VAL-MS-T1/T2 335/12.5 ST - Type 1/2 surge protection plug

2800190

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L-N replacement plug for VAL-MS-T1/T2 335/12.5 plug-in lighting/surge arrester.

Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Can be used in lightning protection level III and IV due to discharge capacity of 12.5 kA per position
- Vibration-resistant latching ensures the plug remains firmly in place

Commercial data

Item number	2800190
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL1151
Product key	CL1151
GTIN	4046356518611
Weight per piece (including packing)	112.7 g
Weight per piece (excluding packing)	107.34 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Product properties

Product type	Replacement plug
Product family	VALVETRAB MS
IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
IEC power supply system	TN-C
	TN-S
	TT
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

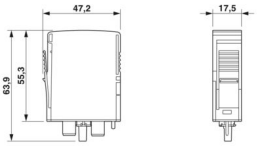
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)

Connection data

Connection method	pluggable

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	47 mm
Depth	67.3 mm
Horizontal pitch	1 HP

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-N
	L-PEN
Direction of action	L-N / L-PEN
Nominal voltage U_N	240/415 V AC (TN-C, TN-S)
	240/415 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	335 V AC
Protective conductor current I_{PE}	≤ 800 µA
Standby power consumption P_C	≤ 270 mVA
Nominal discharge current I_n (8/20) µs	12.5 kA
Maximum discharge current I_{max} (8/20) µs	50 kA
Impulse discharge current (10/350) µs, charge	6.25 As
Impulse discharge current (10/350) µs, specific energy	39 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	12.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 1.2 kV
	≤ 1.6 kV (30 kA - 8/20 µs)
Residual voltage U_{res}	≤ 1.2 kV (at I_n)
	≤ 1.1 kV (at 10 kA)
	≤ 1 kV (at 5 kA)
	≤ 0.9 kV (at 3 kA)
TOV behavior at U_T	415 V AC (5 s / withstand mode)
	457 V AC (120 min / safe failure mode)
Response time t_A	≤ 25 ns
Max. backup fuse with branch wiring	160 A (gG)

Additional technical data

Maximum discharge current I_{max} (8/20) µs	65 kA

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	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV (L-N)	335 V AC

Nominal discharge current I_n (L-N)	20 kA
Mode of protection	L-N
Nominal voltage	240 V AC
Power distribution system	Single phase
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	2630 V
SPD Type	4CA

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011

EN 61643-11

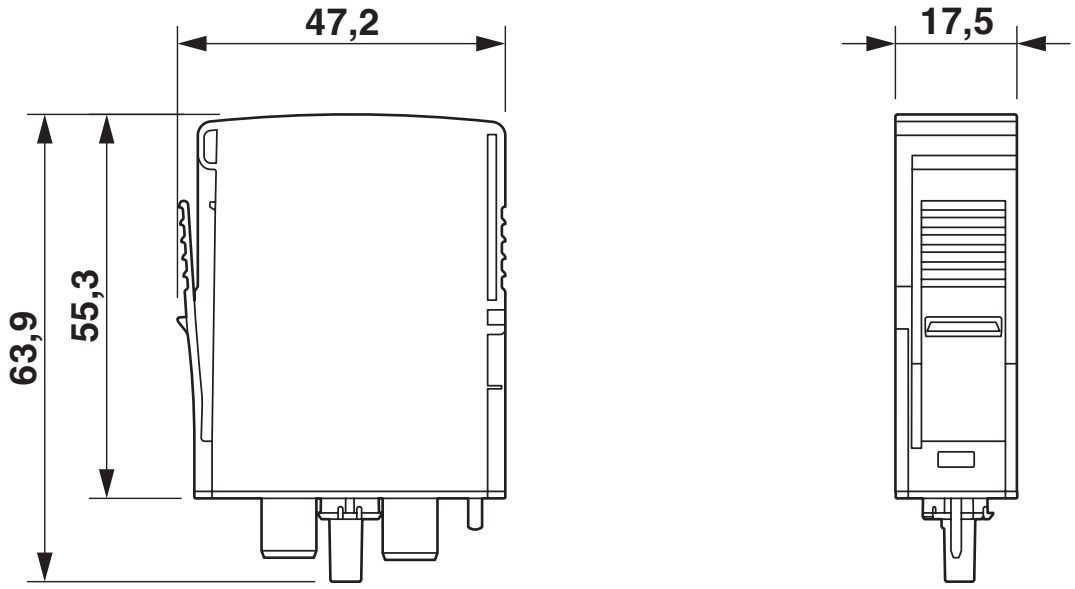
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	on base element

Drawings

Dimensional drawing



Circuit diagram



Approvals

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cUL Recognized
Approval ID: FILE E 330181

UL Recognized
Approval ID: FILE E 330181

IECEE CB Scheme
Approval ID: AT 2584

CCA
Approval ID: NTR-AT 1906

KEMA-KEUR
Approval ID: 2162496-01

DNV GL
Approval ID: TAE00001N9

ÖVE
Approval ID: 18583-009-10

UAE-RoHS
Approval ID: 23-10-88705

Classifications

ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

ETIM

ETIM 10.0	EC002496

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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%

EF3.1 Climate Change

CO2e kg	1.309 kg CO2e

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