

## Type 2 surge protection device - VAL-MS-AR 75 VF/FM - 2801488

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The VAL-MS-AR 75 VF/FM is a hybrid SPD with a gas discharge tube in series with a metal oxide varistor and thermal monitor, ideal for applications where no leakage current can be tolerated. The VAL-MS BE-AR/FM base provides a disconnect that separates the field wire from the protected mode for field diagnosis and dry contacts for remote function monitoring. Independent input and output terminals are on the same side with ground terminals on the opposite end. All terminals are high-current screw clamping for stripped or ferruled, solid or stranded wires.

### Why buy this product

- Versions with and without floating remote indication contact
- Separate field and house wire termination.
- Tool-free field wire disconnect and test point.
- IP20 touch safe when connected.
- VF plug has zero leakage current.



### Key commercial data

Packing unit	10 pc
Minimum order quantity	10 pc
GTIN	 4 046356 879484
Weight per Piece (excluding packing)	222.22 g
Custom tariff number	85363010
Country of origin	United States
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Height	160 mm
Width	17.7 mm
Depth	75 mm

#### Ambient conditions

Degree of protection	IP20
	IP20 (when disconnect closed)
Ambient temperature (operation)	-40 °C ... 80 °C

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## Technical data

### Ambient conditions

Altitude	max. 3000 m
Permissible humidity (operation)	5 % ... 95 %
Permissible humidity (storage/transport)	5 % ... 95 %
Shock (operation)	10g
Vibration (operation)	2g (0 ... 200 Hz)

### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Total surge current (8/20) $\mu$ s	25 kA
Total surge current (10/350) $\mu$ s	3 kA
Mounting type	DIN rail mounting with additional retaining screw
Type	DIN rail module, two-section, divisible
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 $U_N$	60 V DC (5 V...48 V AC)
Maximum continuous operating voltage $U_C$	100 V DC
	75 V AC
Nominal frequency $f_N$	50 Hz (60 Hz)
Rated load current $I_L$	55 A (with 6 AWG)
Max. discharge current $I_{max}$ (8/20) $\mu$ s	20 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s	10 kA
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	3 kA
Voltage protection level $U_p$	$\leq 1.4$ kV
Residual voltage	$\leq 350$ V (at 5 kA)
	$\leq 300$ V (at 3 kA)
	$\leq 450$ V
Max. backup fuse with branch wiring	63 A (gG)
	63 A (gG)
Short-circuit resistance $I_p$ with max. backup fuse (effective)	10 kA

### Connection, protective circuit

AWG conductor cross section	15 ... 2 (UL)
	20 ... 6
	12 ... 4

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## Technical data

### Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
	2 lb <sub>f</sub> -in. ... 4 lb <sub>f</sub> -in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max</sub> AC	250 V AC
Max. operating current I <sub>max</sub>	1.5 A AC (250 V AC)
	1.5 A DC (30 V DC)

## 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	27130803
eCl@ss 7.0	27130803

### ETIM

ETIM 4.0	EC000472
ETIM 5.0	EC000472

### UNSPSC

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

## Accessories

Accessories

Bridge

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### Accessories

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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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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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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Plug-in bridge - FBS 2-18 - 2801068



Plug-in bridge for cross-connections in the VAL-MS BE-AR terminal center, 2-pos., color: Red

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### Insertion bridge

Insertion bridge - EB 56-18 - 3009299



Insertion bridge, Number of positions: 56, Color: gray

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### Screwdriver tools

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## Accessories

Screwdriver - SZS 0,8X4,0 VDE - 1212508



Screwdriver, slot-headed, VDE insulated, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

Screwdriver - SZS 1,0X6,5 VDE - 1205079



Screwdriver, slot-headed, VDE insulated, size: 1.0 x 6.5 x 150 mm, 2-component grip, with non-slip grip

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

## Spare parts

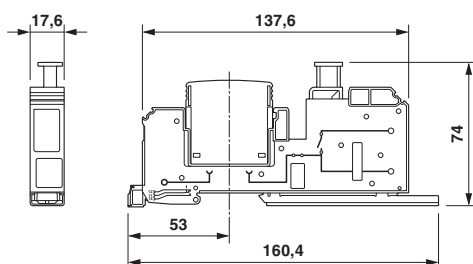
Type 2 surge protection plug - VAL-MS 75 VF ST - 2805318



Surge protection plug type 2 with series connection consisting of varistor and gas-filled spark gap for VAL-MS base element, thermal monitoring, visual fault warning.

## Drawings

Dimensioned drawing



Circuit diagram

