



Specifications and technical data are subject to change without notice.
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Ebasee
Smart Living Green Ebasee



MODULAR TERMINAL



COMPANY PROFILE

As a leading supplier in the low voltage electrics industry, Shanghai Ebasee Electric Co., Ltd. products have been used for residential, commercial and industrial applications with its quality and service. EBASEE brand is recognized for its quality and reliability in an ever-increasing number of markets worldwide. So far EBASEE products have been approved by international labs including BV, TUV, Intertek, with KEMA, CB, SEMKO, RoHS, CE, and CCC etc.

With qualified raw materials and components supply, all products are manufactured by EBASEE's defined international specifications. We have 4 semi-auto production lines, up-to-date quality control facilities, well-trained and experienced workers. Moreover, with a technical R & D team and fully equipped in-house laboratory, EBASEE factory can carry out efficient new products development, daily production and QC.

EBASEE have a wide range of cooperations with world leading companies in new products development, OEM and ODM cooperation. Meanwhile, we process the idea of green and smart energy, working with universities such as Xi'an Jiao Tong University to get more intelligent and environmental electric solutions.

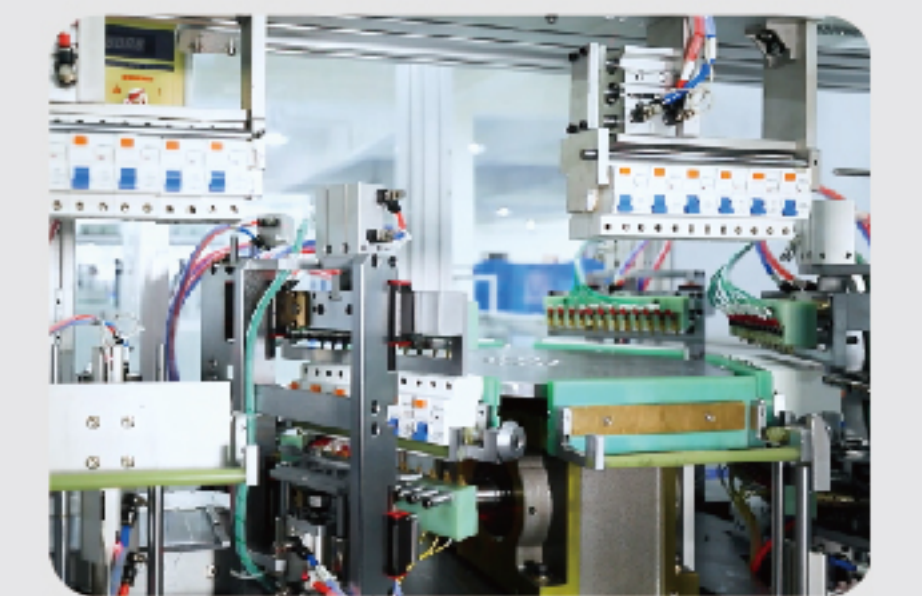
EBASEE focused on achieving growth through the success of worldwide partners. Guided by the philosophy of "market-oriented", powered by the idea of "Quick response and flexible supply", EBASEE support our worldwide partners to compete against established global players, to deliver the most systematic and cost-effective products and service in the market.

"Smart life, Green EBASEE"



Quality is our culture!

