

# Lightning arrester LightningController MC 125-B/NPE

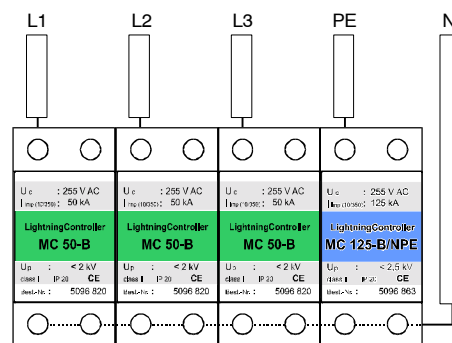


## Operation and fields of application

LightningController MC 125-B/NPE was designed to be used in TN-S, TT and IT systems as a sum current spark gap between the neutral conductor (N) and the protective earth conductor (PE). At the heart of the device there are two partial spark gaps made up of three carbon discs which can handle heavy loads. The precisely defined spacing of the spark gaps is ensured by highly heat-resistant Teflon discs.

The lightning arrester satisfies the preconditions of requirement class B to DIN VDE 0675 Part 6 (Draft 11.89) A1, A2 and of Class I to IEC 61643-1 (02.98). The device is designed to be used between interface 0 to 1 in accordance with the lightning protection zone concept of IEC 61312-1.

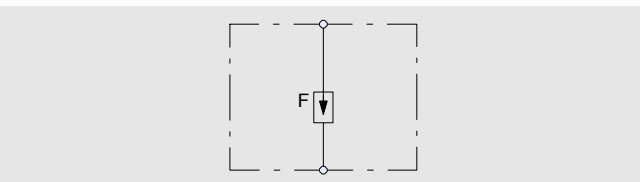
In the lightning protection installation of a building or where power is supplied via an overhead line, the MC 125-B/NPE, combined with LightningController MC 50-B VDE, provides lightning protection potential equalisation.



Circuit for TN-S, TT and IT systems

## Mounting

LightningController MC 125-B/NPE is easy to install, since the dimensions of the housing of the device conform to the space-saving 17.5 mm grid module. The lightning arrester is installed simply by snap-fitting it to the top-hat rail. The LightningController has two terminals each for the N and PE conductors.

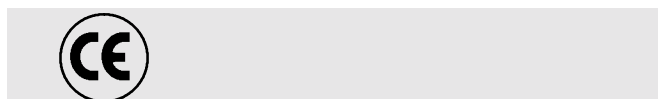


Block diagram of LightningController

## Test marks



## Other marks



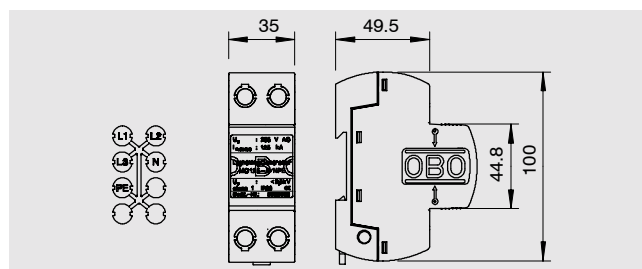
## Technical data

LightningController lightning arrester		MC 125-B/NPE
Type		MC 125-B/NPE
Nominal voltage	$U_N$	230 V / 50-60 Hz
Maximum continuous operating voltage	$U_c$	255 V
Requirement class to DIN VDE 0675, Part 6 (Draft 11.89) A1, A2 to IEC 61643-1		B class I
LPZ		0 → 1
Insulation resistance	$R_{ins}$	> 100 M $\Omega$
Voltage protection level	$U_p$	< 2.5 kV
Response time	$t_A$	< 100 ns
Surge voltage test (10/350) with the lightning parameters set out in IEC 61312-1 (02.95)		
Peak current	$I_{imp}$	125 kA
Charge	Q	62.5 As
Spec. energy	W/R	3.9 MJ/ $\Omega$
Follow-up current quenching capacity at $U_c$	$I_p$	100 A <sub>rms</sub>
Temperature range	$\vartheta$	-40 °C to +85 °C
Air humidity		≤ 95%
IP Code		IP 20
Connection cross-section rigid/flexible/stranded Tightening torque ( $M_A$ ) at least 4 Nm		10-50 / 10-25 / 10-35 mm <sup>2</sup> AWG 8-2
Mounting		Snap-fitting on 35 mm top-hat rail to DIN EN 50022

Subject to technical alterations

## Ordering data

Type	Description	Order no.
MC 125-B/NPE	Complete	5096 86 3



### Features at a glance MC 125-B/NPE

### Advantages in use

Enclosed system, no plasma arcs outside the casing

▶ Can be installed in any standard commercial distribution board enclosure

Safety-tested, VDE, ÖVE, KEMA KEUR, MEEI, EZU test marks

▶ Reliable arrester in all applications, tested by several independent institutes

High lightning current capacity, 125 kA (10/350)

▶ Safety in service

Two connection possibilities on each side

▶ Easy to install

Connection duct at side

▶ No busbars required