

# Type 1+2+3 combined lightning current and surge arresters - FLT-SEC-ZP2-3S-255/7.5



1168940

<https://www.phoenixcontact.com/gb/products/1168940>

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Lightning current arrester, in acc. with type 1/class I, for 3-phase power supply networks, with separate N and PE (L1, L2, L3, PE, N). Suitable for equipotential bonding in systems without external lightning protection with and without overhead line supply. For mounting on 40 mm busbar systems.

## Your advantages

- Universal use – fits into every meter cabinet, regardless of manufacturer, with a narrow overall width of just 27 mm
- Installation in the unmetred area with application rule VDE-AR-N 4100 compliance – confirmed through VDE approval
- Mounts securely and without tools through a universal interlock on a 5 mm and 10 mm rail thickness
- Integration into building technology systems with optional remote signaling module

## Commercial Data

Item number	1168940
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL1181
Product Key	CL1181
GTIN	4063151187316
Weight per Piece (including packing)	657.1 g
Weight per Piece (excluding packing)	589 g
Customs tariff number	85363090
Country of origin	DE

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## Technical Data

### Product properties

IEC test classification	I + II + III T1 + T2 + T3
EN type	T1 + T2 + T3
IEC power supply system	TN-S TT
Type	Busbar module, one-piece
Product type	Combination type
Number of positions	4
Surge protection fault message	visual, remote signaling via optional module

### Insulation characteristics

Overvoltage category	IV
Pollution degree	2

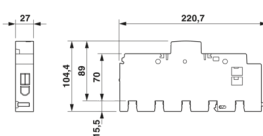
### Electrical properties

Nominal frequency $f_N$	50 Hz (60 Hz)
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### Connection data

Connection method	Screw connection
Screw thread	M6
Tightening torque	2.5 Nm
Stripping length	18 mm
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section solid	2.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>

### Dimensions

Dimensional drawing	
Width	27 mm 47 mm (with spacer lid) 52 mm (with spacer lid)
Height	220.7 mm
Depth	104.4 mm
Horizontal pitch	1.5 Div.

### Material specifications

Color	light grey RAL 7035
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Flammability rating according to UL 94	V-0
CTI value of material	175
Insulating material	PA 6.6
	PC
Material group	IIIa
Housing material	PA 6.6
	PC

## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	3L-N & N-PE
Nominal voltage $U_N$	230/400 V AC $\pm 10\%$ (TN-S)
	230/400 V AC $\pm 10\%$ (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	255 V AC
Residual current $I_{PE}$	$\leq 5 \mu A$
Nominal discharge current $I_n$ (8/20) $\mu s$ (L-N)	20 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (L-PE)	20 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (N-PE)	80 kA
Combination wave $U_{OC}$	20 kV
Impulse discharge current (10/350) $\mu s$ (L-N), charge	3.75 As
Impulse discharge current (10/350) $\mu s$ (L-N), specific energy	15 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu s$ (L-N), peak current value $I_{imp}$	7.5 kA
Impulse discharge current (10/350) $\mu s$ (L-PE), charge	3.75 As
Impulse discharge current (10/350) $\mu s$ (L-PE), specific energy	15 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu s$ (L-PE), peak current value $I_{imp}$	7.5 kA
Impulse discharge current (10/350) $\mu s$ (N-PE), charge	15 As
Impulse discharge current (10/350) $\mu s$ (N-PE), specific energy	225 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu s$ (N-PE), peak current value $I_{imp}$	30 kA
Total discharge current $I_{total}$ (10/350) $\mu s$	30 kA
Follow current quenching capacity $I_{fi}$ (L-N)	25 kA
Follow current interrupt rating $I_{fi}$ (L-PE)	25 kA
Follow current interrupt rating $I_{fi}$ (N-PE)	100 A
Short-circuit current rating $I_{SCCR}$	25 kA

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Voltage protection level $U_p$ (L-N)	$\leq 1.5$ kV
Voltage protection level $U_p$ (L-PE)	$\leq 2$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.5$ kV
TOV behavior at $U_T$ (L-N)	442 V AC (120 min / withstand mode)
TOV behavior at $U_T$ (L-PE)	442 V AC (120 min / withstand mode) 1455 V AC (200 ms / withstand mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$	$\leq 100$ ns
Max. backup fuse with branch wiring	160 A (gG)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20C (Installed)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 6000$ m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

