

CERTIFICATE

Issued to:
Applicant:
OBO Bettermann GmbH & Co.
Hüingser-Ring 52
58710 Menden, Germany

Manufacturer/Licensee:
OBO Bettermann GmbH & Co.
Hüingser-Ring 52
58710 Menden, Germany

Product : Surge protective devices
Trade name : OBO
Types/models : V20-...

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 61643-11:2012; IEC 61643-11:2011;
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 900038

DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

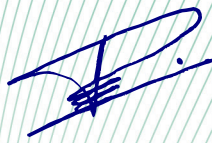
This certificate is issued on: 23 March 2017 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2192718.01

DEKRA Certification B.V.



drs. G.J. Zoetbrood
Managing Director



F.S. Strikwerda
Certification Manager

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DUTCH ACCREDITATION
COUNCIL



SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	Surge protective devices
Trade name	:	OBO
Types	:	C20-0-255, V20-0-75, V20-0-150, V20-0-280, V20-0-320, V20-0-385, V20-1+FS-280, V20-1+FS-320, V20-1+NPE+FS-280, V20-1+NPE+FS-320, V20-1+NPE-75, V20-1+NPE-150, V20-1+NPE-280, V20-1+NPE-320, V20-1+NPE-385, V20-1-75, V20-1-150, V20-1-280, V20-1-320, V20-1-385, V20-2+FS-280, V20-2+FS-385, V20-2+NPE+FS-150, V20-2+NPE+FS-280, V20-2+NPE-150, V20-2+NPE-280, V20-2-75, V20-2-150, V20-2-280, V20-2-385, V20-3+FS-280, V20-3+FS-320, V20-3+FS-385, V20-3+NPE+FS-150, V20-3+NPE+FS-280, V20-3+NPE+FS-320, V20-3+NPE+FS-385, V20-3+NPE-150, V20-3+NPE-280, V20-3+NPE-320, V20-3+NPE-385, V20-3-150, V20-3-280, V20-3-320, V20-3-385, V20-4+FS-280, V20-4+FS-385, V20-4-280, V20-4-385
SPD type/class	:	2/II 1/I and 2/II for C20-0-255 and N-PE modes of V20-...+NPE... only
Maximum continuous operating voltage (U_c)	:	See product data - type
Nominal discharge current (I_n)	:	See product data - type
Maximum discharge current (I_{max})	:	See product data - type
Voltage protection level (U_p)	:	See product data - type
Maximum overcurrent protection	:	160 A gL/gG
Short-circuit current rating (I_{scsr})	:	50 kA
Total discharge current (I_{Total})	:	V20-2-...(2-pole) 80 kA V20-3-...(3-pole) 120 kA V20-4-...(4-pole) 160 kA V20-1+NPE-... (2-pole) 60 kA V20-2+NPE-... (3-pole) 60 kA V20-3+NPE-... (4-pole) 60 kA

Product data - type C20-0-255

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	255 Vac
Impulse discharge current (I_{imp})	:	12 kA
Nominal discharge current (I_n)	:	40 kA
Maximum discharge current (I_{max})	:	60 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-0-75

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	75 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,5 kV

Product data - type V20-0-150

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	150 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,8 kV

Product data - type V20-0-280

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-0-320

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	320 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,4 kV

Product data - type V20-0-385

SPD	:	Plug
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-1+FS-280

SPD	:	1-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-1+FS-320

SPD	:	1-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	320 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,4 kV

Product data - type V20-1+NPE+FS-280

SPD	:	2-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE+FS-320

SPD	:	2-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 320 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,4 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE-75

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 75 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,5 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE-150

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 150 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,8 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE-280

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE-320

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 320 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,4 kV N-PE: < 1,3 kV

Product data - type V20-1+NPE-385

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 385 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,7 kV N-PE: < 1,3 kV

Product data - type V20-1-75

SPD	:	1-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	75 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,5 kV

Product data - type V20-1-150

SPD	:	1-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	150 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,8 kV

Product data - type V20-1-280

SPD	:	1-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-1-320

SPD	:	1-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	320 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,4 kV

Product data - type V20-1-385

SPD	:	1-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-2+FS-280

SPD	:	2-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-2+FS-385

SPD	:	2-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-2+NPE+FS-150

SPD	:	3-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 150 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,8 kV N-PE: < 1,3 kV

Product data - type V20-2+NPE+FS-280

SPD	:	3-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-2+NPE-150

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 150 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,8 kV N-PE: < 1,3 kV

Product data - type V20-2+NPE-280

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-2-75

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	75 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,5 kV

Product data - type V20-2-150

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	150 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,8 kV

Product data - type V20-2-280

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-2-385

SPD	:	2-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-3+FS-280

SPD	:	3-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-3+FS-320

SPD	:	3-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	320 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,4 kV

Product data - type V20-3+FS-385

SPD	:	3-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-3+NPE+FS-150

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 150 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,8 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE+FS-280

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE+FS-320

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 320 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,4 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE+FS-385

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 385 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,7 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE-150

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 150 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 0,8 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE-280

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 280 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,3 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE-320

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 320 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,4 kV N-PE: < 1,3 kV

Product data - type V20-3+NPE-385

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	L-N: 385 Vac N-PE: 255 Vac
Impulse discharge current (I_{imp})	:	N-PE: 12 kA
Nominal discharge current (I_n)	:	L-N: 20 kA N-PE: 40 kA
Maximum discharge current (I_{max})	:	L-N: 40 kA N-PE: 60 kA
Voltage protection level (U_p)	:	L-N: < 1,7 kV N-PE: < 1,3 kV

Product data - type V20-3-150

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	150 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 0,8 kV

Product data - type V20-3-280

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-3-320

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	320 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,4 kV

Product data - type V20-3-385

SPD	:	3-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-4+FS-280

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-4+FS-385

SPD	:	4-pole, socket with remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

Product data - type V20-4-280

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	280 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,3 kV

Product data - type V20-4-385

SPD	:	4-pole, socket without remote contact
Maximum continuous operating voltage (U_c)	:	385 Vac
Nominal discharge current (I_n)	:	20 kA
Maximum discharge current (I_{max})	:	40 kA
Voltage protection level (U_p)	:	< 1,7 kV

TESTS**Test requirements**

EN 61643-11:2012

IEC 61643-11:2011

Test result

The test results are laid down in DEKRA test file 2192718.01 and are also based on CB AT 3352 + CB AT 3352/M1 and TRF No. CTI-CB 869-1 up to 869-5 and CTI-CB 921-1.

Remarks

This certificate replaces certificate 2109002.01 issued on 4 December 2007.

Conclusion

The examination proved that all test requirements were met.

Tested by : OVE

Checked by : M.T.H. van Gemen

**Factory locations**

OBO Bettermann GmbH & Co.
Hüingser-Ring 52, 58710 Menden
Germany