PRODUCTION LINE

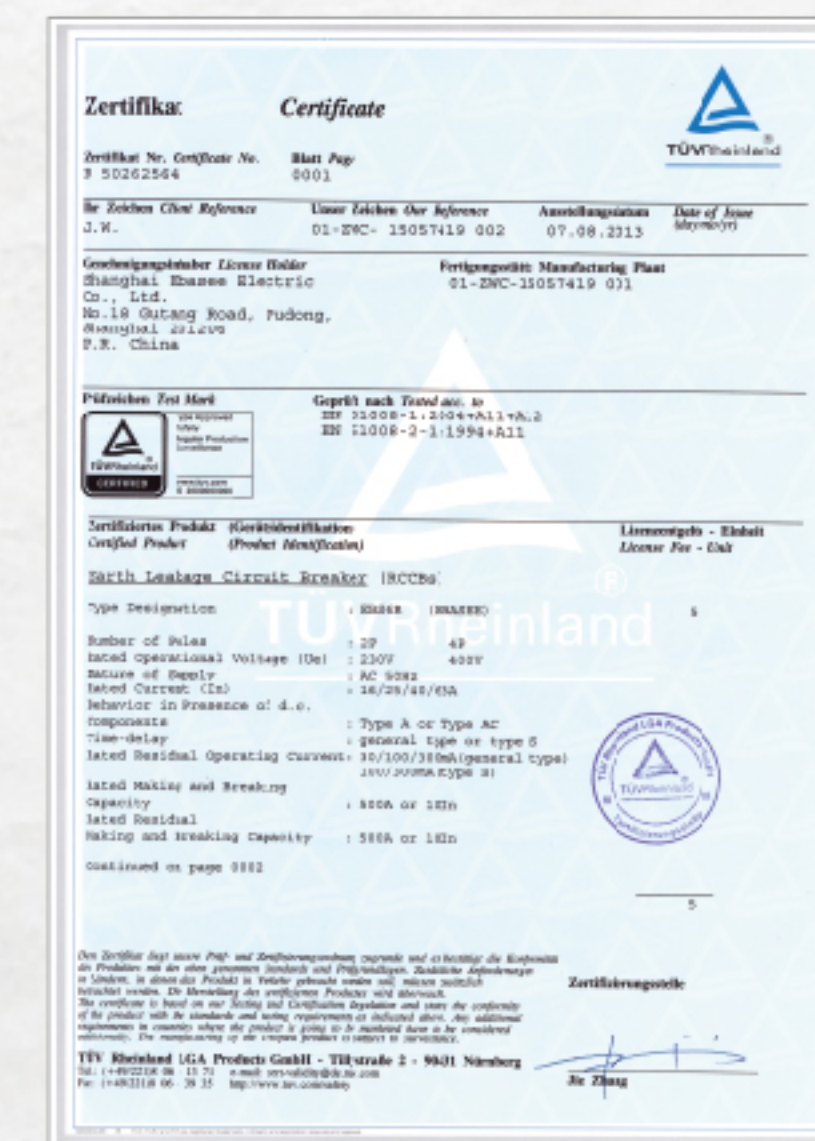
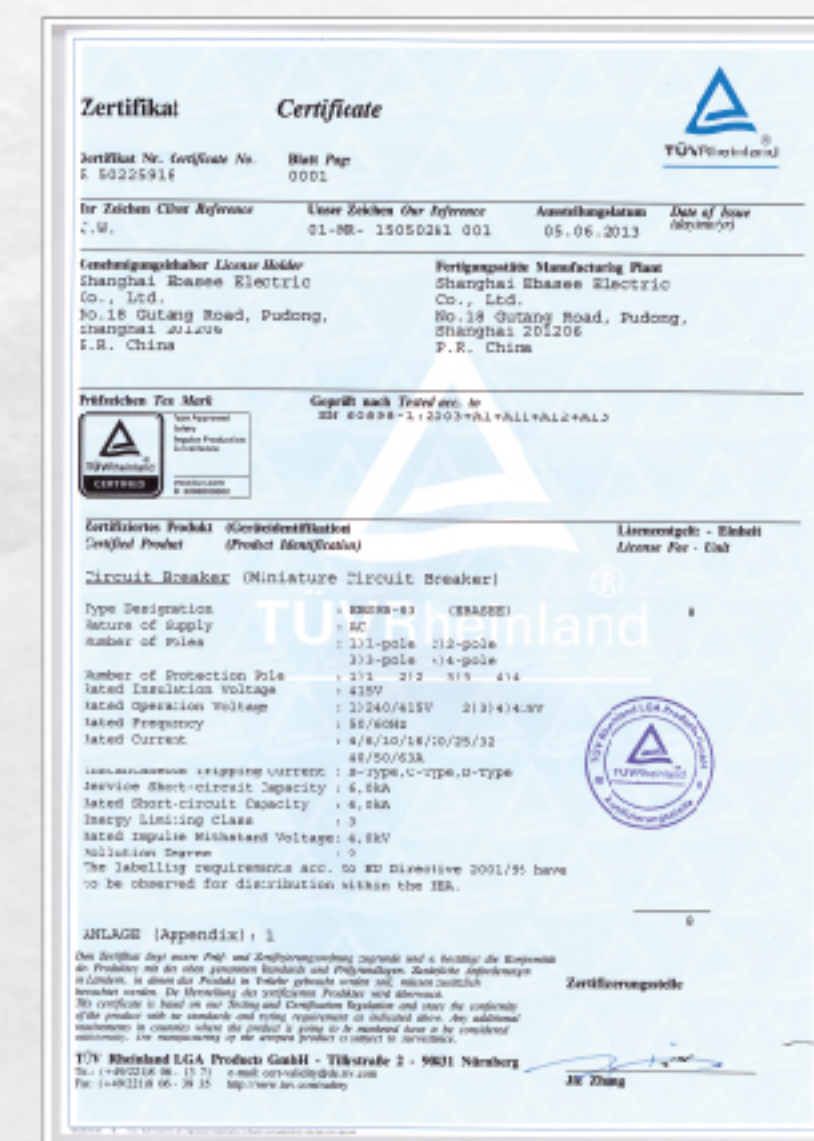
