

Type 2 surge protection device - VAL-MS 230/FM - 2839130

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Surge voltage arrester consisting of base element with remote indicator contact and ground connector with high-capacity varistor, for mounting on NS 35/7.5, nominal voltage: 230 V AC, 1-channel



Product Features

- Single-channel, DIN-rail mountable protective devices
- Base element with/without floating remote indication contact
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters
- Consists of base element and plug
- Disconnect device on each individual plug



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	136.02 GRM
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	96.8 mm
Width	17.7 mm
Depth	65.5 mm
Pitch unit	1 Div.

Ambient conditions

Degree of protection	IP20
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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 %

General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 664-1
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	Optical, remote indicator contact
Direction of action	1L-N/PE

Protective circuit

IEC test classification	II
	T2
EN type	T2
Nominal voltage U_N	230 V AC
Maximum continuous operating voltage U_C	275 V AC
Maximum continuous operating voltage U_C (L-N)	275 V AC
Maximum continuous operating voltage U_C (L-PEN)	275 V AC
Nominal frequency f_N	50 Hz (60 Hz)
Residual current I_{PE}	$\leq 300 \mu\text{A}$ (at U_N)
Operating effective current I_C at U_N	$\leq 300 \mu\text{A}$
Max. discharge current I_{max} (8/20) μs	40 kA
Max. discharge current I_{max} (8/20) μs maximum (L-N)	40 kA
Max. discharge current I_{max} (8/20) μs maximum (L-PEN)	40 kA
Nominal discharge current I_n (8/20) μs	20 kA
Nominal discharge current I_n (8/20) μs (L-N)	20 kA
Nominal discharge current I_n (8/20) μs (L-PEN)	20 kA
Impulse discharge current (10/350) μs , peak value I_{imp}	3 kA
Max. energy absorption (2 ms)	550 J
Voltage protection level U_P	$\leq 1.35 \text{ kV}$
Voltage protection level U_P (L-N)	$\leq 1.35 \text{ kV}$
Voltage protection level U_P (L-PEN)	$\leq 1.35 \text{ kV}$

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Protective circuit

Residual voltage	≤ 1 kV (at 5 kA)
Residual voltage (L-N)	≤ 1 kV (at 5 kA)
Residual voltage (L-PEN)	≤ 1 kV (at 5 kA)
Response time	≤ 25 ns
Response time (L-N)	≤ 25 ns
Response time (L-PEN)	≤ 25 ns
Max. required backup fuse with branch wiring	125 A (gG)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA

Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Screw thread	M5
Tightening torque	4.5 Nm
	30 lb in (UL)
Stripping length	14.5 mm
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	2
AWG conductor cross section	10 ... 2 (UL)

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT contact
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
	4 lb in (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	28

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Remote indicator contact

Conductor cross section AWG/kcmil max	16
AWG conductor cross section	30 ... 14 (UL)
Maximum operating voltage U_{max} AC	250 V AC
Maximum operating voltage U_{max} DC	30 V DC
Max. operating current I_{max}	1 A AC (250 V AC)
	1 A DC (30 V DC)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11/A11 2007

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

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Approvals

Approvals

IECEE CB Scheme / UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / GOST / GL / CCA / KEMA-KEUR / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

IECEE CB Scheme 

UL Recognized 

KEMA-KEUR 

ÖVE 

cUL Recognized 

GOST 

GL

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Approvals

CCA

KEMA-KEUR 

cULus Recognized 

Accessories

Accessories

Bridge

Wiring bridge - MPB 18/1- 2 - 2809209



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

Wiring bridge - MPB 18/1- 3 - 2809212



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

Wiring bridge - MPB 18/1- 4 - 2809225



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

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Accessories

Wiring bridge - MPB 18/1- 6 - 2748564



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

Wiring bridge - MPB 18/1- 7 BU - 2856278



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 7-pos., color: Blue

Wiring bridge - MPB 18/1- 8 BU - 2858470



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

Wiring bridge - MPB 18/1- 8 - 2748577



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

Wiring bridge - MPB 18/1- 9 - 2748580



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

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Accessories

Wiring bridge - MPB 18/1-12 - 2748593



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

Wiring bridge - MPB 18/1-57 - 2809238



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

Wiring bridge - MPB 18/3- 6 - 2809241



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

Wiring bridge - MPB 18/3- 9 - 2809254



Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 9-pos.

Wiring bridge - MPB 18/4- 8 - 2809283



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

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Accessories

Wiring bridge - MPB 18/4-12 - 2809296



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm

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Accessories

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm

Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm

Wiring bridge - MPB 18/1-10/1.0.0 - 2830443



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

Wiring bridge - MPB 18/1-20/1.2.5 - 2830168



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 20 pitches with contact sequence 1-2-0-0-5

Wiring bridge - MPB 18/4-12 - 2809296



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

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Wiring bridge - MPB 18/4- 8 - 2809283



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

Wiring bridge - MPB 18/3- 6 - 2809241



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

Wiring bridge - MPB 18/1-57 - 2809238



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

Wiring bridge - MPB 18/1-12 - 2748593



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

Wiring bridge - MPB 18/1- 9 - 2748580



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

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Accessories

Wiring bridge - MPB 18/1- 8 - 2748577



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

Wiring bridge - MPB 18/1- 6 - 2748564



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

Wiring bridge - MPB 18/1- 4 - 2809225



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

Wiring bridge - MPB 18/1- 3 - 2809212



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

Wiring bridge - MPB 18/1- 2 - 2809209



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

Device marking

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Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Feed-through terminal block

Feed-through terminal block - DK-BIC-35 - 2749880



Feed-through terminal block for VAL and FLT applications

Labeled device marker

Zack marker strip - ZBN 18,LGS:ERDE - 2749589



Zack marker strip, Strip, white, labeled, Horizontal: Grounding symbol, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Zack marker strip - ZBN 18,LGS:L1-N,ERDE - 2749576



Zack marker strip, Strip, white, labeled, Horizontal: L1, L2, L3, N, GND, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Marker pen

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Accessories

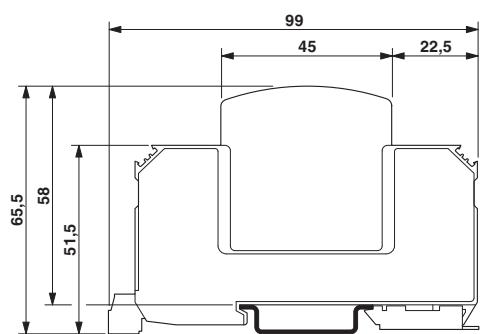
Marker pen - B-STIFT - 1051993



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

Drawings

Dimensioned drawing



Circuit diagram

