

Type 2 surge protection device - VAL-CP-MCB-3S-350/40/ FM - 2882750

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Combination of type 2 surge protection and arrester backup fuse, with monitoring of arrester and arrester backup fuse, in combination with a remote indication contact. Design: 5-conductor system (L1, L2, L3, N, PE), mounting on NS 35 DIN rail

Product Features

- ☒ Plugs can be checked with CHECKMASTER
- ☒ Surge-proof arrester backup fuse
- ☒ Combinations of type 2 arresters with integrated arrester backup fuse
- ☒ Overload of the surge protection results in all-pos. disconnection from the mains
- ☒ Signaling to monitoring systems via remote indication contact in the event of an error
- ☒ Optical, mechanical status indication for the individual arresters
- ☒ Type 2 consistent plug-in surge arresters



Key commercial data

package_quantity	1
GTIN	4046356175845

Technical data

Dimensions

Height	101 mm
Width	131.5 mm
Depth	76 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

General

Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	light gray
Standards for air and creepage distances	DIN VDE 0110-1

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Technical data

General

Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	IEC 61643-11
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	4
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	3L-N & N-PE

Protective circuit

IEC test classification	II
EN type	T2
Nominal voltage U_N	240 V AC (230/400 V AC ... 240/415 V AC)
Nominal voltage U_N	415 V AC (L-L)
Maximum continuous operating voltage U_C (L-N)	350 V AC
Maximum continuous operating voltage U_C (N-PE)	264 V AC
U_T (TOV-proof)	415 V AC (5 s)
U_T (TOV-safe)	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz
Nominal frequency f_N	60 Hz
Rated load current I_L	40 A
Residual current I_{PE}	$\leq 1 \mu A$
Standby power consumption P_C	$\leq 3.5 \text{ mW}$
Max. discharge current I_{max} (8/20) μs maximum (L-N)	90 kA (all channels)
Max. discharge current I_{max} (8/20) μs maximum (L-N)	30 kA
Max. discharge current I_{max} (8/20) μs maximum (N-PE)	30 kA
Nominal discharge current I_n (8/20) μs (L-N)	60 kA (all channels)
Nominal discharge current I_n (8/20) μs (L-N)	20 kA
Nominal discharge current I_n (8/20) μs (N-PE)	20 kA
Front of wave sparkover voltage at 6 kV (1.2/50) μs (N-PE)	$\leq 1.7 \text{ kV}$
Voltage protection level U_P (L-N)	$\leq 2.5 \text{ kV}$
Voltage protection level U_P (N-PE)	$\leq 1.7 \text{ kV}$
Residual voltage (L-N)	$\leq 2.3 \text{ kV}$ (at I_n)
Residual voltage (L-N)	$\leq 1.6 \text{ kV}$ (at 10 kA)
Residual voltage (L-N)	$\leq 1.3 \text{ kV}$ (at 5 kA)
Residual voltage (L-N)	$\leq 1 \text{ kV}$ (at 3 kA)
Residual voltage (L-PE)	$\leq 2.5 \text{ kV}$ (at I_n)
Residual voltage (L-PE)	$\leq 2 \text{ kV}$ (at 10 kA)
Residual voltage (L-PE)	$\leq 1.5 \text{ kV}$ (at 5 kA)
Residual voltage (L-PE)	$\leq 1.1 \text{ kV}$ (at 3 kA)

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Protective circuit

Residual voltage (N-PE)	≤ 1.2 kV (at I_n)
Residual voltage (N-PE)	≤ 0.8 kV (at 10 kA)
Residual voltage (N-PE)	≤ 0.5 kV (at 5 kA)
Residual voltage (N-PE)	≤ 0.3 kV (at 3 kA)
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Max. required backup fuse with branch wiring	(Not required)
Max. required backup fuse with V-type through wiring	(Not required)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA

Connection, protective circuit

Connection name	PE conductor connection
Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	2.5 mm ²
Conductor cross section stranded max.	16 mm ²
Conductor cross section solid min.	2.5 mm ²
Conductor cross section solid max.	25 mm ²
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	4
Connection name	Connection protective circuit
Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	1 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	1 mm ²
Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	18
Conductor cross section AWG/kcmil max	2

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Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	MC 1,5/3
Screw thread	M2
Tightening torque	0.25 Nm
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
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U _{max} AC	250 V AC
Maximum operating voltage U _{max} DC	250 V DC
Max. operating current I _{max}	2 A AC
Max. operating current I _{max}	50 mA DC

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
Standards/regulations	EN 61643-11 2002
Standards/regulations	IEC 60364-4-443
Standards/regulations	IEC 60364-5-534

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
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classifications

