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VAL-MS-T1/T2 48/12.5 ST - Type 1/2 surge protection plug

2801242

https://www.phoenixcontact.com/gb/products/2801242

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L-N replacement plug for VAL-MS-T1/T2 48/12.5 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
- Surge protection for (-) 48 V DC 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	2801242
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL1151
Product key	CL1151
Catalog page	Page 48 (C-4-2019)
GTIN	4046356750196
Weight per piece (including packing)	58.26 g
Weight per piece (excluding packing)	52.4 g
Customs tariff number	85366990
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
Type	Male
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

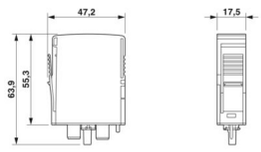
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
Nominal voltage U_N	60 V AC
	60 V DC
	- 48 V DC (RRH)

Connection data

Connection method	pluggable

Dimensions

Dimensional drawing	
Width	17.5 mm
Height	47 mm
Depth	67.3 mm
Horizontal pitch	1 Div.

Material specifications

Color	black (RAL 9005)
	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

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	PBT

Protective circuit

Mode of protection	L-N
	N-PE
	(L+) - (L-)
	(L+) - PE
Direction of action	L-N / L-PEN
Nominal voltage U_N	60 V AC ±10 % (TN)
	60 V DC ±10 %
	-48 V DC ±10 % (RRH)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	75 V AC
	100 V DC
Residual current I_{PE}	≤ 0.6 mA
Standby power consumption P_C	≤ 45.00 mVA
Nominal discharge current I_n (8/20) µs	12.5 kA
Maximum discharge current I_{max} (8/20) µs	30 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	≤ 0.4 kV
Residual voltage U_{res}	≤ 0.4 kV (at I_n)
	≤ 0.35 kV (at 10 kA)
	≤ 0.3 kV (at 5 kA)
	≤ 0.275 kV (at 4 kA)
	≤ 0.25 kV (at 3 kA)
TOV behavior at U_T	100 V AC (5 s / withstand mode)
	130 V DC (5 s / withstand 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)

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Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV (L+) - (L-)	100 V DC
Short-circuit current rating (SCCR)	5 kA
Voltage protection rating VPR (L+) - (L-)	400 V
Nominal discharge current I_n (L+) - (L-)	20 kA
Mode of protection	(L+) - (L-)
Nominal voltage	60 V DC
SPD Type	1CA

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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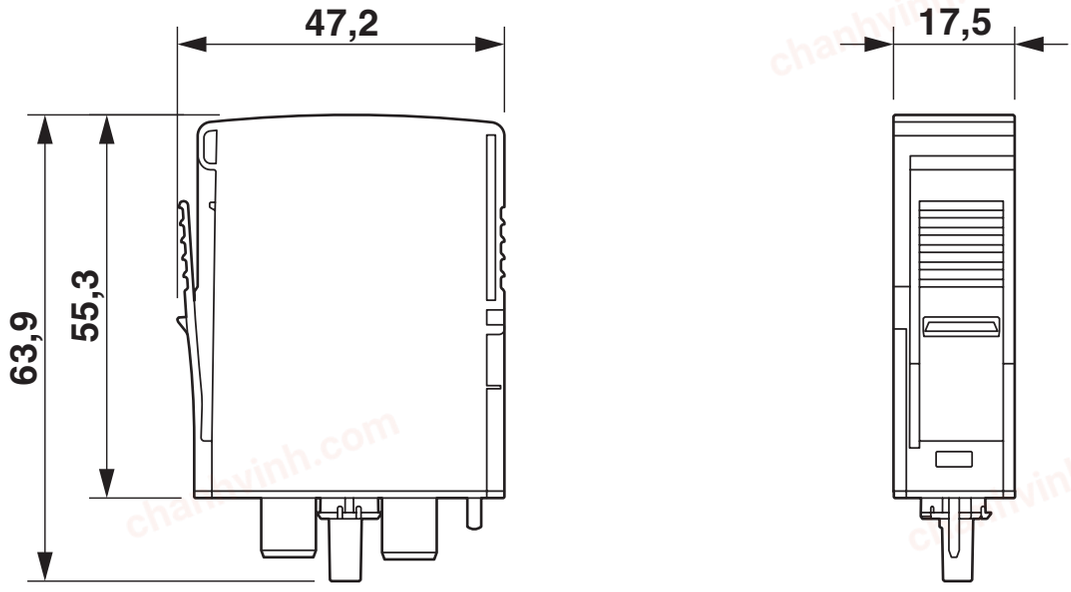
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Drawings

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: DE1-51927

CCA
Approval ID: DE1-34244

KEMA-KEUR
Approval ID: 71-130623

IECEE CB Scheme
Approval ID: DE1-54090

VDE Zeichengenehmigung
Approval ID: 40037097

KEMA-KEUR
Approval ID: 2168290.01

CCA
Approval ID: DE1-34421

UAE-RoHS
Approval ID: 23-10-88705

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

ETIM

ETIM 9.0	EC002496

UNSPSC

UNSPSC 21.0	39121600

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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%

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Accessories

MPB 18/1-10/1.0.0 - Wiring bridge

2830443

https://www.phoenixcontact.com/gb/products/2830443



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

MPB 18/4- 8 - Wiring bridge

2809283

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Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

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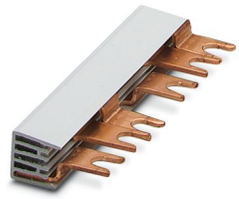
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MPB 18/3- 6 - Wiring bridge

2809241

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Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.

MPB 18/1-57 - Wiring bridge

2809238

https://www.phoenixcontact.com/gb/products/2809238



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

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MPB 18/1-12 - Wiring bridge

2748593

https://www.phoenixcontact.com/gb/products/2748593



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

MPB 18/1- 9 - Wiring bridge

2748580

https://www.phoenixcontact.com/gb/products/2748580



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

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MPB 18/1- 8 - Wiring bridge

2748577

https://www.phoenixcontact.com/gb/products/2748577



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

MPB 18/1- 6 - Wiring bridge

2748564

https://www.phoenixcontact.com/gb/products/2748564



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

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MPB 18/1- 4 - Wiring bridge

2809225

https://www.phoenixcontact.com/gb/products/2809225



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

MPB 18/1- 3 - Wiring bridge

2809212

https://www.phoenixcontact.com/gb/products/2809212



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

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MPB 18/1- 2 - Wiring bridge

2809209

https://www.phoenixcontact.com/gb/products/2809209



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.

ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

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Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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ZBN 18,LGS:L1-N,ERDE - Marker for terminal blocks

2749576

https://www.phoenixcontact.com/gb/products/2749576



Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

https://www.phoenixcontact.com/gb/products/2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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DK-BIC-35 - Feed-through terminal block

2749880

https://www.phoenixcontact.com/gb/products/2749880



Feed-through terminal block for VAL and FLT applications

ZBN 18 CUS - Zack marker strip

0825059

https://www.phoenixcontact.com/gb/products/0825059



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/gb/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk