

Type 2 surge protection device - VAL-CP-MOSO 60-3S-FM - 2804403

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Combination of type 2 surge protection and arrester backup fuse, with arrester monitoring, in combination with a status indicator and remote indication contact. Design: 5-conductor system (L1, L2, L3, N, PE), mounting on 60 mm system technology (power rail system)

Product Features

- ✓ Plugs can be checked with CHECKMASTER
- ✓ For 60 mm system technology
- ✓ Tool-free mounting on 5 and 10 mm busbars
- ✓ Multi-channel type 2 surge arresters and integrated arrester backup fuses
- ✓ Signaling to monitoring systems via remote indication contact in the event of an error
- ✓ Surge-proof arrester backup fuse tailored to type 2 arresters
- ✓ Type 2 consistent plug-in surge arresters
- ✓ Disconnect device on each individual plug
- ✓ Optical, mechanical status indication for the individual arresters



Key commercial data

package_quantity	1
GTIN	4046356317825

Technical data

Dimensions

Height	220 mm
Width	54 mm
Depth	110 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C

General

Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	light gray

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Technical data

General

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	IEC 61643-1
Mounting type	60 mm system technology (power rail)
Design	60 mm system technology
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)
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 / L-N)
U_T (TOV-safe)	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz
Nominal frequency f_N	60 Hz
Residual current I_{PE}	$\leq 1 \mu A$
Standby power consumption P_c	$\leq 140 \text{ mW}$
Max. discharge current I_{max} (8/20) μs maximum (L-N)	75 kA (all channels)
Max. discharge current I_{max} (8/20) μs maximum (L-N)	25 kA (per channel)
Max. discharge current I_{max} (8/20) μs maximum (N-PE)	40 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 (per channel)
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)	$\leq 1.5 \text{ kV}$
Voltage protection level U_P (L-N)	$\leq 2.5 \text{ kV}$
Voltage protection level U_P (N-PE)	$\leq 1.5 \text{ kV}$
Residual voltage (L-N)	$\leq 2.1 \text{ kV}$
Residual voltage (L-N)	$\leq 1.9 \text{ kV}$ (at 10 kA)
Residual voltage (L-N)	$\leq 1.8 \text{ kV}$ (at 5 kA)
Residual voltage (L-N)	$\leq 1.7 \text{ kV}$ (at 3 kA)
Residual voltage (L-PE)	$\leq 2.3 \text{ kV}$
Residual voltage (L-PE)	$\leq 2 \text{ kV}$ (at 10 kA)
Residual voltage (L-PE)	$\leq 1.9 \text{ kV}$ (at 5 kA)
Residual voltage (L-PE)	$\leq 1.8 \text{ kV}$ (at 3 kA)
Residual voltage (N-PE)	$\leq 0.5 \text{ kV}$ (at I_n)
Residual voltage (N-PE)	$\leq 0.3 \text{ kV}$ (at 10 kA)

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Protective circuit

Residual voltage (N-PE)	≤ 0.25 kV (at 5 kA)
Residual voltage (N-PE)	≤ 0.2 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)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA

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, min	4.5 Nm
Stripping length	16 mm
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

N 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, min	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

Phase conductor connection

Connection name	Phase conductor connection
Connection method	60 mm power rail system

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Technical data

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT contact
Connection method	Pluggable screw connection
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	125 V DC
Max. operating current I _{max}	1 A AC (inductive)
Max. operating current I _{max}	1 A AC (ohmic)
Max. operating current I _{max}	30 mA DC (inductive)
Max. operating current I _{max}	0.2 A DC (ohmic)

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
Standards/regulations	EN 61643-11 2002
Standards/regulations	EN 61643-11/A11 2007