UNSPSC

UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

approvals

KEMA-KEUR / VDE Zeichengenehmigung / ÖVE / GOST / CCA / IEC EE CB Scheme /

Approval details

KEMA-KEUR 

VDE Zeichengenehmigung 

ÖVE 

GOST 

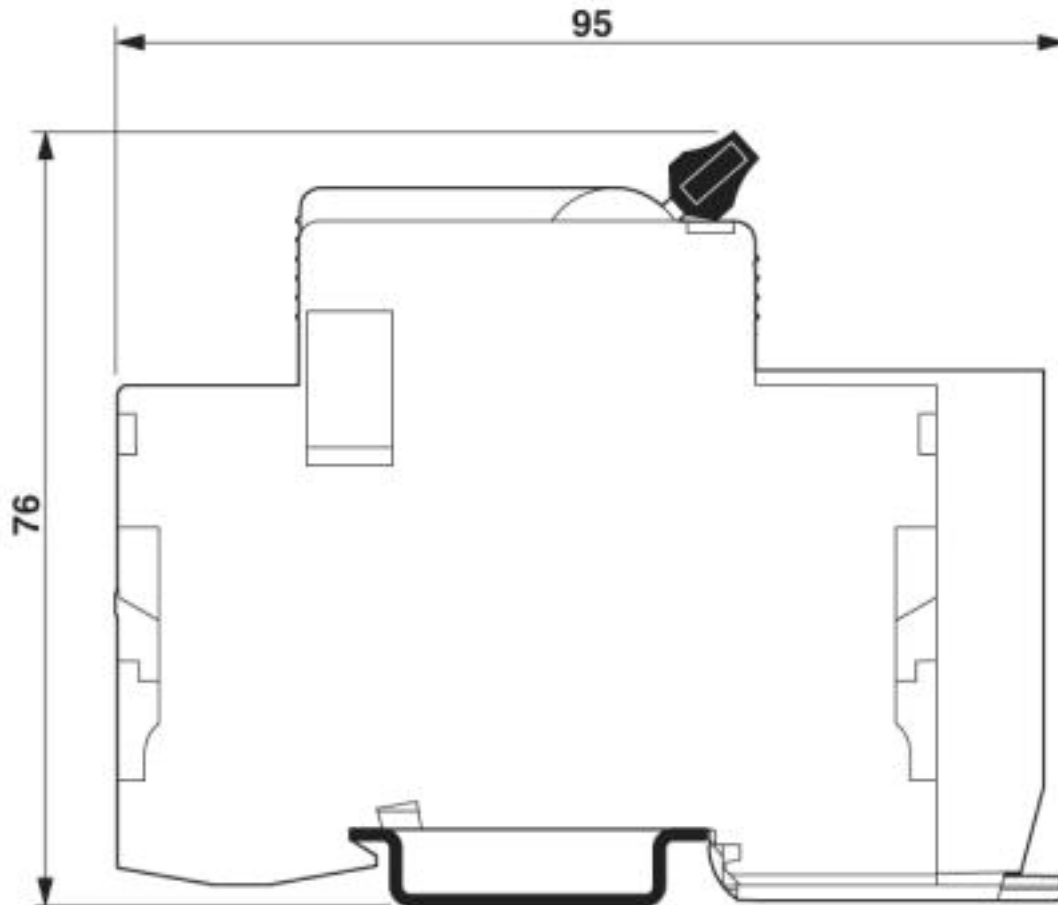
CCA

IECEE CB Scheme 

Drawings

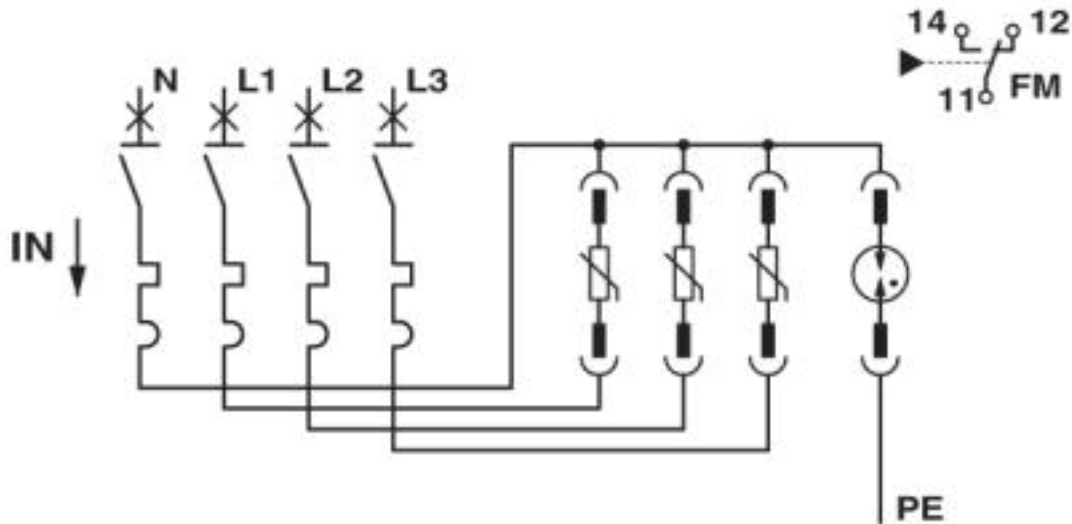
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Dimensioned drawing



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Circuit diagram



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