

VAL-MS 320/1+1-FM


Order No.: 2804393



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Surge arrester for 3-conductor power supply systems (L1, N, PE), consisting of a base element with remote indication contact and protective connectors, for mounting on NS 35.



Commercial data	
EAN	 4 046356 317795
Pack	1 pcs.
Customs tariff	85363010
Gross weight in pieces	0.2511 KG
Net weight per piece (exclusive packing)	0.2335 KG
Product key	CL1321
Catalog page information	Page 43 (CAT-6-2013)

Product notes

WEEE/RoHS-compliant since:
01/01/2008



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Technical data	
Dimensions	
Height	99 mm
Width	35.6 mm
Depth	65.5 mm
Pitch unit	2 Div.

General

Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1 EN 61643-11
Degree of protection	IP20
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	2
Ambient temperature (operation)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 %
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	1L-N & N-PE

Protective circuit

IEC category	II T2
EN type	T2
Nominal voltage U_N	230 V AC
Maximum continuous operating voltage U_C	335 V AC
Maximum continuous operating voltage U_C (L-N)	335 V AC
Maximum continuous operating voltage U_C (N-PE)	260 V AC
U_T (TOV-proof)	415 V AC (5 s / L-N) 1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Residual current I_{PE}	$\leq 1 \mu A$
Standby power consumption P_C	$\leq 120 \text{ mVA}$
Max. discharge surge current I_{max} (8/20) μs	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (L-N)	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (N-PE)	40 kA
Nominal discharge surge current I_n (8/20) μs (L-N)	20 kA
Nominal discharge surge current I_n (8/20) μs (N-PE)	20 kA
Lightning test current (10/350) μs , peak value I_{imp}	12 kA (N-PE)

Impulse operate voltage at 6 kV (1.2/50) μ s (N-PE)	≤ 1.5 kV
Voltage protection level U_p (L-N)	≤ 1.5 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	1.3 kV (at 10 kA)
	1.2 kV (at 5 kA)
	1.1 kV (at 3 kA)
Residual voltage (L-PE)	≤ 1.4 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
Residual voltage (N-PE)	≤ 250 V (at 10 kA)
	≤ 150 V (at 5 kA)
	≤ 100 V (at 3 kA)
Response time (L-N)	≤ 25 ns
Response time (N-PE)	≤ 100 ns
Max. required backup fuse with branch wiring	125 A (gG)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA
Follow current quenching capacity I_f (N-PE)	100 A (260 V)

Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	1.5 mm ²
Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Screw connection

Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U _{max} AC	250 V AC
Maximum operating voltage U _{max} DC	30 V DC
Max. operating current I _{max}	1.5 A AC (250 V AC)
	1 A DC (30 V DC)

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11/A11 2007

Certificates / Approvals



Certification

cULus Recognized, GOST, KEMA-KEUR

Certifications applied for:

Certification Ex:

Accessories

Item	Designation	Description
Bridges		
2809209	MPB 18/1- 2	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.
2809212	MPB 18/1- 3	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

2809225	MPB 18/1- 4	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.
2748564	MPB 18/1- 6	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.
2856278	MPB 18/1- 7 BU	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 7-pos., color: Blue
2748577	MPB 18/1- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.
2858470	MPB 18/1- 8 BU	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos., color: Blue
2748580	MPB 18/1- 9	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.
2748593	MPB 18/1-12	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.
2818339	MPB F200X16/ 1GS	Wiring bridge flexible, diameter 16 mm ² , with a fork-type cable lug on one side, length: 200 mm
2818342	MPB F400X16/ 1GS	Wiring bridge flexible, diameter 16 mm ² , with a fork-type cable lug on one side, length: 400 mm
2818355	MPB F600X16/ 1GS	Wiring bridge flexible, diameter: 16 mm ² , with a fork-type cable lug on one side, length: 600 mm

General

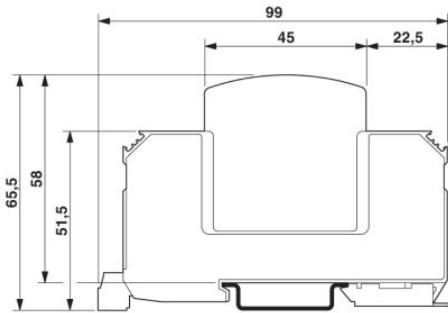
2749880	DK-BIC-35	Feed-through terminal block for VAL and FLT applications
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Marking

1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Zack marker strip, Strip, white, labeled, Horizontal: Grounding symbol, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm
2749576	ZBN 18,LGS:L1-N,ERDE	Zack marker strip, Strip, white, labeled, Horizontal: L1, L2, L3, N, GND, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm
0800763	ZBN 18:SO/CMS	Zack marker strip, white, For terminal block width: 18 mm
2809128	ZBN 18:UNBEDRUCKT	Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Diagrams/Drawings

Dimensioned drawing



Circuit diagram