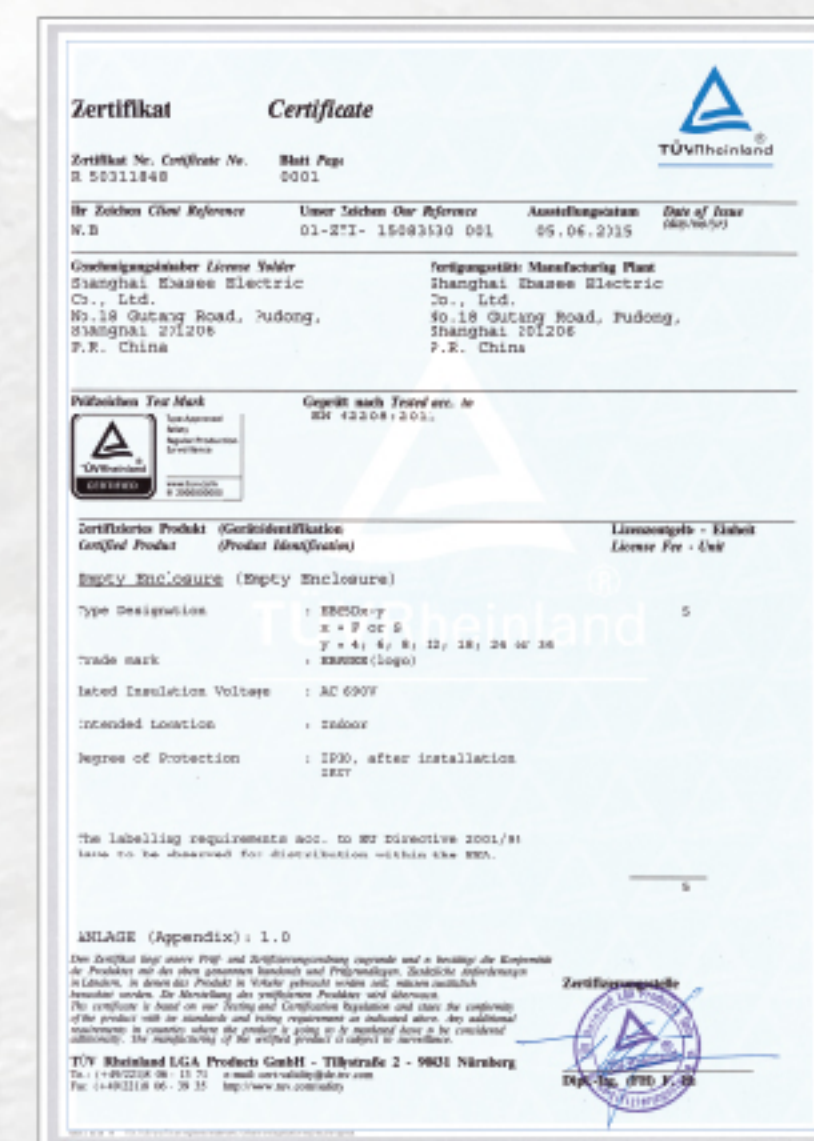
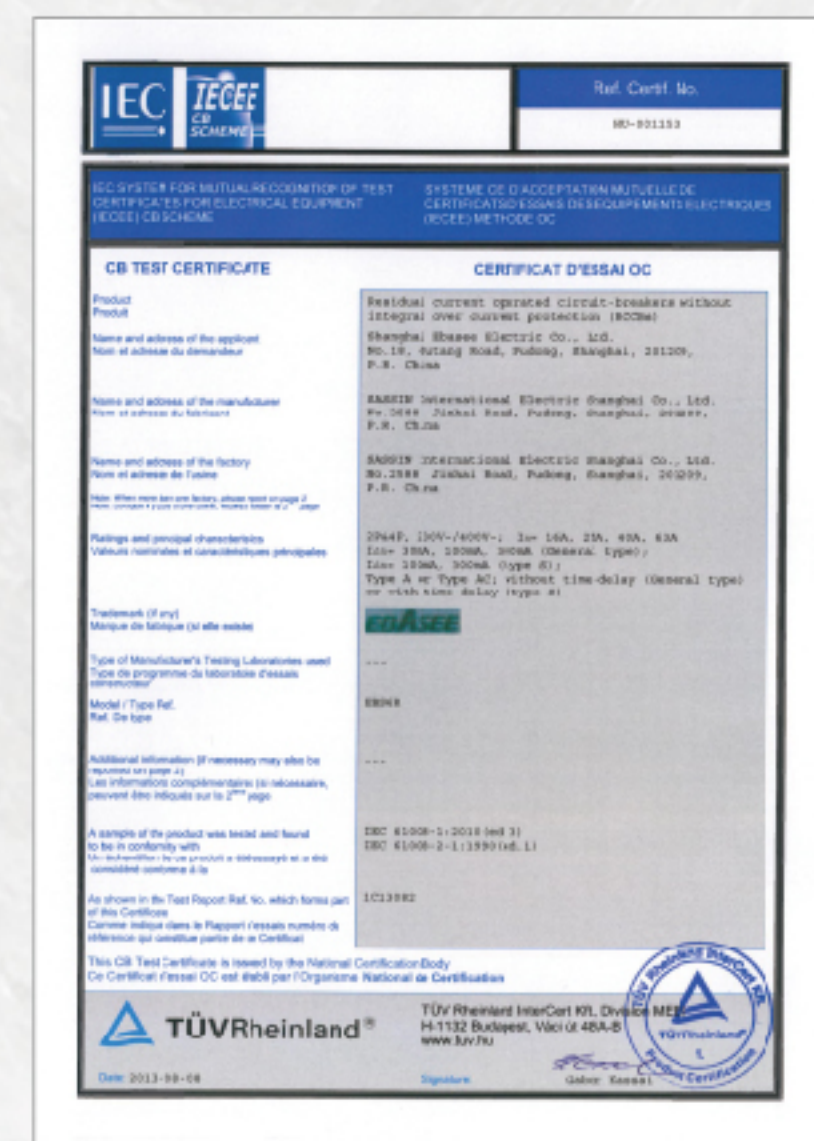
