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.

Product Features

- 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	1 pc
Weight per Piece (excluding packing)	170.0 GRM
Custom tariff number	85363010
Country of origin	Germany

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
Altitude	max. 3000 m
Permissible humidity (operation)	5 % ... 95 %

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Technical data

Ambient conditions

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) µs	25 kA
Total surge current (10/350) µs	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) µs	20 kA
Nominal discharge current I_n (8/20) µs	10 kA
Impulse discharge current (10/350)#µs, peak value I_{imp}	3 kA
Voltage protection level U_p	≤ 1.4 kV
Residual voltage	≤ 350 V (at 5 kA)
	≤ 300 V (at 3 kA)
	≤ 450 V
Max. required 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

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Connection, protective circuit

	12 ... 4

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_f-in. ... 4 lb_f-in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm²
Conductor cross section stranded max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage $U_{max.}$ AC	250 V AC
Max. operating current I_{max}	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
eCl@ss 8.0	27130803

ETIM

ETIM 4.0	EC000472
ETIM 5.0	EC000472

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610

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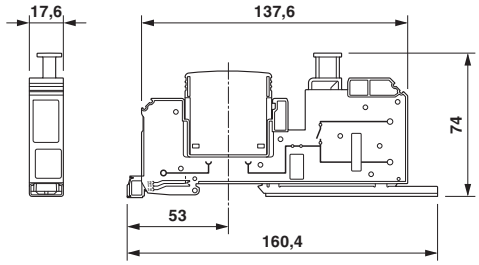
Classifications

UNSPSC

UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Drawings

Dimensioned drawing



Circuit diagram