

# Type 2 surge protection connector - VAL-MS 400 ST - 2816399

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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 400 V AC

## Why buy this product

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



## Key commercial data

Packing unit	1
Minimum order quantity	10
Catalog page	Page 39 (TT-2011)
GTIN	 4 017918 131593
Custom tariff number	85363010
Country of origin	GERMANY

## Technical data

### Standards

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	VDE 0675-6
Degree of protection	IP20
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Number of positions	1

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## Technical data

### Standards

Ambient temperature (operation)	-40 °C ... 80 °C
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Message: Surge protection fault	Optical
Direction of action	1L-N/PE
Width	17.7 mm
Height	52.4 mm
Depth	54.5 mm
Pitch unit	1 Div.

### Protective circuit

IEC category	II
IEC category	T2
EN type	T2
Nominal voltage UN	400 V AC
Arrester rated voltage UC	440 V AC
UT (TOV-proof)	440 V AC (5 s)
Nominal frequency fN	50 Hz (60 Hz)
Ground conductor current IPE	≤ 0.45 mA
Standby power consumption PC	≤ 200 mVA
Max. discharge surge current I <sub>max</sub> (8/20) μs	40 kA
Nominal discharge surge current I <sub>n</sub> (8/20) μs	20 kA
Lightning test current (10/350) μs, peak value I <sub>imp</sub>	3 kA
Max. energy absorption (2 ms)	950 J
Protection level U <sub>p</sub>	≤ 2.2 kV
Residual voltage	≤ 2.2 kV
Residual voltage	≤ 1.8 kV (at 10 kA)
Residual voltage	≤ 1.5 kV (at 5 kA)
Residual voltage	≤ 1.4 kV (at 3 kA)
Response time	≤ 25 ns
Max. required backup fuse with branch wiring	125 A (gL)
Short-circuit resistance IP with max. backup fuse (effective)	25 kA
Capacity	2 nF ±30 %

### Standards

Standards/regulations	IEC 61643-1 2005
Standards/regulations	EN 61643-11/A11 2007
Standards/regulations	UL 1449
Standards/regulations	IEEE C62.1 / C62.34 / C62.45

## Classifications

### eclass

eCl@ss 4.0	27140201
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## Classifications

### eclass

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

### 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

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

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#### Ex Approvals


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#### Approvals submitted

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### Approval details

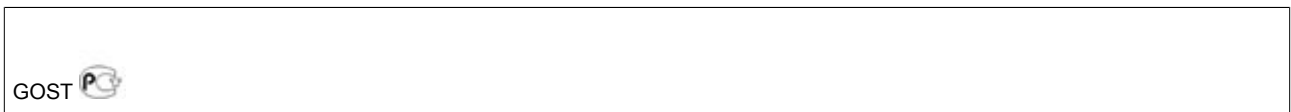
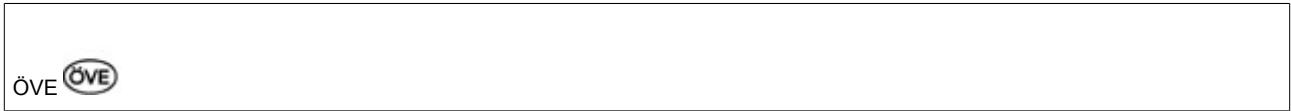
IECEE CB Scheme

UL Recognized 

KEMA-KEUR 

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## Approvals



## Accessories

### Accessories

### Bridges

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 600 mm

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 400 mm

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### Accessories

Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 200 mm

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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

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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.

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Wiring bridge - MPB 18/3- 6 - 2809241



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

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Wiring bridge - MPB 18/1-57 - 2809238



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

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### Accessories

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Wiring bridge - MPB 18/1-12 - 2748593



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

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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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Wiring bridge - MPB 18/1- 8 - 2748577



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

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Wiring bridge - MPB 18/1- 6 - 2748564



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

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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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## Type 2 surge protection connector - VAL-MS 400 ST - 2816399

### Accessories

Wiring bridge - MPB 18/1- 3 - 2809212



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

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Wiring bridge - MPB 18/1- 2 - 2809209



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

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### Marking

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

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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

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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

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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

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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

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### Additional products

Type 2 surge protection base element - VAL-MS BE - 2817741



Base element for type 2 arresters of the VALVETRAB MS series of products. Design: 1-channel

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Type 2 surge protection base element - VAL-MS BE/FM - 2817738



Base element for type 2 arresters of the VALVETRAB MS series of products, with remote indication contact. Design: 1-channel

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### Drawings

Circuit diagram





