
Response time (+/-)	I <sub>Total</sub>	4 kA
responde time (17)	t <sub>A</sub>	< 25 ns
Response time (±/PE)	t <sub>A</sub>	< 100 ns
Maximal back-up fuse		16 A gL/gG
Residual current	I <sub>PE</sub>	≤ 5 µA
Short-circuit current rating at maximum back-up fuse	I <sub>SCCR</sub>	6 kA <sub>rms</sub>
Lightning protection zone		LPZ 2-3
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20
Operating temperature	9	-40 ÷ 55 °C
Humidity range	RH	5 ÷ 95 %
Recommended cross-section of connected conductors	S	2.5 mm <sup>2</sup>
Clamp fastening range (solid conductor)		$0.2 \div 6 \text{ mm}^2$
Clamp fastening range (stranded conductor)		$0.2 \div 4 \text{ mm}^2$
Tightening moment		0,5 Nm
Installation		On DIN rail 35 mm
Modular width		3 TE
Operating position		



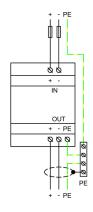
Туре		HSAD16/6VDC
Product placement environment		Internal
Signalling at the device		Optic
Importance of local signaling		OK – red light off FAULT – red light on
Remote signalling		No
Includes EMI / EMC filter		No
Modular design		No
Lifetime		> 100 000 h
Designed according to standards		
Requirements and test methods for SPDs connected to low-voltage power systems		IEC 61643-11:2011
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	95 g
Mass (including the packaging)	m	119 g
Packaging dimensions (H x W x D)		60 x 113 x 73 mm
Packaging value	V	$0.5  \mathrm{dm}^3$
ETIM group		EG000021
ETIM class		EC000942
Customs tariff no.		85363010
EAN code		8590681160848
Art. number		30 250



**The link in the QR code** leads to the online presentation of the **HSAD16/6VDC**. 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** 



## Application wiring diagram (installation)



## Internal diagram