## Standards and regulations

Standards/specifications	IEC 61643-11
Standards/specifications	EN 61643-11

## Mounting

Mounting type	Busbar 40 mm
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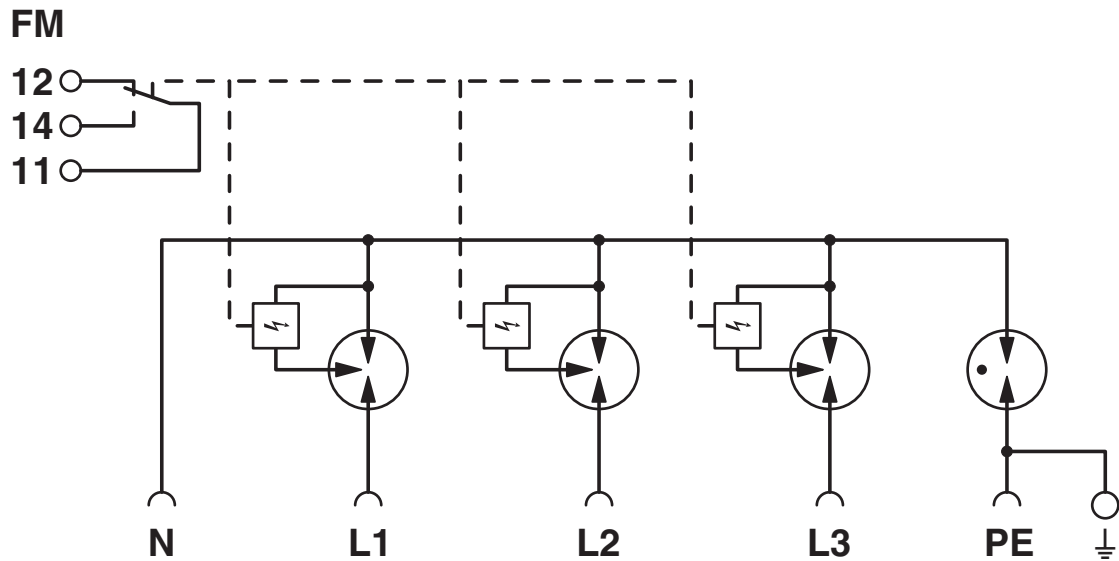
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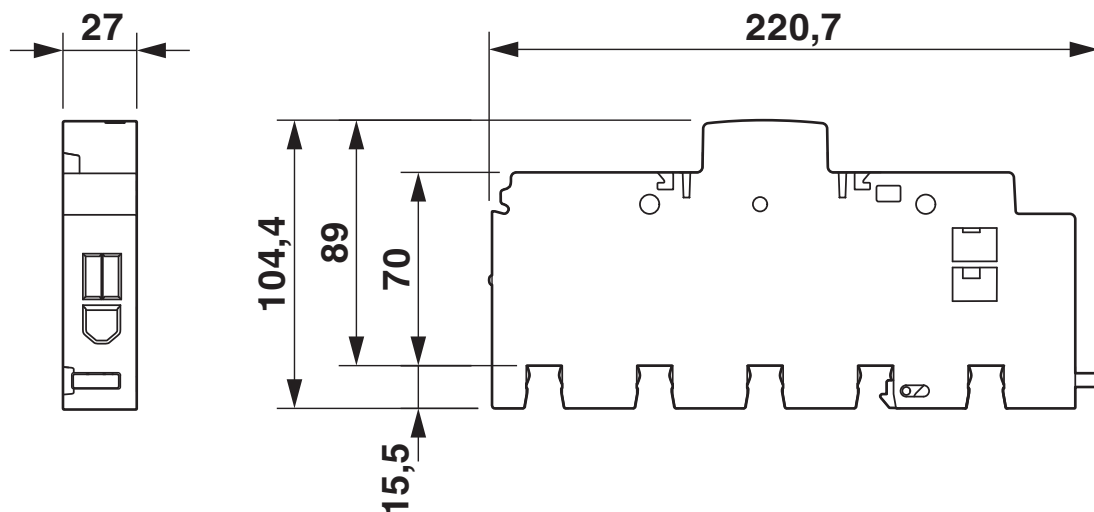
## Drawings

Circuit diagram



The figure shows the product with optional remote signaling "FM-MODULE"

