


**VAL-CP-2S-350/O**

Order No.: 2881049

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Pluggable type 2 arrester (surge arrester) for 2-phase current supply networks with separate N and PE (4-conductor system: L1, L2, N, PE). Overall width: 36 mm.

Commercial data	
GTIN (EAN)	 4 046356 049269
Note	Made-to-order
sales group	J020
Pack	1 pcs.
Customs tariff	85363030
Catalog page information	Page 33 (TT-2011)

## Product notes

WEEE/RoHS-compliant since:  
06/20/2006

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Technical data	
<b>Standards</b>	
Housing material	PBT
Inflammability class acc. to UL 94	V0
Color	gray

Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10
	IEC 61643-1
Surge voltage category	III
Pollution degree	2
Degree of protection	IP20
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	3
Ambient temperature (operation)	-40 °C ... 80 °C
Message: Surge protection fault	Optical
Direction of action	2L-N & N-PE
Width	37.25 mm
Height	70.00 mm
Length	89.80 mm
<b>Protective circuit</b>	
IEC category	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)
Arrester rated voltage $U_C$ (L-N)	350 V AC
Arrester rated voltage $U_C$ (N-PE)	264 V AC
$U_T$ (TOV-proof)	415 V AC (5 sec.)
	1200 V AC (200 ms / N-PE)
Nominal frequency $f_N$	50 Hz
	60 Hz
Nominal load current $I_L$	40 A (biconnect, 6 mm <sup>2</sup> )
	63 A (2 x 10 mm <sup>2</sup> )
Ground conductor current $I_{PE}$	≤ 1 μA
Standby power consumption $P_c$	≤ 3.5 mW
Power consumption without load $P_c$	≤ 3.5 mW
Max. discharge surge current $I_{max}$ (8/20) μs maximum (L-N)	80 kA (all channels)

Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (N-PE)	40 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (L-N)	40 kA (all channels)
	20 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (N-PE)	20 kA
Impulse operate voltage at 6 kV (1.2/50) $\mu$ s (N-PE)	$\leq 1.5$ kV
Protection level $U_p$ (L-N)	$\leq 1.4$ kV
Protection level $U_P$ (N-PE)	$\leq 1.5$ kV
Residual voltage (L-N)	$\leq 1.4$ kV (at $I_n$ )
	$\leq 1.2$ kV (at 10 kA)
	$\leq 1.1$ kV (at 5 kA)
	$\leq 1$ kV (at 3 kA)
Residual voltage (L-PE)	$\leq 1.6$ kV (at $I_n$ )
	$\leq 1.3$ kV (at 10 kA)
	$\leq 1.2$ kV (at 5 kA)
	$\leq 1.1$ kV (at 3 kA)
Residual voltage (N-PE)	$\leq 0.5$ kV (at $I_n$ )
	$\leq 0.3$ kV (at 10 kA)
	$\leq 0.25$ kV (at 5 kA)
	$\leq 0.2$ kV (at 3 kA)
Clamping voltage SVR (L-N)	$\leq 0.9$ kV
Clamping voltage SVR (L-PE)	$\leq 1.2$ kV
Clamping voltage SVR (N-PE)	$\leq 1.2$ kV
Clamping voltage ringwave (L-N)	$\leq 1.2$ kV (category C3 20 kV/10 kA)
	$\leq 1.1$ kV (category C2 10 kV/5 kA)
	$\leq 1$ kV (category B3/C1 6 kV/3 kA)
Clamping voltage ringwave (L-PE)	$\leq 1.3$ kV (category C3 20 kV/10 kA)
	$\leq 1.2$ kV (category C2 10 kV/5 kA)
	$\leq 1.1$ kV (category B3/C1 6 kV/3 kA)
Clamping voltage ringwave (N-PE)	$\leq 1.5$ kV (category C3 20 kV/10 kA)
	$\leq 1.4$ kV (category C2 10 kV/5 kA)
	$\leq 1.2$ kV (category B3/C1 6 kV/3 kA)
Response time (L-N)	$\leq 25$ ns
Response time (L-PE)	$\leq 100$ ns
Response time (N-PE)	$\leq 100$ ns

Max. required backup fuse with branch wiring	125 A (gL/gG)
Max. required backup fuse with V-type through wiring	40 A (gL/gG)
Short-circuit resistance $I_p$ with max. backup fuse (effective)	25 kA
Follow current quenching capacity $I_f$ (N-PE)	100 A

**Connection, protective circuit**

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 <sup>2</sup>
Conductor cross section stranded max.	16 mm <sup>2</sup>
Conductor cross section solid min.	2.5 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	4

**Standards**

Standards/regulations	IEC 61643-1 2005
	DIN EN 61643-11 2002
	DIN EN 61643-11/A11 2007
	IEEE C62.1 / C62.34 / C62.45
	UL 1449

**Certificates / Approvals**



Certification

CB, CUL, GL, GOST, KEMA, UL

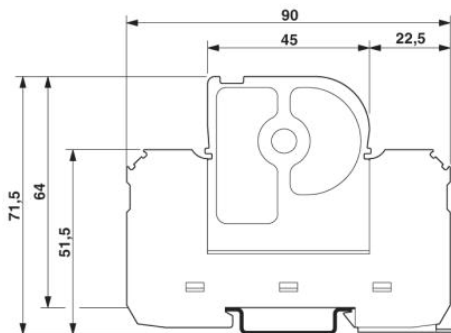
**Accessories**

Item	Designation	Description
<b>Bridges</b>		
2880684	MPB SET VAL-CP-3S	Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue.

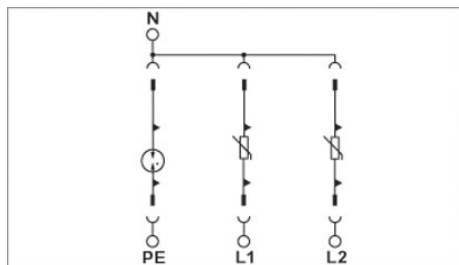
<b>Marking</b>		
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0809735	ZBF 12:UNBEDRUCKT	Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer
0803595	ZBFM 5/WH:UNBEDRUCKT	Zack marker sheet, flat, unprinted: 120-section, 10 strips à 12 markers, sufficient for 120 terminal blocks, for all terminal blocks, pitch 5.2 mm, labeling with M-PEN or CMS system, color: white

**Diagrams/Drawings**

Dimensioned drawing



Circuit diagram



**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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