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

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classifications

UNSPSC

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

approvals

GOST /

Approval details



accessories

Terminal marking

ZBF 12:UNBEDRUCKT - 0809735



ZBFM 5/WH:UNBEDRUCKT - 0803595



Marker pen

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accessories

X-PEN 0,35 - 0811228



accessories

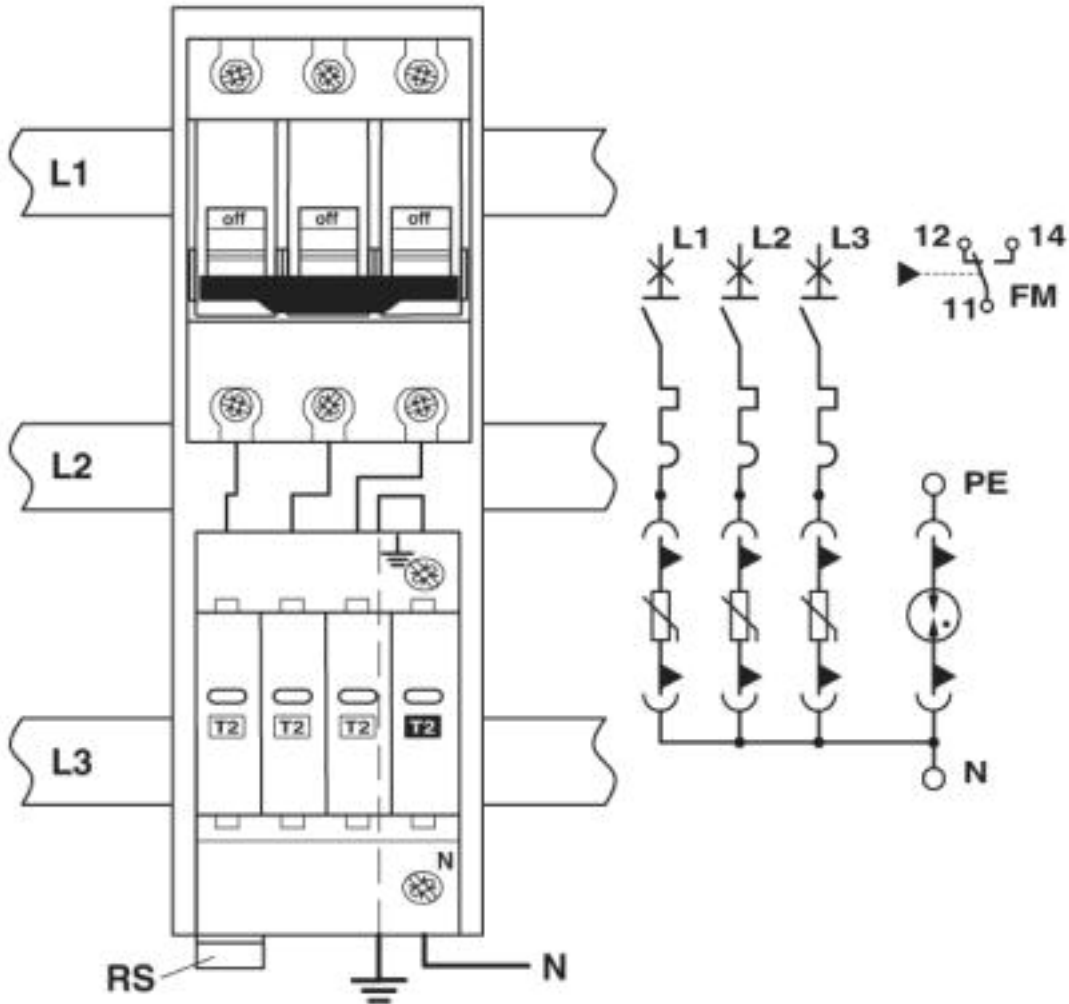
ZBF 12:SO/CMS - 0810038



Drawings

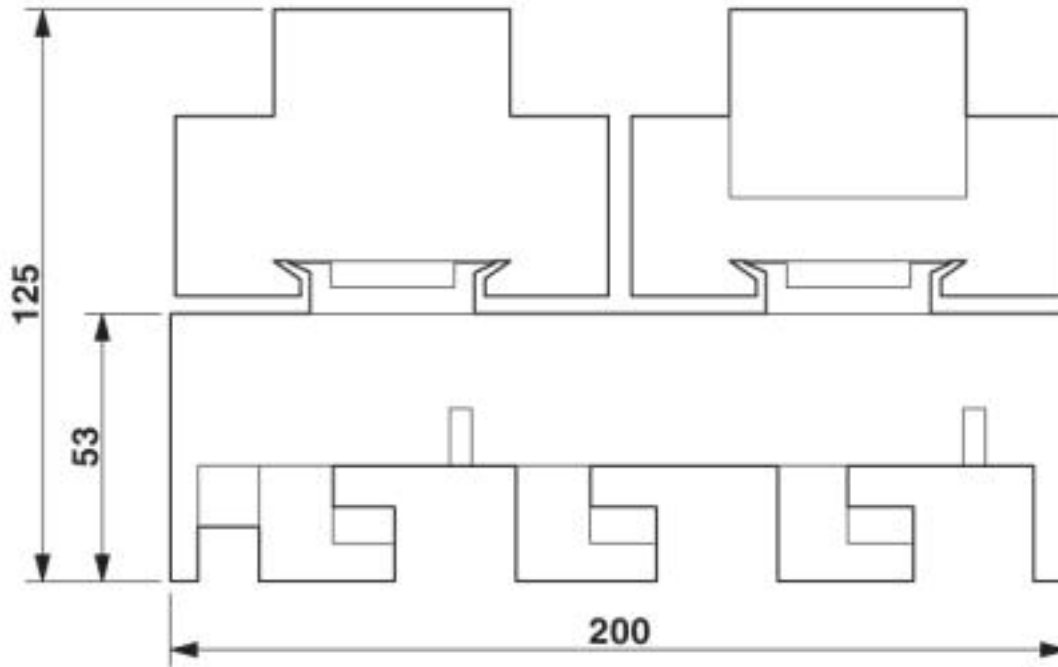
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Application drawing



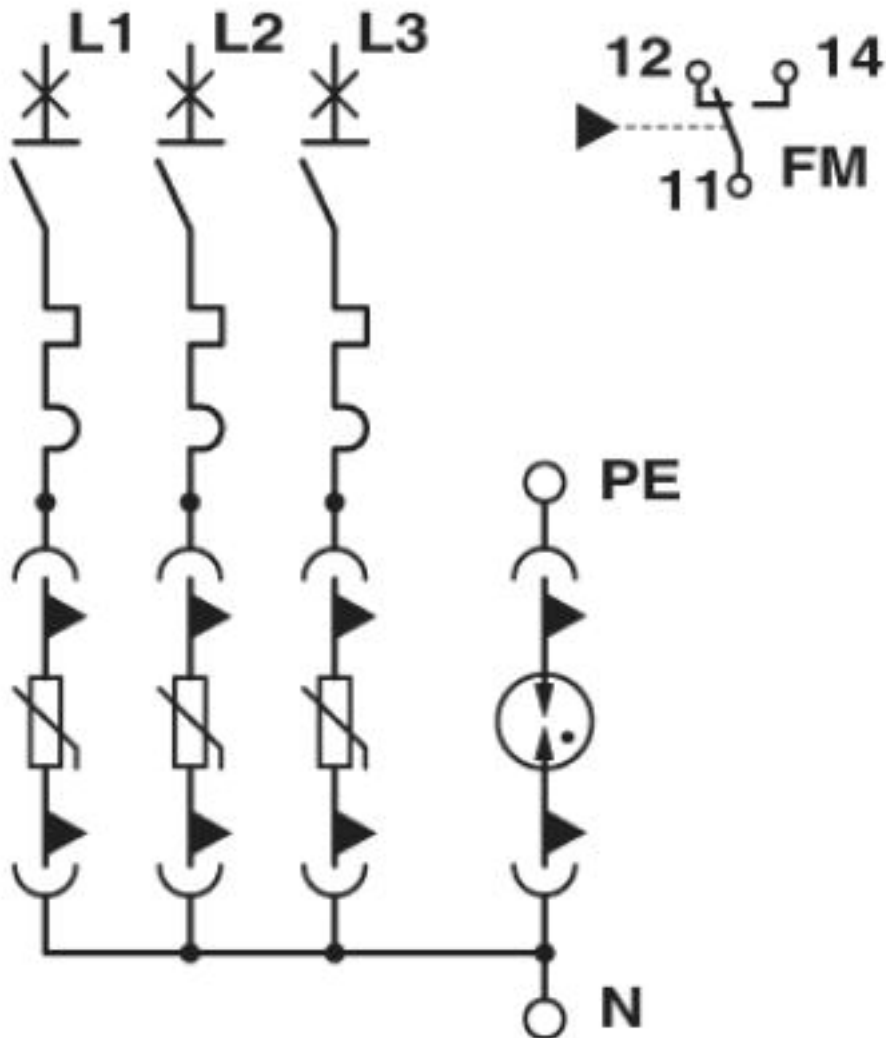
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Dimensioned drawing