Dimensional drawing

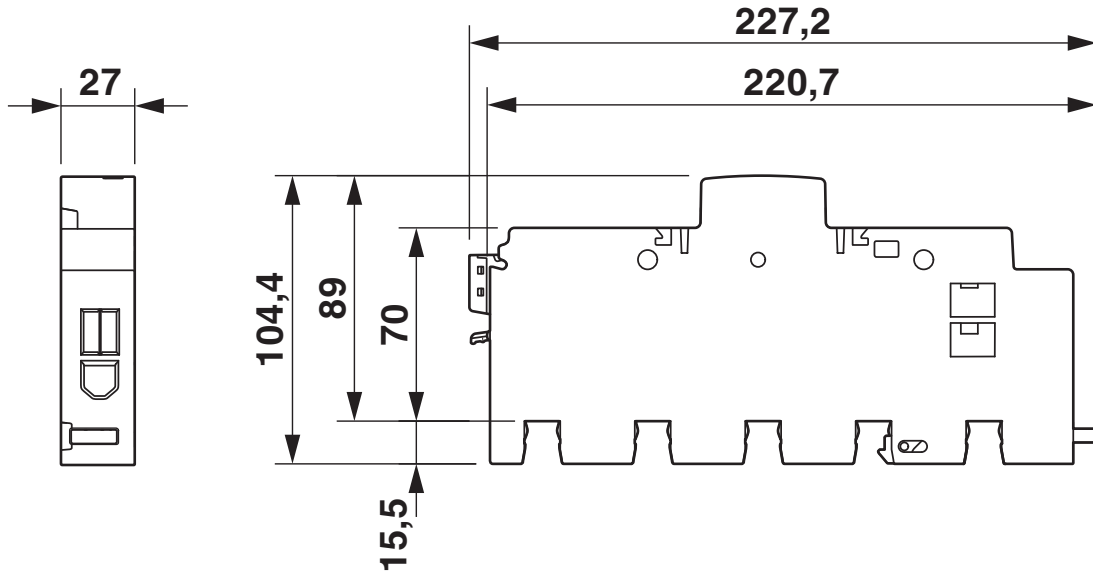


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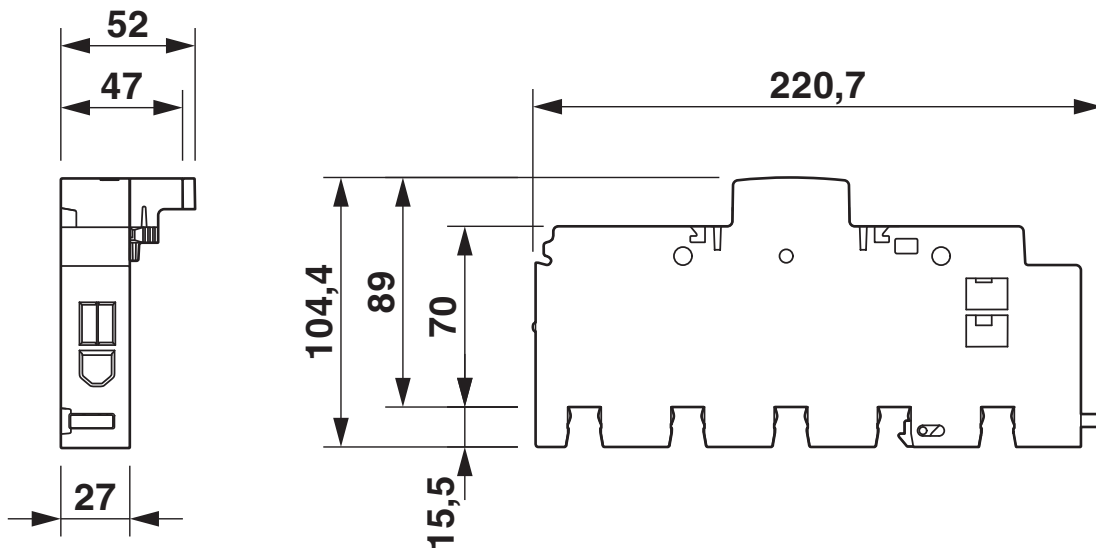
<https://www.phoenixcontact.com/gb/products/1168940>

Dimensional drawing



The figure shows the product with optional remote signaling "FM-MODULE"

Dimensional drawing



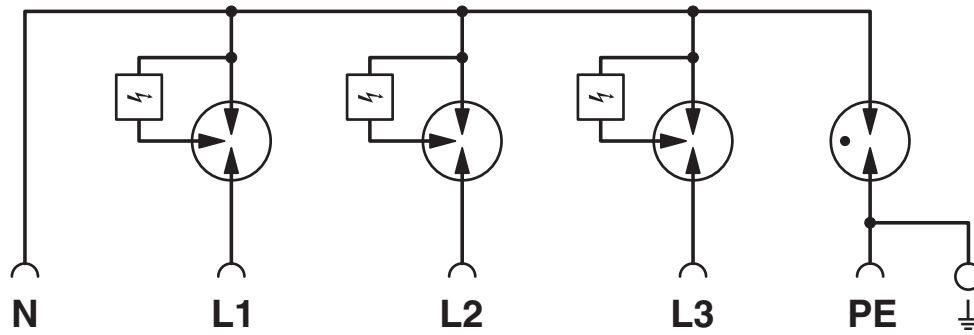
The figure shows the product with included spacer lid

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Circuit diagram



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## Approvals



**IECEE CB Scheme**  
Approval ID: NL-67563

**CCA**

Approval ID: NTR-NL 7853

Nominal Voltage  $U_N$

Nominal Current  $I_N$

Cross Section AWG

Cross Section  $\text{mm}^2$

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**KEMA-KEUR**  
Approval ID: 71-114664



**VDE Zeichengenehmigung**  
Approval ID: 40052444



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## Classifications

### ECLASS

ECLASS-9.0	27130802
ECLASS-10.0.1	27130802
ECLASS-11.0	27130802

### ETIM

ETIM 8.0	EC000381
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### UNSPSC

UNSPSC 21.0	39121600
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## Accessories

### Marker pen

Marker pen - X-PEN 0,35 - 0811228

<https://www.phoenixcontact.com/gb/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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### Label

Label - EML (20XE)R - 0803452

<https://www.phoenixcontact.com/gb/products/0803452>



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

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## Label

Label - EML (20XE)R YE - 0803453

<https://www.phoenixcontact.com/gb/products/0803453>



Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

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## Remote signaling module

Remote signaling module - FLT-SEC-ZP2 FM-MODULE - 1168947

<https://www.phoenixcontact.com/gb/products/1168947>



Optional remote signaling module. Can only be used in the FLT-SEC-ZP2.

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