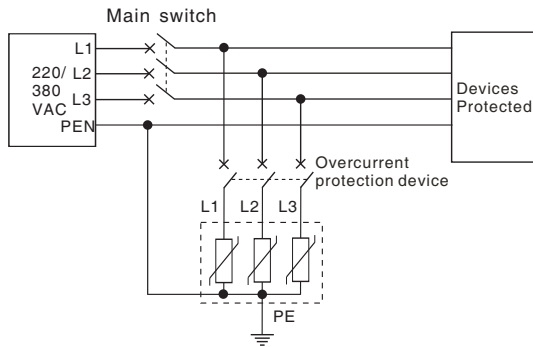
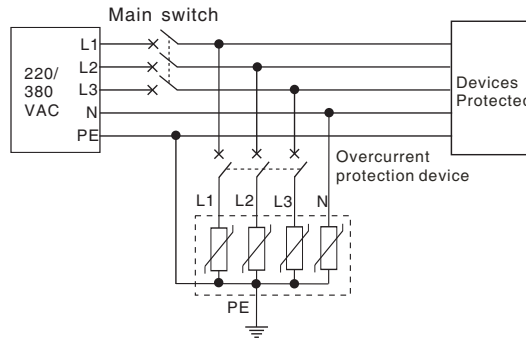


TN-C system



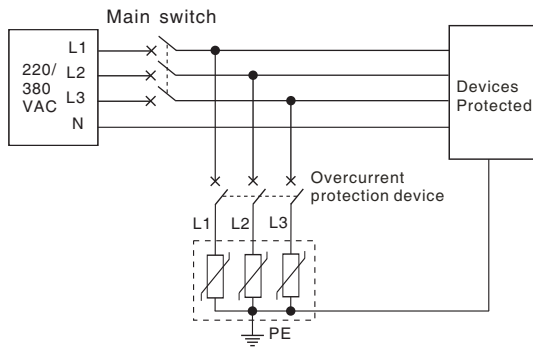
CZLB-160/440/3P

TN-S system



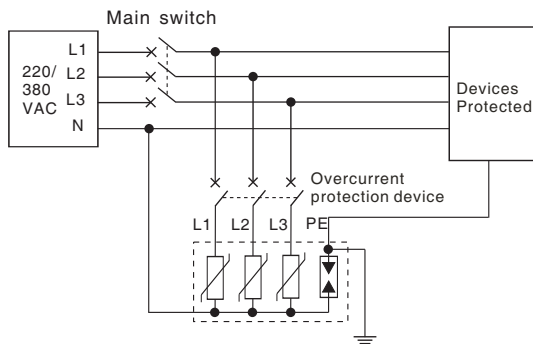
CZLB-160/440/4P

IT system



CZLB-160/440/3P

TT system



CZLB-80/440/3P+1

■ Replacement

Check the status indicator. If the indicator is red, it need to be replaced.

Status indication: a red window indicates failure.



■ Maintenance

1. SPDs must be reliably grounded.
2. Make sure the connections between cable and terminals are firm and correct.
3. SPDs' quality are well controlled and strictly inspected before delivery. If non-functional ones are found during operation, please contact us early enough.
4. Within 5 years of delivery, any problems occurred during normal operations can get treatments free.

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Surge Protective Device

CZLB-160/440 Series



⚠ Caution

- Please check if SPDs' type and specification on the packages and the labels are consistent with the contract.
- Read this instruction carefully before using SPDs. Contact us if there is any questions.
- In case of damage cause by electrostatic, friction should be avoid.
- In case of any failure, disassembling SPDs is prohibited.

General

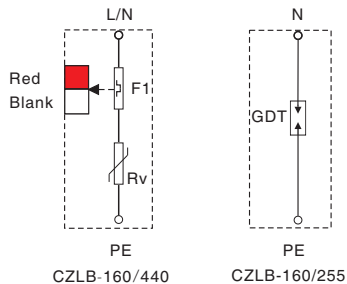
CZLB-160/440 series AC power supply SPDs are designed according to the domestic criterials. It enables the connection between the power supply system and an equipotential network instantaneously when the surge occurs and limit the residual voltage to a certain level to protect the devices protected. Normally, it is used in lighting protection zone 1. For better protection effect, SPDs with different protection levels should be used downstream.

