

## Type 2 surge arrester - VAL-CP-RCD-3S/40/0.03 - 2882802

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Combination of pluggable type 2 arrester and residual current circuit breaker (RCD switch) for 3-phase power supply networks (5-conductor system: L1, L2, L3,N, PE).

### Product Features

- ✓ Combination of type 2 surge arrester and RCD residual current device
- ✓ Personal protection and device protection in a single device
- ✓ Residual current device is not triggered by magnetic influences caused by discharge currents in the type 2 arrester
- ✓ Optical, mechanical status indication for all protective plugs
- ✓ Disconnect device on each individual plug
- ✓ For 5-conductor systems; L1, L2, L3, N, PE
- ✓ Type 2 consistent plug-in surge arresters



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	840.0 GRM
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	90 mm
Width	121 mm
Depth	76 mm

#### Ambient conditions

Degree of protection	IP20
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### Technical data

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 40 °C
Ambient temperature (storage/transport)	-40 °C ... 60 °C

#### General

IEC power supply system	TT
	TN-S
Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	light gray
Standards for air and creepage distances	IEC 61643-1
	IEC 60664-1
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	Optical
Direction of action	3L-N & N-PE

#### Protective circuit

IEC test classification	II
	T2
EN type	T2
Nominal voltage $U_N$	240 V AC (230/400 V AC ... 240/415 V AC)
	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)
	1200 V AC (200 ms / N-PE)
Nominal frequency $f_N$	50 Hz
	60 Hz
Rated load current $I_L$	40 A
Residual current $I_{PE}$	$\leq 1 \mu A$
Standby power consumption $P_C$	$\leq 90 \text{ mVA}$
Max. discharge current $I_{max}$ (8/20) $\mu s$ maximum (L-N)	90 kA (all channels)
	30 kA
Max. discharge current $I_{max}$ (8/20) $\mu s$ maximum (N-PE)	30 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (L-N)	60 kA (all channels)
	20 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (N-PE)	20 kA

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#### Protective circuit

Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (N-PE)	$\leq 1.7$ kV
Voltage protection level $U_p$ (L-N)	$\leq 2$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 2$ kV
Residual voltage (L-N)	$\leq 1.8$ kV (at $I_n$ )
	$\leq 1.5$ kV (at 10 kA)
	$\leq 1.2$ kV (at 5 kA)
	$\leq 1$ kV (at 3 kA)
Residual voltage (L-PE)	$\leq 2.5$ kV (at $I_n$ )
	$\leq 2$ kV (at 10 kA)
	$\leq 1.4$ kV (at 5 kA)
	$\leq 1.1$ kV (at 3 kA)
Residual voltage (N-PE)	$\leq 0.7$ kV (at $I_n$ )
	$\leq 0.4$ kV (at 10 kA)
	$\leq 0.3$ kV (at 5 kA)
	$\leq 0.2$ kV (at 3 kA)
Response time (L-N)	$\leq 25$ ns
Response time (L-PE)	$\leq 100$ ns
Response time (N-PE)	$\leq 100$ ns

#### Connection, protective circuit

Connection name	Protective ground 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.	4 mm <sup>2</sup>
Conductor cross section stranded max.	16 mm <sup>2</sup>
Conductor cross section solid min.	4 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
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	Biconnect screw terminal block

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### Technical data

#### Connection, protective circuit

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.	4 mm <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	4 mm <sup>2</sup>
Conductor cross section solid max.	25 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	2

#### Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11 2002
	IEC 61008-1 2004
	IEC 61008-1/A11 2007
	IEC 61008-2-1 2000
	IEC 60947-3 2005

#### RCD switch

Dimensioning error current	30 mA
Rated making and breaking capacity $I_m$	1.5 kA
Rated residual making and breaking capacity $I_{\Delta m}$	2.5 kA
Surge withstand capability	6 kV (1.2/50 $\mu$ s)
Immunity to short-circuiting $I_{nc}$	10 kA (Back-up fuse: 63 A)
Tripping time for $I_{\Delta n}$	$\leq 300$ ms
Tripping time for $5xI_{\Delta n}$	$\leq 40$ ms
Cycles, max.	20000
Utilization category	AC 23 A
Class	A
Insulation voltage $U_i$	440 V

### Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801

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### Classifications

#### eCl@ss

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

### Approvals

#### Approvals

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#### Approvals

KEMA-KEUR / VDE Zeichengenehmigung / ÖVE / GOST / CCA / IECCEB Scheme

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#### Ex Approvals

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#### Approvals submitted

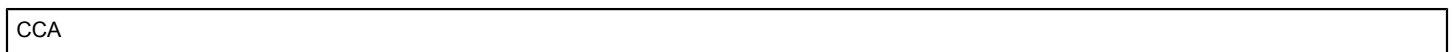
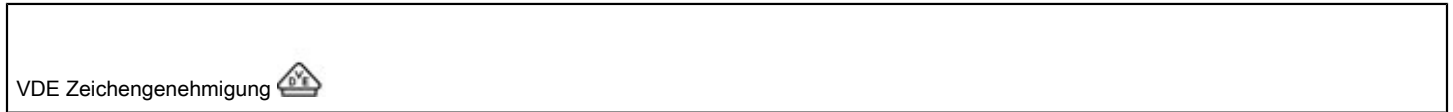
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#### Approval details

KEMA-KEUR 
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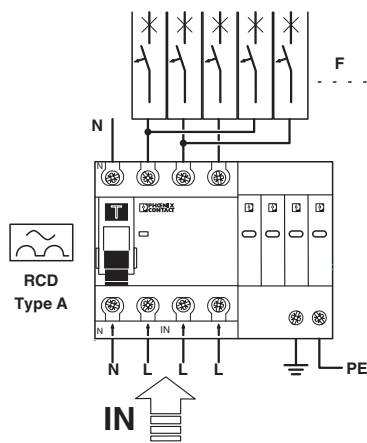
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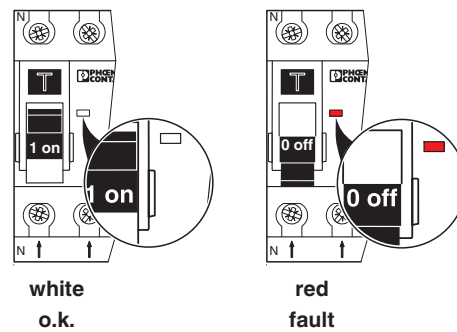


## Drawings

Connection diagram

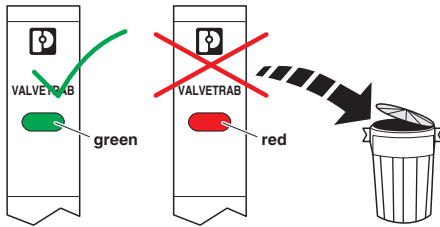


Functional drawing

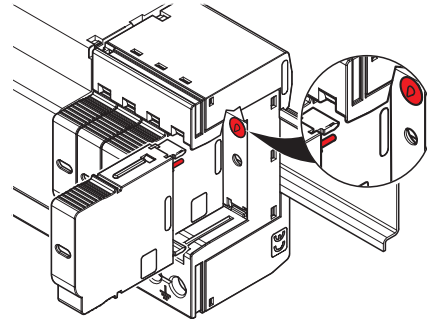


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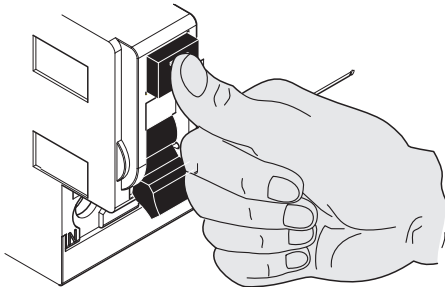
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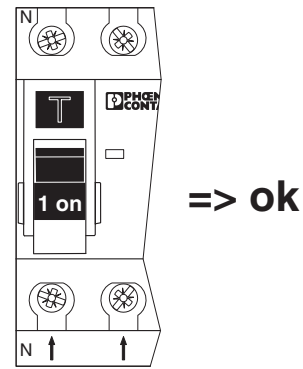
Functional drawing



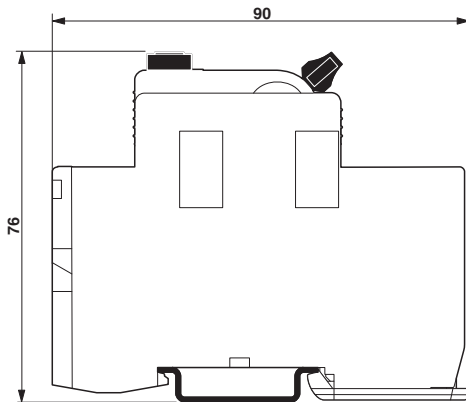
Functional drawing



Functional drawing



Dimensioned drawing



Circuit diagram

