



Ref. Certif. No.

AT 5110

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product

Surge protective device

Name and address of the applicant

HAKEL spol. s r.o.
Bratří Štefanů 980,
500 03 Hradec Králové, Czech Republic

Name and address of the manufacturer

HAKEL spol. s r.o.
Bratří Štefanů 980,
500 03 Hradec Králové, Czech Republic

Name and address of the factory

HAKEL spol. s r.o.
Bratří Štefanů 980,
500 03 Hradec Králové, Czech Republic

Note: When more than one factory, please report on page 2

Additional Information on page 2

Ratings and principal characteristics

Uc = AC 150, 255, 275, 320 V;
In = 20, 25, 30, 100 kA;
Imax = 40 or 50 kA; see pages 2 to 6

Trademark / Brand (if any)

hakil[®]
Hz in Hearts

Customer's Testing Facility (CTF) Stage used

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Model / Type Ref.

Series HLSA-... and HGDT...,
see pages 2 to 6

Additional information (if necessary may also be reported on page 2)

See test report for information about National and/or Group Differences.

Additional Information on pages 2 to 6

A sample of the product was tested and found to be in conformity with

IEC 61643-11:2011

As shown in the Test Report Ref. No. which forms part of this Certificate

CTI-CB 1145-1 to 1145-9

This CB Test Certificate is issued by the National Certification Body



Österreichischer Verband für Elektrotechnik

OVE Certification

Kahlenberger Str. 2A, 1190 Wien, Austria



T. Neumayer
Digitally signed by T. Neumayer
Email=t.neumayer@ove.at

Signature: Dipl.-Ing. T. Neumayer

Date: 2024-05-22

Type spectrum

HLSA non-pluggable SPDs:

HLSA25-275 SPDs, test class I + II + III

SPD product name	Earthing system $U_0 \leq 230/400 \text{ V AC}$	Construction	Details	Poles
HLSA25-275 S	TN → L-(PE)N, N-PE TT → only L-N	varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit with remote contact	1
HLSA25-275	TN → L-(PE)N, N-PE TT → only L-N	varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit without remote contact	1
HLSA25-275/2+0 S	TN	L/N-PE: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit with remote contact	2
HLSA25-275/2+0	TN	L/N-PE: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit without remote contact	2
HLSA25-275/3+0 S	TN	L1/L2/L3-PEN: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit with remote contact	3
HLSA25-275/3+0	TN	L1/L2/L3-PEN: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit without remote contact	3
HLSA25-275/4+0 S	TN	L1/L2/L3/N-PE: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit with remote contact	4
HLSA25-275/4+0	TN	L1/L2/L3/N-PE: varistor	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ unit without remote contact	4
HLSA25-275/1+1 S	TN/TT	1+1 circuit L-N: varistor N-PE: gas discharge tube	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=50\text{kA}$, $I_{imp}=50\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,8\text{kV}$ unit with remote contact	2
HLSA25-275/1+1	TN/TT	1+1 circuit L-N: varistor N-PE: gas discharge tube	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=50\text{kA}$, $I_{imp}=50\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,8\text{kV}$ unit without remote contact	2
HLSA25-275/3+1 S	TN/TT	3+1 circuit L1/L2/L3-N: varistor N-PE: gas discharge tube	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=100\text{kA}$, $I_{imp}=100\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,5\text{kV}$ unit with remote contact	4
HLSA25-275/3+1	TN/TT	3+1 circuit L1/L2/L3-N: varistor N-PE: gas discharge tube	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,2\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=100\text{kA}$, $I_{imp}=100\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,5\text{kV}$ unit without remote contact	4

Additional information (if necessary)

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 Signature: Dipl.-Ing. T. Neumayer