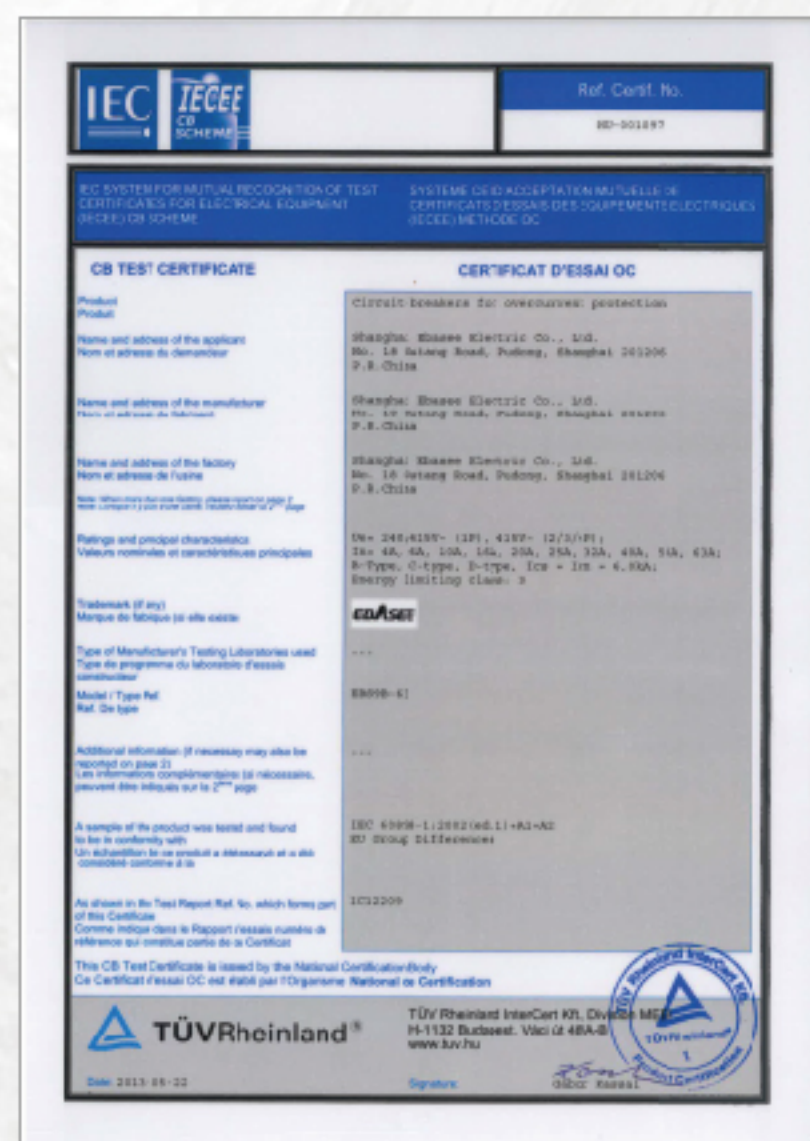
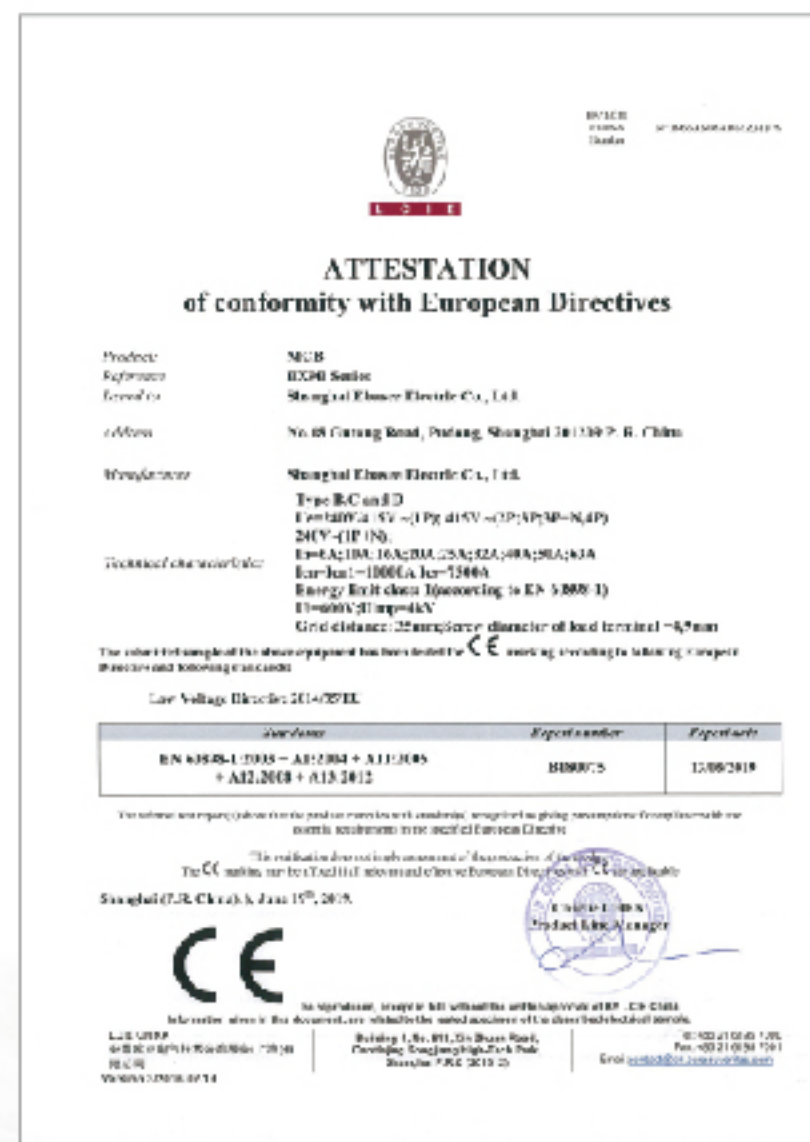


