

Type 2 surge arrester - VAL-CP-3S-350/O - 2881010

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Plug-in surge arrester for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE).

Product Features

- ✓ With or without floating remote indication contact
- ✓ Plugs can be checked with CHECKMASTER
- ✓ High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Use of varistors that are free of leakage current
- ✓ Disconnect device on each individual plug
- ✓ Modular arrester blocks with ultra-narrow design
- ✓ Type 2 consistent plug-in surge arresters
- ✓ Mechanical coding of all slots
- ✓



Key commercial data

Packing unit	1 pc
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	90 mm
Width	49.2 mm
Depth	71.5 mm

Ambient conditions

Degree of protection	IP20
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Ambient conditions

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)	30g (half sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TT
	TN-S
Number of ports	One
SPD design	Combination type
Mode of protection	L-PEN
	N-PE
Mounting type	DIN rail: 35 mm
Color	gray/blue
	black
Housing material	PBT-FR
Pollution degree	2
Inflammability class according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	optical

Protective circuit

Nominal voltage U_N	240/415 V AC (TN-S)
	240/415 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	350 V AC
Maximum continuous voltage U_C (N-PE)	264 V AC
Rated load current I_L	40 A (Biconnect M4 fork-type cable lug 6 mm ²)
	63 A (TWIN ferrule 2 x 10 mm ²)
Residual current I_{PE}	≤ 1 µA

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Protective circuit

Standby power consumption P_C	≤ 300 mVA
Nominal discharge current I_n (8/20) μ s (L-N)	20 kA
Nominal discharge current I_n (8/20) μ s (N-PE)	20 kA
Maximum discharge current I_{max} (8/20) μ s (L-N)	40 kA
Maximum discharge current I_{max} (8/20) μ s (N-PE)	40 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A (264 V AC)
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-N)	≤ 1.5 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage U_{res} (L-N)	≤ 1.5 kV (at I_n)
	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 4 kA)
	≤ 1 kV (at 2 kA)
Residual voltage U_{res} (N-PE)	≤ 0.5 kV (at I_n)
	≤ 0.5 kV (at 10 kA)
	≤ 0.5 kV (at 5 kA)
	≤ 0.5 kV (at 4 kA)
	≤ 0.5 kV (at 2 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) μ s (N-PE)	≤ 1.5 kV
TOV behavior at U_T (L-N)	415 V AC (5 s / withstand mode)
	440 V AC (120 min / safe failure mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_A (L-N)	≤ 25 ns
Response time t_A (N-PE)	≤ 100 ns
Max. backup fuse with branch wiring	315 A AC (gG)
Max. backup fuse with V-type through wiring	40 A AC (gG / Biconnect M4 fork-type cable lug, 6 mm ²)
	63 A AC (gG / TWIN ferrule 2x 10mm ²)

Connection data

Connection method	Screw connection
Conductor cross section flexible min.	2.5 mm ²
Conductor cross section flexible max.	16 mm ²
Conductor cross section solid min.	2.5 mm ²
Conductor cross section solid max.	25 mm ²
AWG conductor cross section	12 ... 4
	14 ... 2 (Solid - UL)

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Connection data

	14 ... 4 (Stranded - UL)
Screw thread	M5
Tightening torque	4.5 Nm
	40 lb _f -in. ... 50 lb _f -in. (UL)
Stripping length	16 mm

UL specifications

UL class	Type 4 SPD for Type 2 applications
Maximum continuous operating voltage MCOV (L-L)	700 V AC
Maximum continuous operating voltage MCOV (L-N)	350 V AC
Maximum continuous operating voltage MCOV (L-G)	614 V AC
Maximum continuous operating voltage MCOV (N-G)	264 V AC
Nom. voltage	240/415 V AC
Mode of protection	L-L
	L-N
	L-G
	N-G
Power distribution system	3Y
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	2 kV
Voltage protection rating VPR (L-N)	1.2 kV
Voltage protection rating VPR (L-G)	1.8 kV
Voltage protection rating VPR (N-G)	1.2 kV
Nominal discharge current I_n (L-L)	20 kA
Nominal discharge current I_n (L-N)	20 kA
Nominal discharge current I_n (L-G)	20 kA
Nominal discharge current I_n (N-G)	20 kA
Follow current (N-G)	200 A (264 V AC)

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

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Classifications

eCl@ss

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

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UL Recognized / KEMA-KEUR / cUL Recognized / GL / IECCE CB Scheme / CCA / EAC / EAC / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

UL Recognized 

KEMA-KEUR 

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Approvals

cUL Recognized 

GL

IECEE CB Scheme 

CCA

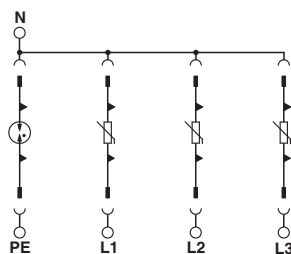
EAC

EAC

cULus Recognized 

Drawings

Circuit diagram



Dimensional drawing

