

VAL-MS 385/80 ST - Type 2 surge protection plug



2920353

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Type 2 surge protection plug with varistor for VAL-MS 385/80/..., thermal monitoring, visual fault warning.

Commercial data

Item number	2920353
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Product key	CL1322
GTIN	4046356157353
Weight per piece (including packing)	88 g
Weight per piece (excluding packing)	86 g
Country of origin	DE

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Technical data

Product properties

Product type	Replacement plug
Product family	VALVETRAB MS
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
	TT
Type	Male
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

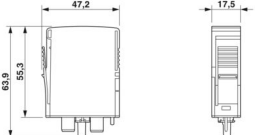
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Connection data

Connection method	pluggable
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Dimensions

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

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

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Mode of protection	L-N
	L-PEN
Direction of action	1L-N/PE
Nominal voltage U_N	240/415 V AC (TN-C)
	240/415 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	385 V AC
Protective conductor current I_{PE}	$\leq 600 \mu A$
Standby power consumption P_C	$\leq 230 mVA$
Nominal discharge current I_n (8/20) μs	40 kA
Maximum discharge current I_{max} (8/20) μs	80 kA
Impulse discharge current (10/350) μs , charge	1.25 As
Impulse discharge current (10/350) μs , specific energy	1.56 kJ/ Ω
Impulse discharge current (10/350) μs , peak value I_{imp}	2.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	$\leq 2 kV$
Residual voltage U_{res}	$\leq 2 kV$ (at I_n)
	$\leq 1.3 kV$ (at 10 kA)
	$\leq 1.2 kV$ (at 5 kA)
	$\leq 1.15 kV$ (at 3 kA)
TOV behavior at U_T	480 V AC (5 s / withstand mode)
	457 V AC (120 min / withstand mode)
Response time t_A	$\leq 25 ns$
Max. backup fuse with branch wiring	250 A (gG)

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

Approvals

UL specifications

Maximum continuous operating voltage MCOV (L-N)	385 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

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Measured limiting voltage MLV (L-N)	2710 V
SPD Type	4CA

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	on base element
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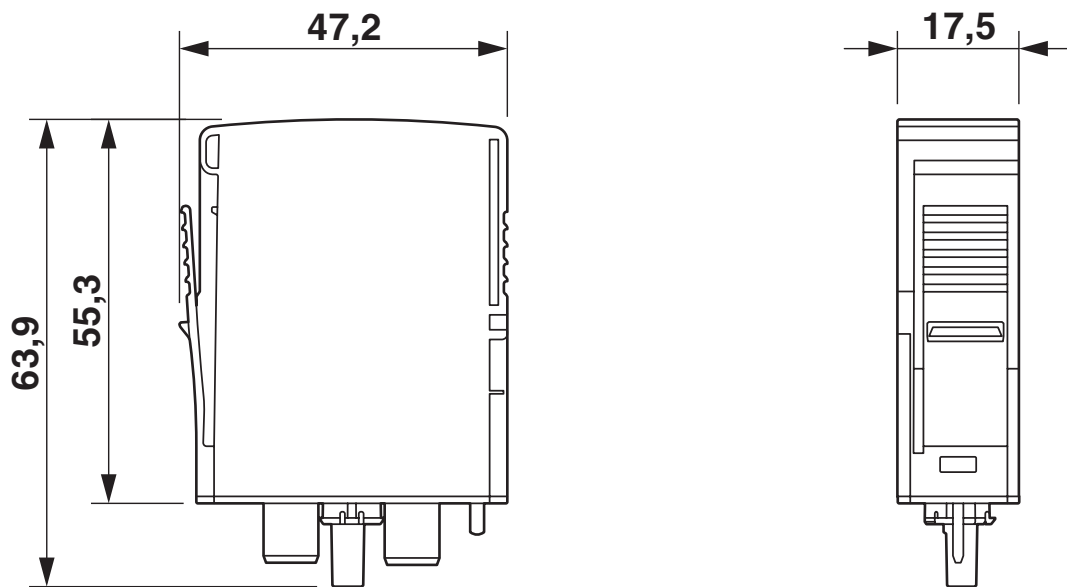
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Drawings

Dimensional drawing



Circuit diagram



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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 3003

CCA

Approval ID: NTR-AT 1955



KEMA-KEUR
Approval ID: 2171147.01



DNV GL
Approval ID: TAE00001N9

UAE-RoHS

Approval ID: 22-09-51251

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Classifications

ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

ETIM

ETIM 9.0	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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EF3.0 Climate Change

CO2e kg	2.611 kg CO2e
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