SMART LIVING GREEN EBASEE



INTERNATIONAL QUALITY CERTIFICATE

EBASEE products have been approved by international labs including BV, TUV, Intertek, with KEMA, CB, SEMKO, RoHS, CE, and CCC etc.



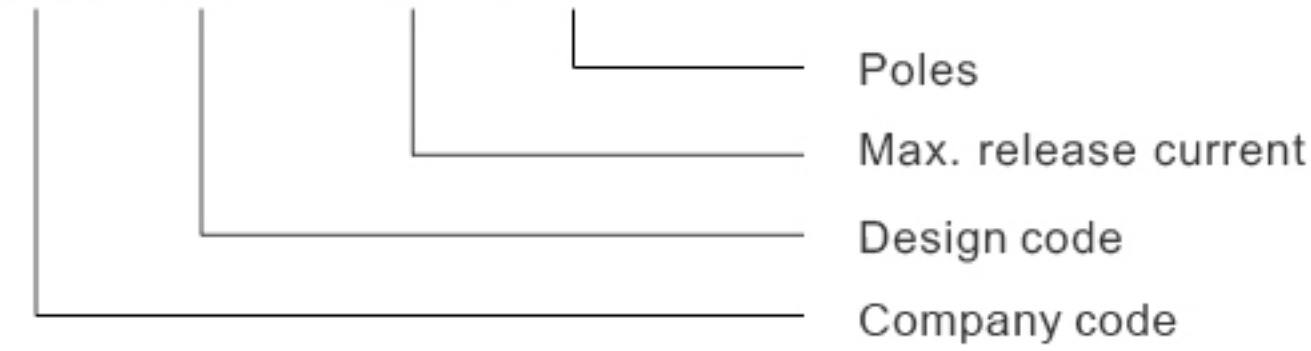
1.Function

EBS2U Series Surge protector device(hereinafter referred to as SPD) is used for power supply systems such as IT, TT, TN-C, TN-S, TN-CS, etc. for low-voltage AC distribution systems, for indirect lightning and direct lightning or other A surge of transient overvoltage is protected. The SPD has a common mode(MC) and differential mode(MD) protection. The SPD complies with GB/T18802.1/IEC61643-II.



