

HLSA12,5-600/4+0

- Lightning impulse current and surge arresters type T1+T2 ensure the equipotential bonding, eliminate the effects of lightning current and reduce switching, induced and residual overvoltage in single-phase and three-phase power supply systems.
- Suitable for objects with considerable levels of protection LPL III and LPL IV, such as small administration complexes, residential buildings, family houses or properties and halls without the incidence of persons and indoor equipment.
- Installed at the boundaries of LPZ 0 LPZ 1 and higher zones, closest to where overhead line enters the building i.e. in the main distribution boards.
- The products consist of varistors with big discharge ability.
- Configurations 1+1 and 3+1 are additionally combined with a gas discharge tube which ensures zero leakage current through the PE conductor.
- If the product contains two PE (or PEN) terminals, it must not be used as a PE (PEN) bridge.
- **S** indication specifies a version with remote monitoring.

Test class according to EN 61643-11:2012 (IEC 61643-11:2011) System Number of poles Rated operating AC voltage Maximum continuous operating voltage AC Maximum discharge current (8/20) Impulse discharge current for class I test (10/350) Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I_n Temporary overvoltage test (TOV) for $I_T = 5$ s		T1, T2 TN-S
Number of poles Rated operating AC voltage Maximum continuous operating voltage AC Maximum discharge current (8/20) Impulse discharge current for class I test (10/350) Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n		
Rated operating AC voltage Maximum continuous operating voltage AC Maximum discharge current (8/20) Impulse discharge current for class I test (10/350) Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n		
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Maximum discharge current (8/20) Impulse discharge current for class I test (10/350) Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	U_N	500 V
Impulse discharge current for class I test (10/350) Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	U _c	600 V
Charge Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	I _{max}	50 kA
Specific energy for class I test Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	I _{imp}	12.5 kA
Total discharge current (10/350) L1+L2+L3+N->PE Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	Q	6.25 As
Total discharge current (8/20) L1+L2+L3+N->PE Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	W/R	39 kJ/Ω
Nominal discharge current for class II test (8/20) Open circuit voltage of the combination wave generator Voltage protection level at I _n	I _{Total}	50 kA
Open circuit voltage of the combination wave generator Voltage protection level at In	I _{Total}	200 kA
Voltage protection level at I _n	I _n	20 kA
	U _{oc}	6 kV
Temporary overvoltage test (TOV) for t = 5 s	U_p	< 2.4 kV
remporary overvoitage test (10v) for t _T = 33	U _T	726 V
Response time	t _A	< 25 ns
Maximal back-up fuse		160 A gL/gG
Short-circuit current rating at maximum back-up fuse	I _{SCCR}	60 kA _{rms}
Lightning protection zone		LPZ 0-1, LPZ 1-2, LPZ 2-3
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20
Operating temperature	9	-40 ÷ 70 °C
Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T1	S	6 mm² (L, N) 16 mm² (PE, PEN)
Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T2	S	2.5 mm ² (L, N) 6 mm ² (PE, PEN)
Clamp fastening range (solid conductor)		1.5 ÷ 25 mm ²



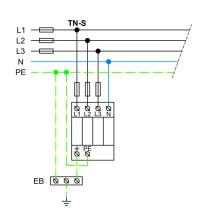
Tightening moment 3 Nm Installation On DIN rail 35 mm Modular width 8 TE Operating position Any Signalling at the device Optic Importance of local signaling OK - clear target FAULT - red target Remote signalling No Modular design No Lifetime > 100 000 h Designed according to standards Requirements and 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 6164:12:2009 Ordering, packaging and additional data Mass (including the packaging) m 1.32 kg Mass (including the packaging) m 1.364 kg Packaging dimensions (H x W x D) 71 x 177 x 106 mm Packaging value V 1.33 dm³ </th <th>Туре</th> <th></th> <th>HLSA12,5-600/4+0</th>	Туре		HLSA12,5-600/4+0
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Modular width 8 TE Operating position Any Signalling at the device Optic Importance of local signaling OK - clear target Remote signalling No Modular design No Lifetime > 100 000 h Designed according to standards IEC 61643-11:2011 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 IEC 62305:2010 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 Mass m 1.32 kg Mass (including the packaging) m 1.364 kg Packaging dimensions (H x W x D) 71 x 177 x 106 mm Packaging value V 1.33 dm³ ETIM class EC001457 Customs tariff no. 85363010	Tightening moment		3 Nm
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Importance of local signaling OK - clear target FAULT - red target Remote signalling No Modular design No Designed according to standards Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems Requirements and test methods for SPDs connected to low-voltage power systems REC 61643-11:2011 REC 62305:2010 REC 62305:2	Operating position		Any
FAULT - red target	Signalling at the device		Optic
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 1.32 kg Mass (including the packaging) m 1.364 kg Packaging dimensions (H x W x D) 71 x 177 x 106 mm Packaging value V 1.33 dm³ ETIM group EG000021 ETIM class EC001457 Customs tariff no. 85363010 EAN code 8590681113967	Importance of local signaling		
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Designed according to standards Requirements and test methods for SPDs connected to low-voltage power systems Safety of Flammability of Plastic Materials Protection against lightning Selection and erection of electrical equipment – Switchgear and controlgear Selection and application principles for SPDs connected to low-voltage power systems CLC/TS 61643-12:2009 Ordering, packaging and additional data Mass m 1.32 kg Mass (including the packaging) Mass (including the packaging) Packaging dimensions (H x W x D) Packaging value V 1.33 dm³ ETIM group EG000021 ETIM class EC001457 Customs tariff no. 85363010 EAN code	Modular design		No
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Ordering, packaging and additional data Mass m 1.32 kg Mass (including the packaging) m 1.364 kg Packaging dimensions (H x W x D) 71 x 177 x 106 mm Packaging value V 1.33 dm³ ETIM group EG000021 ETIM class EC001457 Customs tariff no. 85363010 EAN code 8590681113967	Selection and erection of electrical equipment – Switchgear and controlgear		HD 60364-5-53:2022
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Customs tariff no. 85363010 EAN code 8590681113967	ETIM group		EG000021
EAN code 8590681113967	ETIM class		EC001457
	Customs tariff no.		85363010
Art. number 10 350	EAN code		8590681113967
	Art. number		10 350



The link in the QR code leads to the online presentation of the **HLSA12,5-600/4+0**. 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

