Extract from the online catalog

VAL-MS-T1/T2 335/12.5/3+1

Order No.: 2800184

http://eshop.phoenixcontact.sk/phoenix/treeViewClick.do?UID=2800184

Universal varistor-based plug-in lightning/surge arrester for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), for Lightning Protection Levels III and IV.

Commercial data	
EAN	4 046356 518567
Pack	1 pcs.
Customs tariff	85363030
Gross weight in pieces	0.638 kg
Catalog page information	Page 34 (C-6-2013)

Product notes

WEEE/RoHS-compliant since: 03.07.2009

Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at http://www.download.phoenixcontact.com. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Dimensions

Height	90 mm
Width	71.2 mm
Depth	77.5 mm
Horizontal pitch	4 Div.

Ambient conditions	
Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C

General	
IEC power supply system	TT
	TN-C
	TN-S
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
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	Optical
Direction of action	3L-N & N-PE

Protective circuit	
IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
Lightning protection class	III-IV /50 kA (TT, TN-C-S)
Nominal voltage U_N	240 V AC (230/400 V AC ... 240/415 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)	264 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)
Rated load current I_L	80 A (with serial 16mm² through wiring)
Residual current I_{PE}	≤ 5 µA (per phase)
Standby power consumption P_C	≤ 268 mVA
Max. discharge current I_{max} (8/20) µs maximum (L-N)	50 kA

Max. discharge current I_{max} (8/20) µs maximum (N-PE)	50 kA
Nominal discharge current I_n (8/20) µs (L-N)	12.5 kA
Nominal discharge current I_n (8/20) µs (N-PE)	50 kA
Impulse discharge current (10/350) µs charge	25 As
Impulse discharge current (10/350)☐µs, specific energy	625.00 kJ/Ω
Impulse discharge current (10/350)☐µs, peak value I_{imp}	50 kA (N-PE)
Impulse discharge current (10/350) µs charge	6.25 As
Impulse discharge current (10/350)☐µs, specific energy	39.00 kJ/Ω
Impulse discharge current (10/350)☐µs, peak value I_{imp}	12.5 kA (L-N)
Impulse discharge current (10/350) µs charge	25 As
Impulse discharge current (10/350)☐µs, specific energy	625.00 kJ/Ω
Impulse discharge current (10/350)☐µs, peak value I_{imp}	50 kA
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1.7 kV
Voltage protection level U_p (L-N)	≤ 1.2 kV
	≤ 1.6 kV (30 kA - 8/20µs)
Voltage protection level U_p (L-PE)	≤ 2 kV
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage (L-N)	≤ 1.1 kV (at 10 kA)
	≤ 1 kV (at 5 kA)
	≤ 0.9 kV (at 3 kA)
	≤ 1.2 kV (at I_n)
Residual voltage (L-PE)	≤ 1.5 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
	≤ 2 kV (at I_n)
Residual voltage (N-PE)	≤ 0.5 kV (at 10 kA)
	≤ 0.5 kV (at 5 kA)
	≤ 0.4 kV (at 3 kA)
	≤ 0.6 kV (at I_n)
Response time (L-N)	≤ 25 ns

Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Max. required backup fuse with branch wiring	160 A (gL/gG)
Max. required backup fuse with V-type through wiring	80 A (gL/gG / with 16 mm²)
Short-circuit resistance I_P with max. backup fuse (effective)	25 kA
Follow current quenching capacity If (N-PE)	100 A (264 V AC)

Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm²
Conductor cross section stranded max.	25 mm²
Conductor cross section solid min.	1.5 mm²
Conductor cross section solid max.	35 mm²
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2

Standards and Regulations

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

Certificates

Certification cULus Recognized, KEMA-KEUR, ÖVE, GL

Certifications applied for:

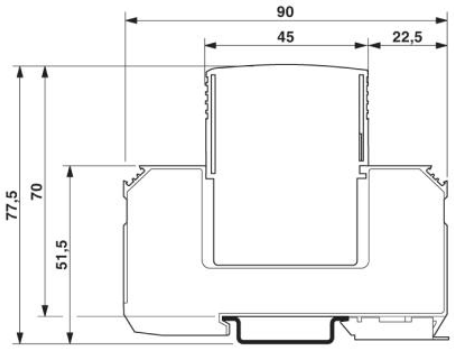
Certification Ex:

Accessories

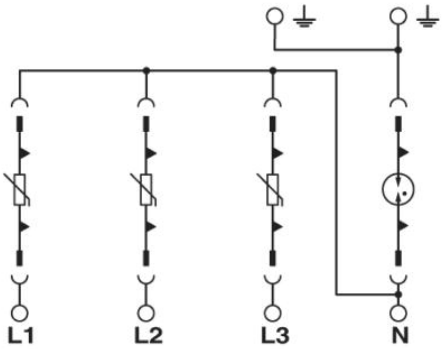
Item	Designation	Description
General		
2749880	DK-BIC-35	Feed-through terminal block for VAL and FLT applications
Marking		
1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Marker for terminal blocks, Strip, 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	Marker for terminal blocks, 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

Drawings

Dimensioned drawing



Circuit diagram



Address

PHOENIX CONTACT, s.r.o.
Mokráň záhon 4
821 04 Bratislava,Slovakia
Phone +420 542 213 401
Fax +421 2 3210 1479
http://www.phoenixcontact.sk