2.Nomenclature

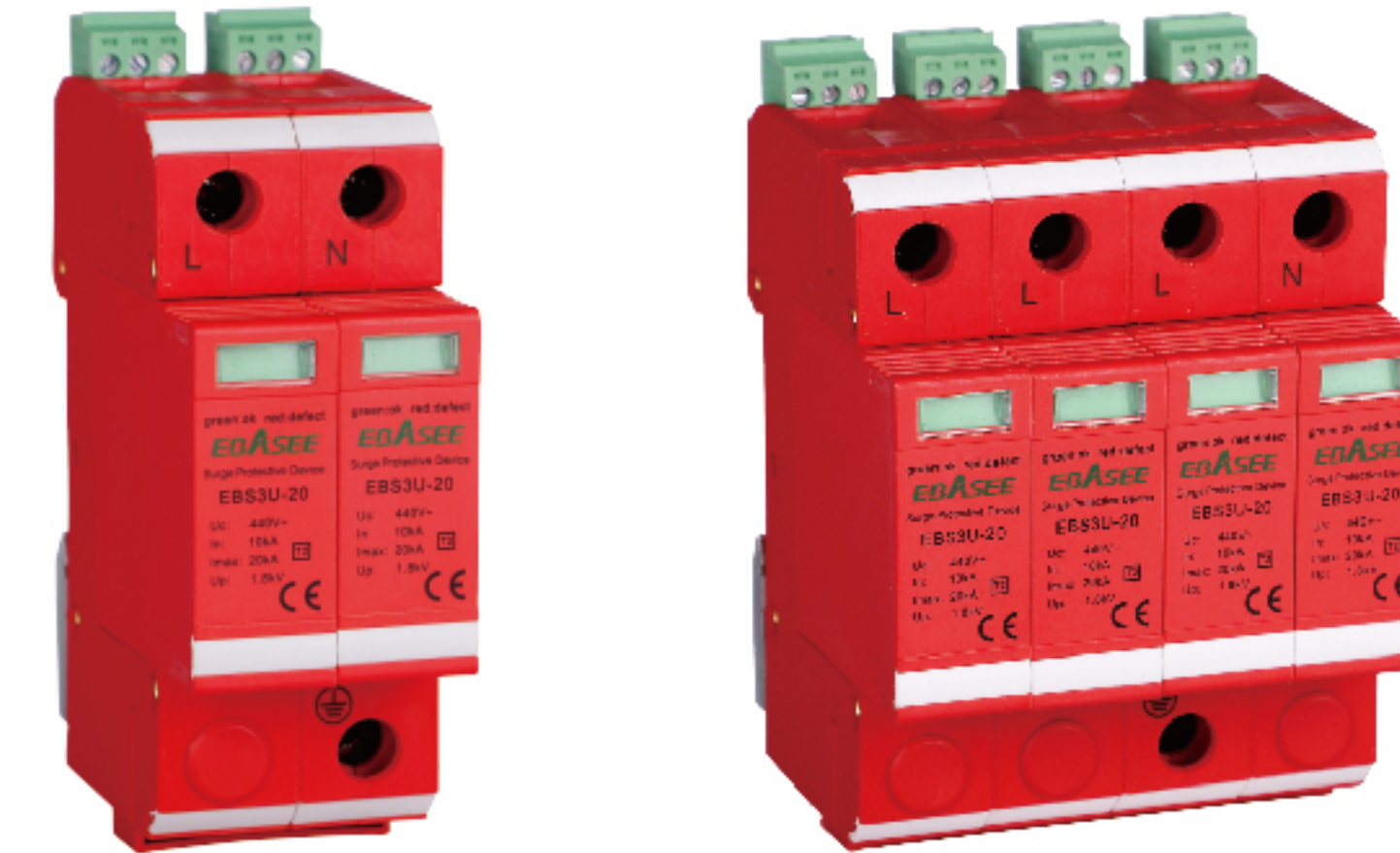
EBS 2U - 60 / 1P



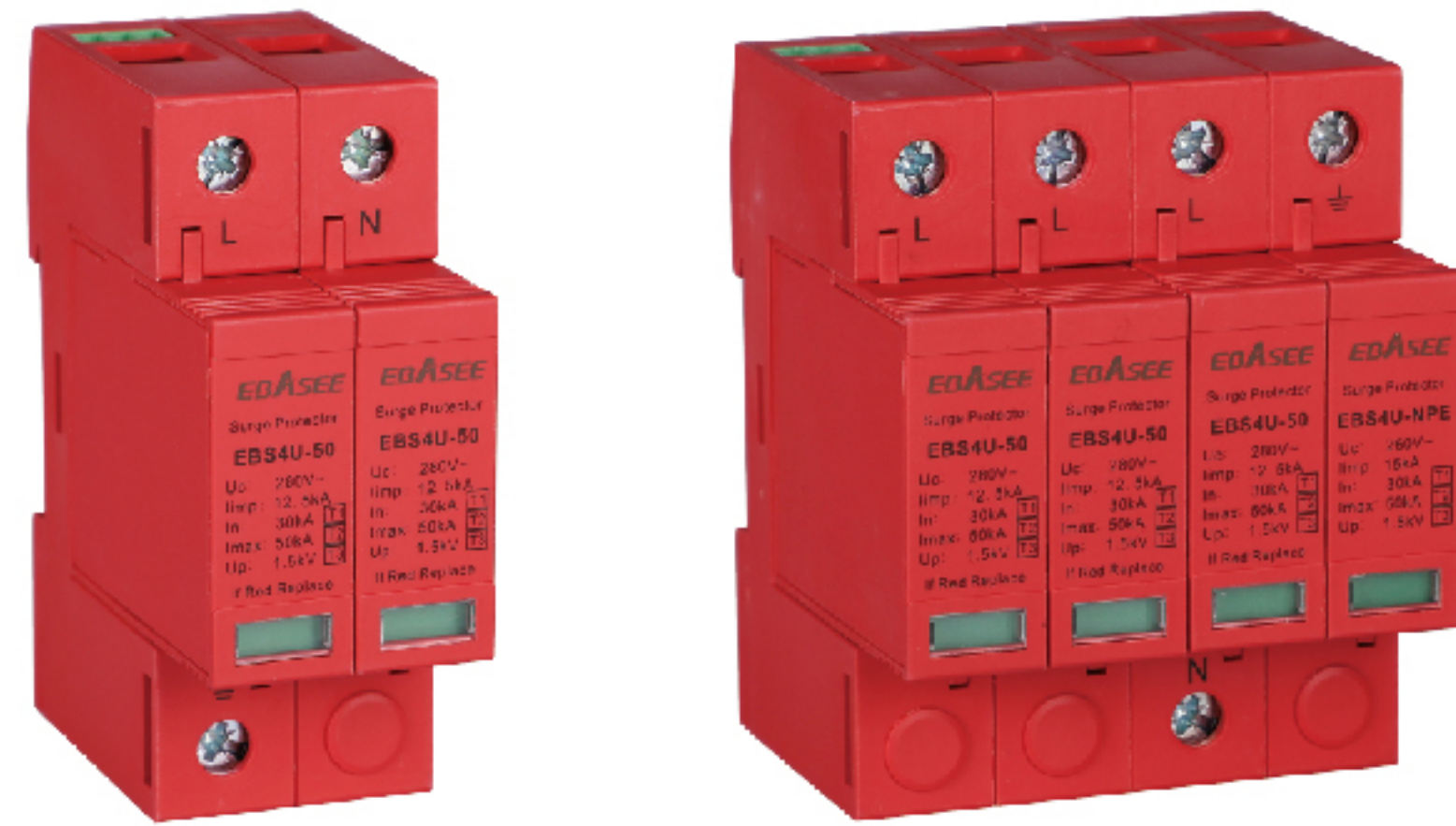
- Poles:1P, 2P, 3P, 4P, 1P+N, 3P+N
- Max. Continuous operating a.c.voltage Voltage UC:140, 275, 320, 385, 420V
- SPD Type:T1, T2, T3
- Voltage protection level :Up 1.2, 1.5, 1.8, 2.0kV
- Maximum discharge current (8/20μs) :Imax 10, 20, 40, 60, 80, 100kA
- Nominal discharge current (8/20μs) :In 2, 3, 5, 10, 15, 20, 30, 40, 50, 80kA

3.Specifications

Standard		EBS2U-40	EBS2U-40 N-PE
According to IEC61643-11		Type 2	Type 2
Max. continuous operation AC voltage	Uc	275V AC	255V AC
Nominal discharge current (8/20μs)	In	20kA	20kA
Maximum discharge current (8/20μs)	Imax	40kA	/
Peak current (10/350)	Ipeak	/	12.5kA
Voltage protection level (L-N)	Up	1.5kV	1.5kV
Response time (L-N)	tA	25ns	25ns
Environment temperature	Tu	-40℃~80℃	-40℃~80℃
Status indicator		Green / red	Green / red
Mounting		36mm Standard Guide	36mm Standard Guide
Cross section of wire (Min.)	mm ²	4mm ²	4mm ²
Cross section of wire (Max.)	mm ²	35mm ²	35mm ²
Casing material		Thermoplastic UL94-V0	Thermoplastic UL94-V0
Degree of protection		IP20	IP20
Remote Signalling		Optional	Optional
Dimension (LxWxH)		90x70x54mm	90x70x54mm



Standard		EBS3U-40
According to IEC61643-11		Type 2
Max. continuous operation AC voltage	Uc	275V AC
Nominal discharge current (8/20μs)	In	20kA
Maximum discharge current (8/20μs)	Imax	40kA
Voltage protection level (L-N)	Up	1.8kV
Response time (L-N)	tA	25ns
Environment temperature	Tu	-40℃~80℃
Status indicator		Green / red
Mounting		36mm Standard Guide
Cross section of wire (Min.)	mm ²	4mm ²
Cross section of wire (Max.)	mm ²	35mm ²
Casing material		Thermoplastic UL94-V0
Degree of protection		IP20
Remote Signalling		Optional
Dimension (LxWxH)		90x70x54mm