Date: 2024-05-22

HLSA25G-255 SPDs, test class I + II + III

SPD product name	Earthing system $U_0 \leq 230/400$ V AC	Construction	Details	Poles
HLSA25G-255 S	TN → L-(PE)N, N-PE TT → only L-N	varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit with remote contact	1
HLSA25G-255	TN → L-(PE)N, N-PE TT → only L-N	varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit without remote contact	1
HLSA25G-255/2+0 S	TN	L/N-PE: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit with remote contact	2
HLSA25G-255/2+0	TN	L/N-PE: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit without remote contact	2
HLSA25G-255/3+0 S	TN	L1/L2/L3-PEN: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit with remote contact	3
HLSA25G-255/3+0	TN	L1/L2/L3-PEN: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit without remote contact	3
HLSA25G-255/4+0 S	TN	L1/L2/L3/N-PE: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit with remote contact	4
HLSA25G-255/4+0	TN	L1/L2/L3/N-PE: varistor	$U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV unit without remote contact	4
HLSA25G-255/1+1 S	TN/TT	1+1 circuit L-N: varistor N-PE: gas discharge tube	L-N: $U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV N-PE: $U_c=255$ V AC, $I_n=50$ kA, $I_{imp}=50$ kA, $U_{oc}=10$ kV, $U_p \leq 1,8$ kV unit with remote contact	2
HLSA25G-255/1+1	TN/TT	1+1 circuit L-N: varistor N-PE: gas discharge tube	L-N: $U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV N-PE: $U_c=255$ V AC, $I_n=50$ kA, $I_{imp}=50$ kA, $U_{oc}=10$ kV, $U_p \leq 1,8$ kV unit without remote contact	2
HLSA25G-255/3+1 S	TN/TT	3+1 circuit L1/L2/L3-N: varistor N-PE: gas discharge tube	L-N: $U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV N-PE: $U_c=255$ V AC, $I_n=100$ kA, $I_{imp}=100$ kA, $U_{oc}=10$ kV, $U_p \leq 1,5$ kV unit with remote contact	4
HLSA25G-255/3+1	TN/TT	3+1 circuit L1/L2/L3-N: varistor N-PE: gas discharge tube	L-N: $U_c=255$ V AC, $I_n=25$ kA, $I_{max}=50$ kA, $I_{imp}=25$ kA, $U_{oc}=6$ kV, $U_p \leq 1,3$ kV N-PE: $U_c=255$ V AC, $I_n=100$ kA, $I_{imp}=100$ kA, $U_{oc}=10$ kV, $U_p \leq 1,5$ kV unit without remote contact	4

HGDT... SPDs, test class I + II

SPD product name	Earthing system $U_0 \leq 230/400$ V AC	Construction	Details	Poles
HGDT25	TN/TT → only N-PE	gas discharge tube	$U_c=255$ V AC, $I_n=30$ kA, $I_{imp}=25$ kA, $U_p \leq 1,4$ kV (also used in HLSA12,5/1+1, HLSA6,25-275/1+1 and HLSA6,25-275/3+1 modules for N-PE mode)	1
HGDT50	TN/TT → only N-PE	gas discharge tube	$U_c=255$ V AC, $I_n=50$ kA, $I_{imp}=50$ kA, $U_p \leq 1,8$ kV (also used in HLSA25/1+1, HLSA25G/1+1 and HLSA12,5-275/3+1 modules for N-PE mode)	1
HGDT100	TN/TT → only N-PE	gas discharge tube	$U_c=255$ V AC, $I_n=100$ kA, $I_{imp}=100$ kA, $U_p \leq 1,5$ kV (also used in HLSA25/3+1, HLSA25G/3+1 modules for N-PE mode)	1

Additional information (if necessary)


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Date: 2024-05-22

HSA pluggable SPDs:

HLSA12,5-275 M SPDs, test class I + II + III

SPD product name	Earthing system $U_0 \leq 230/400 \text{ V AC}$	Construction	Details	Poles
HLSA12,5-275 M S	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	1
HLSA12,5-275 M	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	1
HLSA12,5-275/2+0 M S	TN	L/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	2
HLSA12,5-275/2+0 M	TN	L/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	2
HLSA12,5-275/3+0 M S	TN	L1/L2/L3-PEN: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	3
HLSA12,5-275/3+0 M	TN	L1/L2/L3-PEN: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	3
HLSA12,5-275/4+0 M S	TN	L1/L2/L3/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	4
HLSA12,5-275/4+0 M	TN	L1/L2/L3/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	4
HLSA12,5-275/1+1 M S	TN/TT	1+1 circuit L-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit with remote contact	2
HLSA12,5-275/1+1 M	TN/TT	1+1 circuit L-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit without remote contact	2
HLSA12,5-275/3+1 M S	TN/TT	3+1 circuit L1/L2/L3-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=50\text{kA}$, $I_{imp}=50\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,8\text{kV}$ unit with remote contact	4
HLSA12,5-275/3+1 M	TN/TT	3+1 circuit L1/L2/L3-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=25\text{kA}$, $I_{max}=50\text{kA}$, $I_{imp}=12,5\text{kA}$, $U_{oc}=6\text{kV}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=50\text{kA}$, $I_{imp}=50\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,8\text{kV}$ unit without remote contact	4

