Type 2 surge arrester - VAL-MS 350 VF-RW/3+0-FM/40 - 1050284

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Pluggable surge protective device free of leakage current with increased lightning current discharge capacity, for 3-phase power supply networks with N and PE in a common conductor (4-conductor system: L1, L2, L3, PEN), with remote indication contact.

RoHS

Key Commercial Data

Packing unit	1
GTIN	4 055626 666501
GTIN	4055626666501
Custom tariff number	85363090

Technical data

Dimensions

Height	98.7 mm
Width	53.4 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 Div.

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

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Technical data

General

IEC test classification	II
	T2
EN type	T2
Mode of protection	L-PE
	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact

Additional descriptions

Note	Only usable in IT Systems between L-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a).

Protective circuit

Nominal voltage U_N	240/415 V AC (TN-C)
	230 V AC (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	350 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 5 µA
Standby power consumption P_C	≤ 6 mVA
Nominal discharge current I_n (8/20) µs	10 kA
Maximum discharge current I_{max} (8/20) µs	20 kA
Impulse discharge current (10/350) µs, charge	1.25 As
Impulse discharge current (10/350) µs, specific energy	1.56 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	2.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 1.5 kV
Residual voltage U_{res}	≤ 1.35 kV (at I_n)

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Protective circuit

	≤ 1.35 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) µs	≤ 1.5 kV
TOV behavior at U_T (L-PEN)	415 V AC (5 s / withstand mode)
	440 V AC (120 min / withstand mode)
Response time t_A	≤ 100 ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	125 A (gG)

Indicator/remote signaling

Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC
	30 V DC
Operating current	5 mA AC ... 1.5 A AC
	1 A DC
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1.5 mm² ... 16 mm²)
	4.5 Nm (25 mm² ... 35 mm²)
Stripping length	16 mm
Conductor cross section flexible	1.5 mm² ... 25 mm²
Conductor cross section solid	1.5 mm² ... 35 mm²
Conductor cross section AWG	15 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 16 mm²

Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

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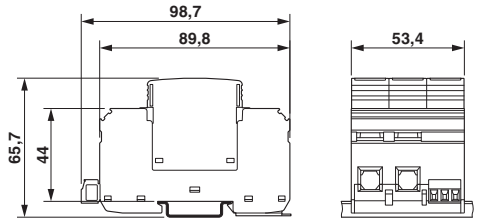
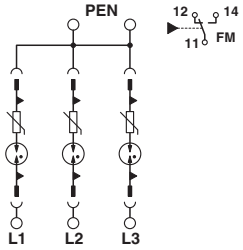
Drawings

Dimensional drawing



Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130805
eCl@ss 11.0	27130805
eCl@ss 6.0	27130800
eCl@ss 7.0	27130805
eCl@ss 9.0	27130805

ETIM

ETIM 6.0	EC000941
ETIM 7.0	EC000941