

VAL-US-240D/40-P - Type 1 surge protection plug



2910337

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UL Recognized type 1 SPD and IEC type 2 surge protection plug with a varistor and thermal disconnect for use with VAL-US base elements, mechanical and visual fault warning

Product description

Surge protective device replacement plug

Your advantages

- Thermal disconnect device for each individual plug
- Optical, mechanical status indication for the individual arresters
- Pluggable
- Mechanical coding of all slots
- Consists of base element and plug

Commercial data

Item number	2910337
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1321
GTIN	4055626444499
Weight per piece (including packing)	44.5 g
Weight per piece (excluding packing)	33 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Notes

General	Used in:
General	
Note	<p>For use in all low-voltage systems between L-PEN.</p> <p>Only for use in IT systems between L-PE if the exposed conductive parts of the equipment of the low-voltage electrical installation are connected to the grounding system of the transformer station (common grounding of the HV transformer station and the exposed conductive part of the LV load system).</p> <p>RE = RA according to VDE 0100-442:2013, Figure 44.A1 and Table 44.A1</p>

Product properties

Product type	Replacement plug
Product family	VALVETRAB MS
IEC test classification	II
EN type	T2
Type	Male
Number of positions	1
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Connection data

Connection method	VALVETRAB plug-in system
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Dimensions

Dimensional drawing	
Width	17.5 mm
Height	52.4 mm
Depth	55.3 mm

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Horizontal pitch	1 Div.
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Material specifications

Color	black (RAL 9005)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6/PBT
Material group	I
Housing material	PA 6.6 PBT

Protective circuit

Mode of protection	L-PEN
Direction of action	1L-N/PE
Nominal voltage U_N	240/415 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	275 V AC
Protective conductor current I_{PE}	$\leq 450 \mu\text{A}$
Standby power consumption P_C	$\leq 120 \text{ mVA}$
Nominal discharge current I_n (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	$\leq 1.35 \text{ kV}$
Residual voltage U_{res}	$\leq 1.35 \text{ kV}$ (at I_n) $\leq 1.1 \text{ kV}$ (at 10 kA) $\leq 1 \text{ kV}$ (at 5 kA) $\leq 0.9 \text{ kV}$ (at 3 kA)
TOV behavior at U_T	335 V AC (5 s / withstand mode) 440 V AC (120 min / safe failure mode)
Max. backup fuse with branch wiring	100 A (gG)

Additional technical data

Maximum discharge current I_{max} (8/20) μs	40 kA
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

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Approvals

UL specifications

Maximum continuous operating voltage MCOV	275 V AC
Short-circuit current rating (SCCR)	200 kA
Voltage protection rating VPR	1000 V
UL type	type 1
Nominal discharge current I_n	20 kA
Maximum Surge Current per Phase	40 kA
Mode of protection	L-L
	L-G
Nominal voltage	240 V AC
Power distribution system	Single phase
Nominal frequency	50/60 Hz
SPD Type	1CA

Standards and regulations

Air clearances and creepage distances

Standards/regulations	EN 60664-1 / EN 61643-11
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	on base element
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Drawings



Circuit diagram



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Approvals

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Classifications

ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

ETIM

ETIM 10.0	EC002496
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com