*...N-PE gas discharge tube not pluggable

HLSA6,25-320 M SPDs, test class I + II

SPD product name	Earthing system $U_0 \leq 230/400 \text{ V AC}$	Construction	Details	Poles
HLSA6,25-320 M S	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=320\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,5\text{kV}$ unit with remote contact	1
HLSA6,25-320 M	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=320\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,5\text{kV}$ unit without remote contact	1

Additional information (if necessary)

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HLSA6,25-275 M SPDs, test class I + II

SPD product name	Earthing system $U_0 \leq 230/400 \text{ V AC}$	Construction	Details	Poles
HLSA6,25-275 M S	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	1
HLSA6,25-275 M	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	1
HLSA6,25-275/2+0 M S	TN	L/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	2
HLSA6,25-275/2+0 M	TN	L/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	2
HLSA6,25-275/3+0 M S	TN	L1/L2/L3-PEN: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	3
HLSA6,25-275/3+0 M	TN	L1/L2/L3-PEN: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	3
HLSA6,25-275/4+0 M S	TN	L1/L2/L3/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit with remote contact	4
HLSA6,25-275/4+0 M	TN	L1/L2/L3/N-PE: plug-in varistor module	$U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ unit without remote contact	4
HLSA6,25-275/1+1 M S	TN/TT	1+1 circuit L-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit with remote contact	2
HLSA6,25-275/1+1 M	TN/TT	1+1 circuit L-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit without remote contact	2
HLSA6,25-275/3+1 M S	TN/TT	3+1 circuit L1/L2/L3-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit with remote contact	4
HLSA6,25-275/3+1 M	TN/TT	3+1 circuit L1/L2/L3-N: plug-in varistor module N-PE: gas discharge tube*	L-N: $U_c=275\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 1,25\text{kV}$ N-PE: $U_c=255\text{V AC}$, $I_n=30\text{kA}$, $I_{imp}=25\text{kA}$, $U_{oc}=10\text{kV}$, $U_p \leq 1,4\text{kV}$ unit without remote contact	4

*...N-PE gas discharge tube not pluggable

HLSA6,25-150 M SPDs, test class I + II

SPD product name	Earthing system $U_0 \leq 230/400 \text{ V AC}$	Construction	Details	Poles
HLSA6,25-150 M S	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=150\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 0,8\text{kV}$ unit with remote contact	1
HLSA6,25-150 M	TN → L-(PE)N, N-PE TT → only L-N	plug-in varistor module	$U_c=150\text{V AC}$, $I_n=20\text{kA}$, $I_{max}=40\text{kA}$, $I_{imp}=6,25\text{kA}$, $U_p \leq 0,8\text{kV}$ unit without remote contact	1

Additional information (if necessary)


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HLSA-... M plug-in modules

Name plug in module	Information	Uc [V]	Class I	Class II		Class III	U _F [kV]
			I _{imp} [kA]	I _n [kA]	I _{max} [kA]	U _{oc} [kV]	
HLSA12,5-275 M	Varistor plug-in module → for HLSA12,5-275 M (S) units	275	12,5	25	50	6	≤ 1,25
HLSA6,25-320 M	Varistor plug-in module → for HLSA6,25-320 M (S) units	320	6,25	20	40	---	≤ 1,5
HLSA6,25-275 M	Varistor plug-in module → for HLSA6,25-275 M (S) units	275	6,25	20	40	---	≤ 1,25
HLSA6,25-150 M	Varistor plug-in module → for HLSA6,25-150 M (S) units	150	6,25	20	40	---	≤ 0,8

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