Main technical parameters

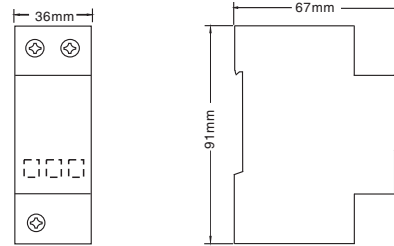
Parameter	SPD module	CZLB-160/440	CZLB-160/255
Nominal operating voltage U_n		220V AC	255V AC
Max. operating voltage U_c		440V AC	255V AC
Nominal discharge current $I_n(8/20 \mu s)$		80kA	80kA
Max. discharge current $I_{max}(8/20 \mu s)$		160kA	160kA
Impulse current $I_{imp}(10/350 \mu s)$		15kA	50kA
Protection level $U_p(80kA, 8/20 \mu s)$		2.8kV	2.5kV
Response time		<25ns	<100ns
Leakage current		<20 μA	-
Status indication		Blank: Ok Red: failed	-
Over current protection		200A	-
Connection cable sectional area L/N		$\geq 6mm^2$	$\geq 6mm^2$
Connection cable sectional area PE		$\geq 10mm^2$	$\geq 10mm^2$

Operation temperature: -40°C-70°C
 Relative humidity: 10%-90%
 Housing protection level(IEC60529): IP 20
 Housing material flame-retarded level(UI94): PA66/V0
 Installation: Standard 35mm DIN rail
 Testing standards: GB 18802.1/IEC 61643-1
 Performance test: Shanghai Lighting Protection Center

Schematic diagram

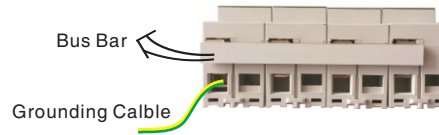


Dimension



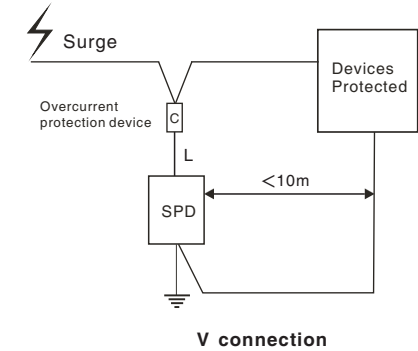
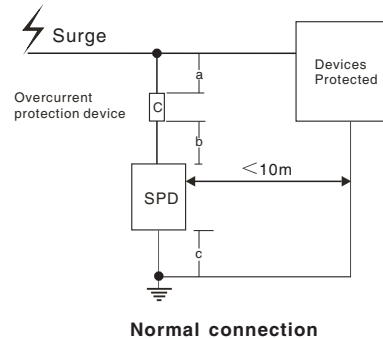
Installation

CZLB-160/440 series SPDs are delivered in single pieces. They should be connected by a bus-bar and then you can choose any piece for ground connection. Otherwise you need to ground all pieces. Loosen all the screws completely before you put the bar in and then tighten the screws except the one you chose for ground connection.



When install SPDs, the connection cable should be as short as possible. As the diagrams shown below, $L(L=a+b+c$ in normal connection) should be less than 0.5 meters. Cable between SPD and the protected device should be less than 10m. The housing of the protected device should be grounded via SPD terminals.

In case of the main circuit broken because of a failed SPD, a protection device such as air switch or fuse should be installed before the SPDs. According to our tests, protection devices with a nominal current of 100A are recommended. The cross sectional area of the upper (for L/N connection) cable should be no less than $6mm^2$ and the cross sectional area of the cable for grounding should be no less than $10mm^2$.



Typical applications

Single phase system

