

### Tripping device

There's tripping device designed on the modular of the protector. When the protector is over heat or shocked, the tripping device can automatically separate it from the electric net, at the same time showing the indication signal. It's green when the protector is normal, red when tripping.

### Remote signaling contact

The products can be produced available with the accessory of remote signaling contact. If one or more of modular of the protector is in malfunction, the contact will be closed, and sending the malfunction signal.

### Principal parameters

Maximum continuous operating voltage :  $U_c$  75 150 275 320 385 440 660V~

Test grade:II

Voltage protect level:  $U_p < 350$  550 1000 1250 1500 1750 2500V

Maximum discharge current : (8/20 $\mu$ S)  $I_{max}$  40kA

Nominal discharge current: (8/20 $\mu$ S)  $I_n$  10 15 20kA

### Remote communication terminal parameter

Type of remote communication terminal		Active
Terminal normal power	UN/IN	AC: 250V/0.5A DC: 250V/0.1A, 125V/0.2A, 75V/0.5A
Conductor section	BY10-40/4-150	Maximum single line: 1.5mm <sup>2</sup>

### Main Structure and Operating Principle

In three-phase four- line system , three phase lines and one zero line are connected protective device to the earth cable . (figure 1 ) . In normal situation , the protective device is high resistance , when the over voltage brings for electric network shocked by thunder or other reasons , the protective device will rapidly transmit in ns , then lead the voltage into earth and protect the electric equipment . As the surge voltage through the protective device and after disappear it will recover to high resistance and not influence the normal operating.



BY10-65/3

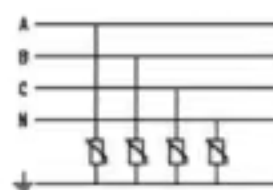
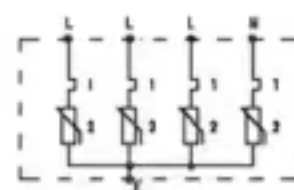


Fig.1 380V net graph



Note: 1. thermal malfunction tripping device  
2. voltage dependent resistance

### Technical Parameters :

Item		75	150	275	320	440	600
Maximum continuous operating voltage	Uc	75V~110V~	50V~200V~	275V~350V~	20V~420V~	440V~585V~	600V~1600V~
Nominal discharge current:	In	10	15	20	15	15	15
Maximum discharge current	I <sub>max</sub>	40	40	40	40	40	40
Voltage protect level Up	5kA	≤350V	≤550V	≤1kV	≤1250V	≤1750V	≤2.5kV
	In	≤450V	≤750V	≤1.5kV	≤1750V	≤2250V	≤3kV
Response time ns		≤25ns					
Max. fuse intensity		125AgL/Gg					
Short circuit current intensity		50kA/50Hz			25kA/50Hz		
Operating temperature area		40C -- 80C					
Conductor section		Min 1.5mm <sup>2</sup> /single lead, max. 35mm multi-twisting lead/35mm single laed.					
Installation frame		35mm rail					
Out case		red hot shrink material					
Protection class		IP20					
Dimension		one standard module width					

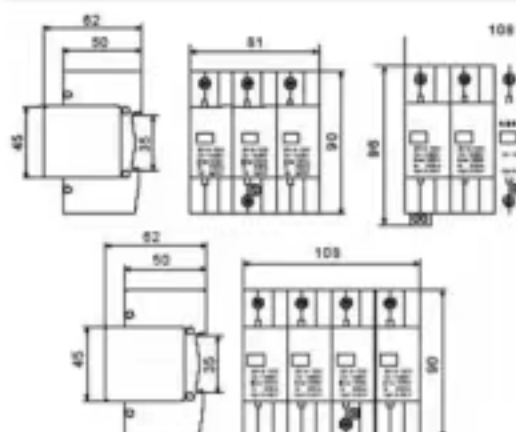
### Installation

1. It is installed by standard 35 mm rail.
2. The earth cable should choose the double color wire 4mm<sup>2</sup> whose length is not longer than 500 mm.
3. To avoid the influence to the electric net after the protector is in malfunction, the protector connected to L line should be in series connect with a fuse. The appearance and installation dimension refer to the Fig. 3.

## Installation position and application

1. SPD class B, functioning as an equip-potential connection in case of lightning.
2. Installed at the joint of the LPZOA, LZPOB and LPZ1 zones.
3. It is usually installed in low voltage main distribution cabinet connected to the incoming end of the buildings.
4. It adopts 35 mm DIN rail.
5. It is linked by 6 --- 35 mm<sup>2</sup> copper wire
6. The cable should choose double color wire which is longer than 6 mm<sup>2</sup>
- 7.. In order to guarantee electrical network's normal operating after protective device losing efficiency , the protective device which linked to the phase line must be connected a fuse box whose current is higher than 63A or a circuit breaker.

Appearance and Installation Dimension



## Usage and application scope

Usage and application scope BY10 type surge protective device (short name "SPD") is suitable for AC 50/60 Hz, 380V and the following electric power systems, such as TT, IT, TN-S, TN-C, TN-C-S. It protects the electric network shocked by the thunder or over voltage .

## Working condition:

1. Height: not more than 2000m
2. Operating temperature : normal -5~+40C Enlarge range: -40~+80C
3. Relative humidity: on condition that room temperature 30%~90%
4. Installed at no notability shocked and virated place
5. Don't be contained in explosion medium, the medium such as air and dust (including conduction dust ) shouldn't come to the degree that can corrode metal or damage insulation.

## Model and meaning

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