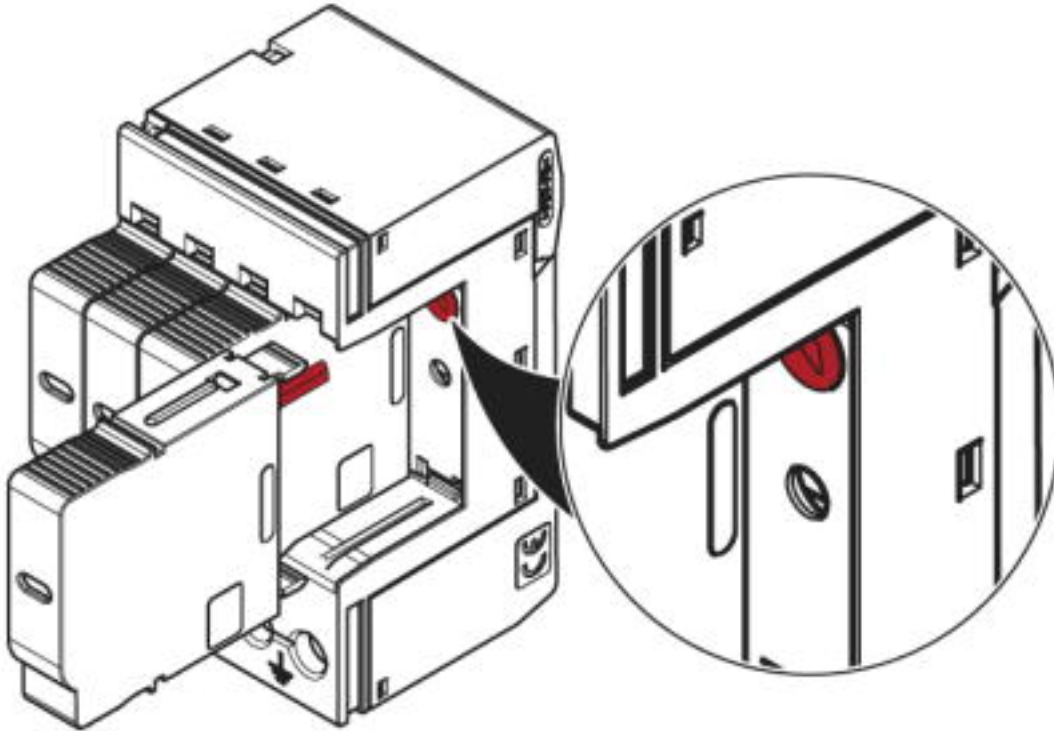
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Circuit diagram



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Schematic diagram



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