


**VAL-MS 580/3+0-FM**

Order No.: 2920447

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2920447>

Surge arrester for 4-conductor power supply systems (L1, L2, PEN), consisting of a base element with remote indication contact and protective connectors, for mounting on NS 35.



Commercial data	
GTIN (EAN)	 4 046356 163569
Note	Made-to-order
sales group	J022
Pack	1 pcs.
Customs tariff	85363030
Catalog page information	Page 31 (TT-2009)

## Product notes

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

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## Technical data

## Standards

Housing material	PBT / PA
Inflammability class acc. to UL 94	V0
Color	black

Standards for air and creepage distances	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	3
Ambient temperature (operation)	-40 °C ... 80 °C
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	3L-PEN
Width	53.40 mm
Height	65.50 mm
Length	99.00 mm
Pitch unit	3 Div.

**Protective circuit**

IEC category	II
	T2
EN type	T2
Nominal voltage $U_N$	400 V AC (400/690 V AC TN-C)
	$\leq 500$ V AC (IT)
Arrester rated voltage $U_C$	580 V AC
Arrester rated voltage $U_C$ (L-PEN)	580 V AC
$U_T$ (TOV-proof)	690 V AC (5 s/L-PEN)
Nominal frequency $f_N$	50 Hz (60 Hz)
Ground conductor current $I_{PE}$	$\leq 250$ $\mu$ A
Standby power consumption $P_C$	$\leq 0.45$ VA ( $\leq 20$ mW)
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s	30 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (L-PEN)	90 kA (all channels)
	30 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-PEN)	45 kA (all channels)
	15 kA
Protection level $U_p$	$\leq 2.5$ kV
Protection level $U_p$ (L-PEN)	$\leq 2.5$ kV

Residual voltage	≤ 2.5 kV
	≤ 2.3 kV (at 10 kA)
	≤ 2.1 kV (at 5 kA)
	≤ 1.9 kV (at 3 kA)
Residual voltage (L-PEN)	≤ 2.5 kV
	≤ 2.3 kV (at 10 kA)
	≤ 2.1 kV (at 5 kA)
	≤ 1.9 kV (at 3 kA)
Response time	≤ 25 ns
Response time (L-N)	≤ 25 ns
Max. required backup fuse with branch wiring	125 A (gL / gG)
Short-circuit resistance I <sub>p</sub> with max. backup fuse (effective)	25 kA

#### Connection, protective circuit

Type of connection	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 <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	1.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
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 contact
Type of connection	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>

Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max.</sub> AC	250 V AC
Max. operating current I <sub>max</sub>	1.5 A AC (250 V AC)
	1.5 A DC (30 V DC)

### Standards

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

### Certificates / Approvals



Certification

CB, CCA, CUL, GOST, KEMA, OEVE, UL

### Accessories

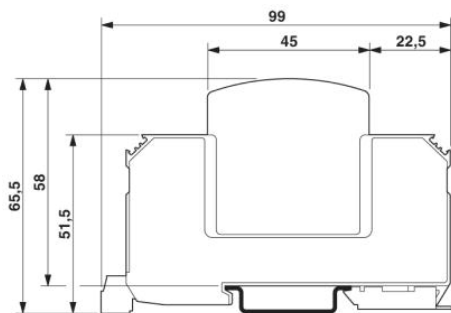
Item	Designation	Description
<b>Bridges</b>		
2809241	MPB 18/3- 6	Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.
2809254	MPB 18/3- 9	Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 9-pos.
2818339	MPB F200X16/ 1GS	Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 200 mm
2818342	MPB F400X16/ 1GS	Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 400 mm
2818355	MPB F600X16/ 1GS	Wiring bridge flexible, diameter: 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 600 mm
<b>General</b>		
2749880	DK-BIC-35	Feed-through terminal block for VAL and FLT applications

**Marking**

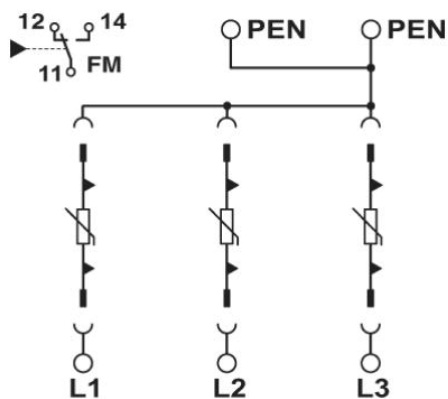
1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White
2749576	ZBN 18,LGS:L1-N,ERDE	Marker labels, printed horizontally, strips with 5 labels, L1, L2, L3, N, GND, color: white
0800763	ZBN 18:SO/CMS	Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White
2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White

**Diagrams/Drawings**

Dimensioned drawing



Circuit diagram



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