

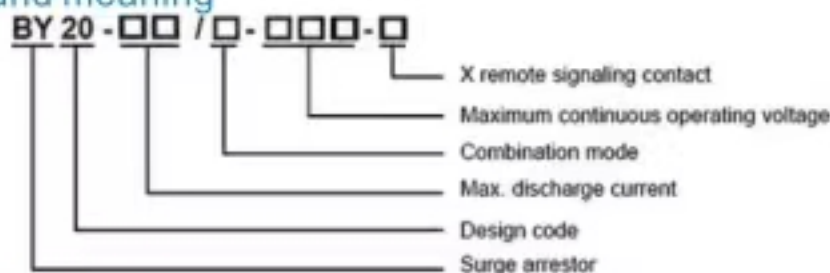
Usage and application scope

BY20 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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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 275 440 V~

Test grade: II

Voltage protect level: $U_p \leq 1.2 \quad 1.8 \quad 2.0 \text{ kV}$

Maximum discharge current : (8/20 μ S) I_{max} 12 15 40 62kV

Nominal discharge current: (8/20 μ S) I_n 8 5 15 30kA

Remote communication terminal parameter

Type of remote communication terminal	Active	
Terminal normal power	UNIN	AC: 250V/0.5A DC: 250V/0.1A, 125V/0.2A, 75V/0.5A
Conductor section	Maximum single line: 1.5mm ²	

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.

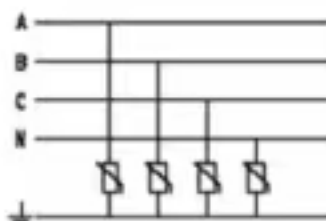
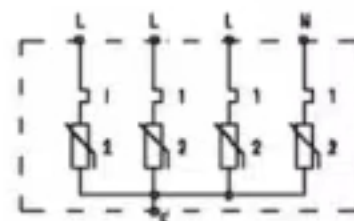


Fig.1 380V net graph



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



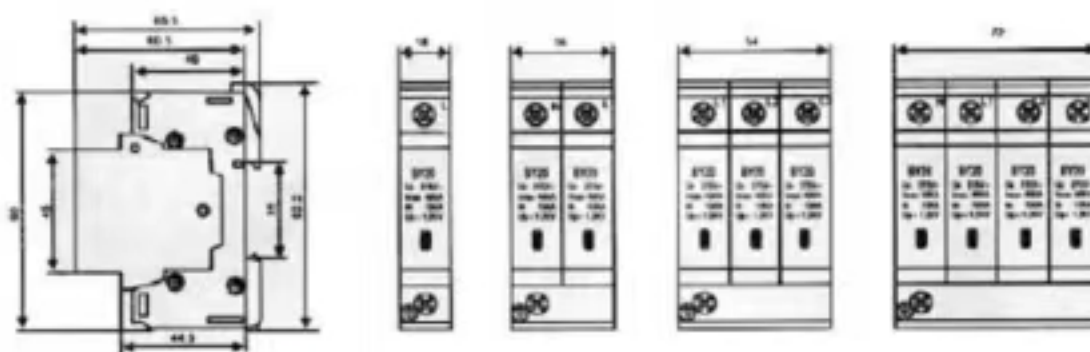
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Technical Parameters :

Item		8-275	8-440	15-275	40-440	40-275	40-440	65-275	65-440
Maximum continuous operating voltage	Uc	275V~	440~	275V~	440V~	275V~	440V~	275V~	440V~
Nominal discharge current	In	2	2	5	5	15	15	20	20
Maximum discharge current	I _{max}	8	8	15	15	40	40	65	65
Voltage protect level Up	5kA	≤1.2kV	≤1.8kV	≤1.2kV	≤1.8kV	≤1.2kV	≤1.8kV	≤1.5kV	≤2.0kV
Response time ns		≤25ns							
Max. fuse intensity		125AgL/Gg				100AgL/Gg			
Short circuit current intensity		16AgL/Gg		25AgL/Gg		50AgL/Gg80AgL/Gg			
Operating temperature area		40C ~+ 80C							
Conductor section		Min. 1.5mm ² single lead, max. 35mm multi-twisting lead/35mm single lead							
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 4mm² 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.



Adjustment, operation, maintenance

1. There's no need to adjust the protector after installation.
2. The protector can automatically protect the electric net should it's installed rightly.
3. When operating, check whether the modular scutcheon is red, at the same time check whether the indication red light is lighting, then can change the malfunction device.