

Type 2 surge protection plug - VAL-MS 350 VF ST - 2856595

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surge protection connector type 2 with series connection consisting of varistor and gas-filled spark gap for VAL-MS base element, thermal monitoring, visual fault warning. Design: 350 V AC



Key Commercial Data

Packing unit	10 STK
GTIN	 4 017918 876869
GTIN	4017918876869

Technical data

Dimensions

Height	52.4 mm
Width	17.5 mm
Depth	55.3 mm
Horizontal pitch	1 Div.

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

General

IEC test classification	II
	T2
EN type	T2

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Technical data

General

IEC power supply system	TN
	TT
	IT
Mode of protection	L-N
	L-PE
	L-PEN
Mounting type	on base element
Color	jet black RAL 9005
Housing material	PA 6.6
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	1
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.12
Surge protection fault message	optical

Additional descriptions

Note	Usable in all low-voltage systems between L-N or L-PEN. Only usable in IT Systems between L-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation. (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a)
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Protective circuit

Nominal voltage U_N	240/415 V AC (TN)
	240/415 V AC (TT)
	230 V AC (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	350 V AC
Residual current I_{PE}	$\leq 5 \mu A$
Standby power consumption P_C	$\leq 2 \text{ mVA}$
Nominal discharge current $I_n (8/20) \mu s$	10 kA
Maximum discharge current $I_{max} (8/20) \mu s$	20 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	$\leq 1.5 \text{ kV}$
Residual voltage U_{res}	$\leq 1.2 \text{ kV (at } I_n)$
	$\leq 1.2 \text{ kV (at } 10 \text{ kA)}$
	$\leq 1.1 \text{ kV (at } 5 \text{ kA)}$
Front of wave sparkover voltage at 6 kV (1.2/50) μs	$\leq 1.5 \text{ kV}$
TOV behavior at U_T	415 V AC (5 s / withstand mode)
	440 V AC (120 min / withstand mode)

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Protective circuit

Response time t_A	≤ 100 ns
Max. backup fuse with branch wiring	125 A (gG)

Connection data

Connection method	pluggable
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UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-N)	350 V AC
Nom. voltage	350 V AC
Mode of protection	L-N
Power distribution system	1
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	1610 V
Nominal discharge current I_n (L-N)	10 kA

Environmental Product Compliance

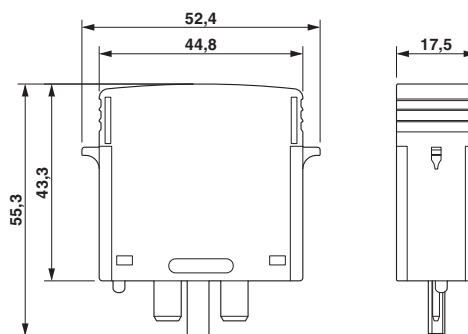
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Circuit diagram



Dimensional drawing



Approvals

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IECEE CB Scheme / UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / CCA / CSA / EAC / EAC / cULus Recognized

Ex Approvals

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Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	AT 2905/M1
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
KEMA-KEUR		http://www.dekra-certification.com	2170208.01
ÖVE		https://www.ove.at/en/certification-pz/certification-register/	18583-001-13
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
CCA			NTR-AT 1947-A
CSA		http://www.csagroup.org/services-industries/product-listing/	13631
EAC			EAC-Zulassung
EAC			RU C- DE.A*30.B01561
cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

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