



BY 4 - 60

Usage and application scope

BY4 type SPD is series surge protective device (protector in short) is applied in A.C 50/60 Hz , $\leq 380V$ electric power system such as TT,IT ,TN-S,TN-C and TN-C-S, and used at the equipotential connection of LPZ0A and LPZ31 zone or LPZ0B and LPZ1 zone, which protects the electric network shocked by the thunder or surge over voltage.

The protector can be made connecting with remote signaling contact, which is a normal open contact. If one or more of modular of the protector is in malfunction, the contact will be closed, and sending the malfunction signal. The rated value of remote signaling contact is AC36V, 1A.

Maximum continuous operating voltage:

Uc 320, 385VAC

test classification:

II grade

voltage protection level:

uP< 2.0 2.5 3.0 kV

max. discharging current (8/20s):

I_{max} 60 80 100kA

Nominal discharge current (8/20s):

I_n 30 40 60kA



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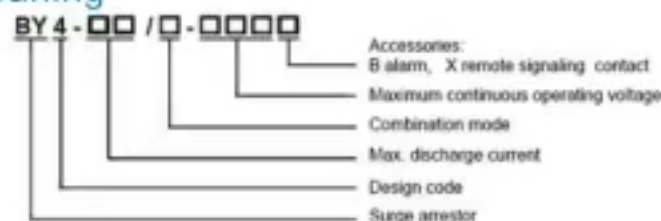
max. discharging current (8/20s):

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Model and meaning



Note: combination mode: 3-3 pole combination, public pole connects to the earth.

3-3 pole combination, public pole connects to N

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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.



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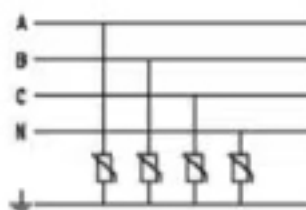
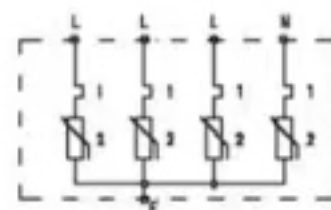


Fig.1 380V net graph



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

Technical Parameters



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Item	BY4-60/3-385 BY4-60/3N-385 BY4-60/4-385	BY4-80/3-385 BY4-80/3N-385 BY4-80/4-385	BY4-100/3-385 BY4-100/3N-385 BY4-100/4-385
Maximum continuous operating voltage Uc	385 V		
Test grade	Class 2		
Nominal discharge current In(8/20s)	30kV	40kV	60kV
Maximum discharge current Imax (8/20s) kA	60kV	80kV	100kV
Voltage protective level Up	2.0 kV	2.5 kV	3.0 kV
Response time ns	< 25 ns		
Defending grade	IP20		
Ambient temperature	-40— +85C		
Color (Mould)	Orange		
(Base)	Grey		
Outer covering material	Reinforced fire-retardant nylon PBT		
Phase Line , Zero Line	6 —3 5mm ²		
Earth Line	6 —3 5mm ²		
Signal Line	1.5 mm ²		
Accessory	According to the needs adding the remote signaling contact		
Item	BY4-60/3-320 BY4-60/3N-320 BY4-60/4-320	BY4-80/3-320 BY4-80/3N-320 BY4-80/4-320	BY4-100/3-320 BY4-100/3N-320 BY4-100/4-320
Maximum continuous operating voltage Uc	320 V		
Test grade	Class 2		
Nominal discharge current In(8/20s)	30kV	40kV	60kV
Maximum discharge current Imax (8/20s)	60kV	80kV	100kV
Voltage protective level Up	2.0 kV	2.0 kV	2.5 kV
Response time ns	< 25 ns		
Defending grade	IP20		
Ambient temperature	-40— +85C		
Color (Mould)	Orange		
(Base)	Grey		
Outer covering material	Reinforced fire-retardant nylon PBT		
Phase Line , Zero Line	6 —3 5mm ²		
Earth Line	6 —3 5mm ²		
Signal Line	1.5 mm ²		
Accessory	According to the needs adding the remote signaling contact		