

# VAL-CP-2S-175

Order No.: 2859495




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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), with remote indication contact. Overall width: 36 mm.



## Commercial data

GTIN (EAN)	 4 046356 045490
sales group	J020
Pack	1 pcs.
Customs tariff	85369010
Catalog page information	Page 27 (TT-2009)

## Product notes

WEEE/RoHS-compliant since:  
06/30/2006



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## Technical data

### Standards

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 61643-11
	UL 1449
	IEEE C62.1
	IEEE C62.45
	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, remote indicator contact
Direction of action	2L-N & N-PE
Width	37.25 mm
Height	70.00 mm
Length	98.50 mm

**Protective circuit**

IEC category	II
	T2
EN type	T2
Nominal voltage $U_N$	120 V AC
Arrester rated voltage $U_C$ (L-N)	175 V AC
Arrester rated voltage $U_C$ (N-PE)	150 V AC
$U_T$ (TOV-proof)	208 V AC (5 s)
	1200 V AC (200 ms / N-PE)
$U_T$ (TOV-safe)	240 V AC (5 s)
Nominal frequency $f_N$	50 Hz
	60 Hz
Nominal load current $I_L$	40 A (40 A ... 63 A)
Ground conductor current $I_{PE}$	$\leq 1 \mu\text{A}$
Standby power consumption $P_C$	$\leq 1.75 \text{ mW}$

Max. discharge surge current $I_{max}$ (8/20) $\mu s$ 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)
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)	$\leq 950$ V
Protection level $U_p$ (L-N)	$\leq 850$ V
Protection level $U_p$ (N-PE)	$\leq 950$ V
Residual voltage (L-N)	$\leq 600$ V (at 5 kA)
Residual voltage (L-PE)	$\leq 700$ V (at 5 kA)
Residual voltage (N-PE)	$\leq 200$ V (at 5 kA)
Clamping voltage SVR (L-N)	$\leq 500$ V
Clamping voltage SVR (L-PE)	$\leq 1$ kV
Clamping voltage SVR (N-PE)	$\leq 800$ V
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
Short-circuit current self-quenching	100 A (N-PE)

**Connection, protective circuit**

Type of connection	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

**Remote indicator contact**

Connection name	Remote fault indicator contact
Switching function	PDT contact
Type of connection	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max</sub> AC	250 V AC
Maximum operating voltage U <sub>max</sub> DC	125 V DC
Max. operating current I <sub>max</sub>	1 A AC (inductive)
	1 A AC (ohmic)
	30 mA DC (inductive)
	200 mA DC (ohmic)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

**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, GOST, KEMA, UL

### Accessories

Item	Designation	Description
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### Bridges

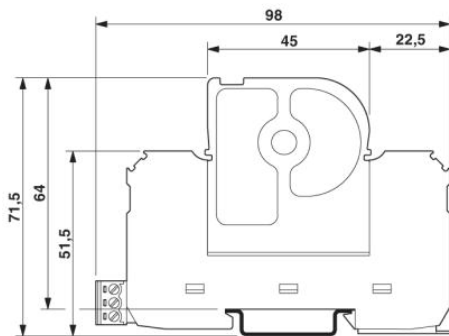
2880684	MPB SET VAL-CP-3S	Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue.
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### Marking

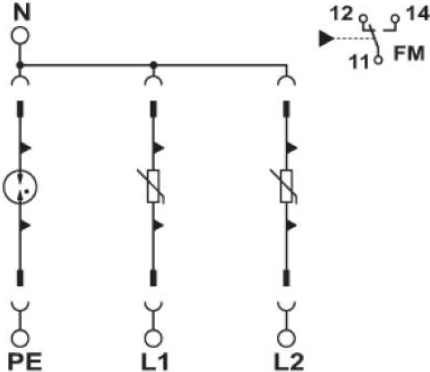
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0809735	ZBF 12:UNBEDRUCKT	Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer
0803595	ZBFM 5/WH:UNBEDRUCKT	Zack marker sheet, flat, unprinted: 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 Deutschland GmbH  
Flachmarktstr. 8  
32825 Blomberg, Germany  
Phone +49 5235 3 12000  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.de>



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