

VAL-MS 385/65/3+1


Order No.: 2920890



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Type 2 surge arrester for 5-wire power supply systems (L1, L2, L3, N, PE), with connector latching.



Commercial data	
EAN	 4 046356 280914
Pack	1 pcs.
Customs tariff	85363030
Gross weight in pieces	0.5949 kg
Catalog page information	Page 48 (C-6-2013)

Product notes

WEEE/RoHS-compliant since:
27.07.2010



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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	II
	T2
EN type	T2
Nominal voltage U_N	240 V AC (230/400 V AC ... 240/415 V AC)
Maximum continuous operating voltage U_C	385 V AC
Maximum continuous operating voltage U_C (L-N)	385 V AC
Maximum continuous operating voltage U_C (N-PE)	264 V AC
U_T (TOV-proof)	480 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 16mm ² through wiring)
Residual current I_{PE}	≤ 5 μA
Standby power consumption P_c	≤ 231 mVA (per phase)
Max. discharge current I_{max} (8/20) μs	65 kA
Max. discharge current I_{max} (8/20) μs maximum (L-N)	65 kA

Max. discharge current I_{max} (8/20) μ s maximum (N-PE)	80 kA
Nominal discharge current I_n (8/20) μ s (L-N)	30 kA
Nominal discharge current I_n (8/20) μ s (N-PE)	40 kA
Impulse discharge current (10/350) μ s charge	1.25 As
Impulse discharge current (10/350) $\square\mu$ s, specific energy	1.56 kJ/ Ω
Impulse discharge current (10/350) $\square\mu$ s, peak value I_{imp}	2.5 kA (1-pos.)
Impulse discharge current (10/350) μ s charge	5 As
Impulse discharge current (10/350) $\square\mu$ s, specific energy	25.00 kJ/ Ω
Impulse discharge current (10/350) $\square\mu$ s, peak value I_{imp}	10 kA (N-PE)
Front of wave sparkover voltage at 6 kV (1.2/50) μ s (N-PE)	≤ 1.7 kV
Voltage protection level U_p (L-N)	≤ 1.8 kV
Voltage protection level U_p (L-PE)	≤ 2 kV (IEC 60364-5-534)
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage (L-N)	≤ 1.4 kV (at 10 kA)
	≤ 1.25 kV (at 5 kA)
	≤ 1.2 kV (at 3 kA)
	≤ 1.8 kV
Residual voltage (L-PE)	≤ 1.5 kV (at 10 kA)
	≤ 1.4 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
	≤ 2 kV
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
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	250 A (gL/gG)
Max. required backup fuse with V-type through wiring	80 A (gL/gG / with 16 mm ²)

Short-circuit resistance I_p with max. backup fuse (effective)	25 kA
Follow current quenching capacity I_f (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 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

Standards and Regulations

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

Certificates



Certification

KEMA-KEUR, ÖVE, GL, CCA, IECCEB CB Scheme

Certifications applied for:

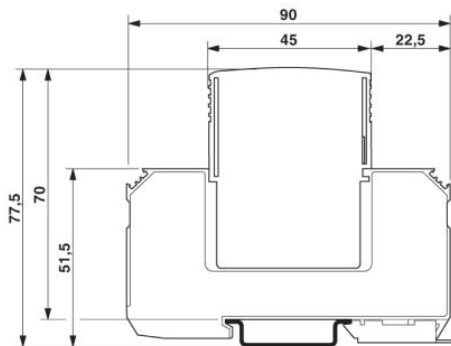
Certification Ex:

Accessories

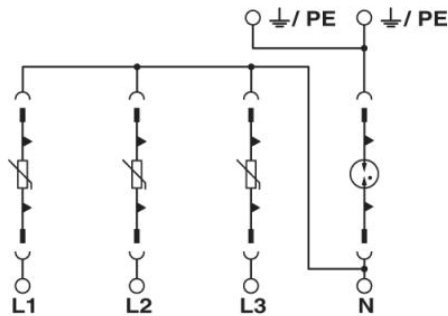
Item	Designation	Description
General		
2921307	F-MS 80 ST	Type 2 surge protection plug with N-PE total current spark gap.
2920308	VAL-MS 385/65 ST	Type 2 surge protection plug with varistor for VAL-MS 385/65/..., thermal monitoring, visual fault warning.

Drawings

Dimensioned drawing



Circuit diagram



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