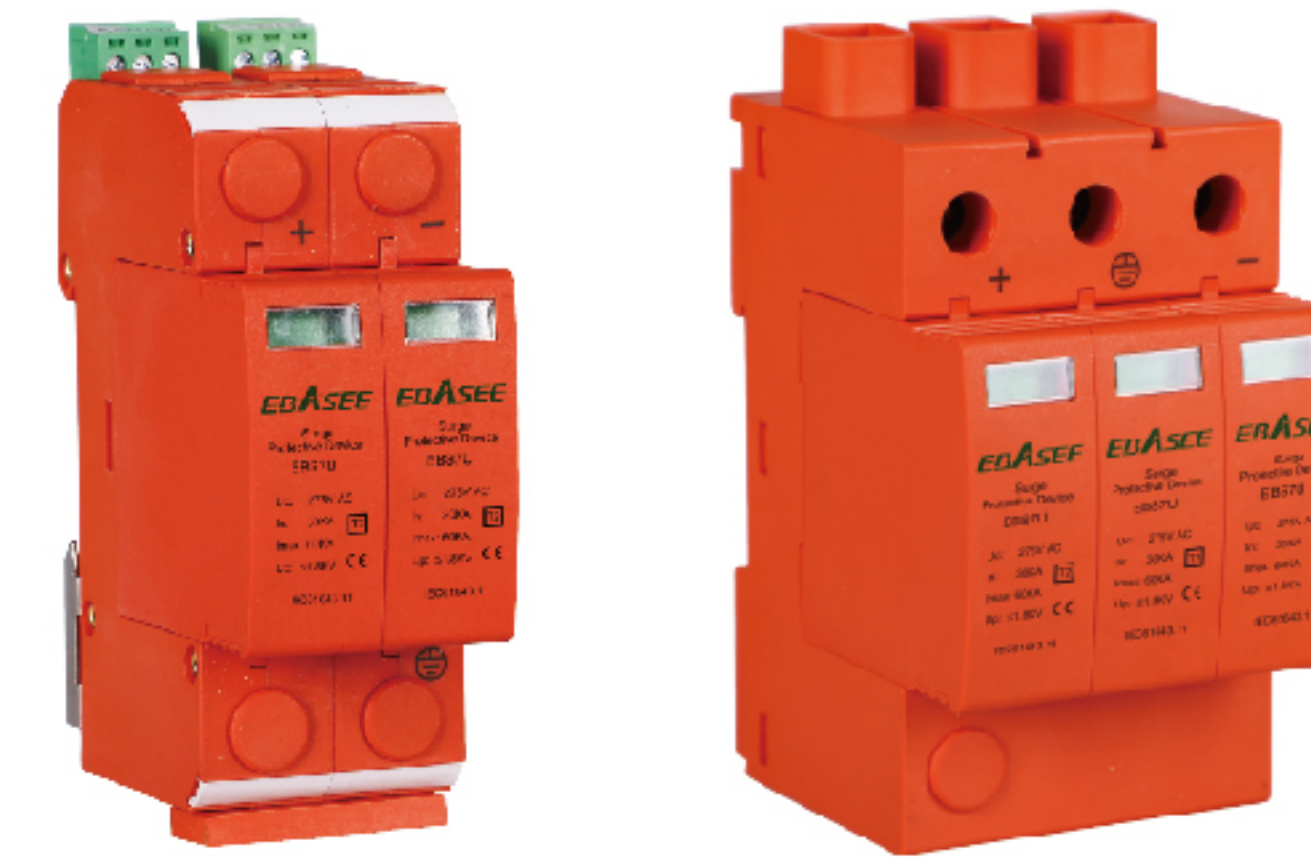
Standard		EBS4U
According to IEC61643-11		T1+T2+T3
Max. continuous operation AC voltage	Uc	275V AC
Nominal discharge current (8/20µs)	In	20kA
Maximum discharge current (8/20µs)	I _{max}	40kA
Peak current (10/350)	I _{peak}	12.5kA
Voltage protection level (L-N)	Up	1.5kV
Response time (L-N)	t _A	25ns
Environment temperature	T _u	-40°C ~80°C
Status indicator		Green / red
Mounting		36mm Standard Guide
Cross section of wire (Min.)	mm ²	4mm ²
Cross section of wire (Max.)	mm ²	35mm ²
Casing material		Thermoplastic UL94-V0
Degree of protection		IP20
Remote Signalling		Optional
Dimension (LxWxH)		90x70x72mm



Standard		EBS5U
According to IEC61643-11		Type 2
Max. continuous operation AC voltage	Uc	350V AC
Nominal discharge current (8/20µs)	In	25kA
Maximum discharge current (8/20µs)	I _{max}	50kA
Voltage protection level (L-N)	Up	1.5kV
Response time (L-N)	t _A	25ns
Environment temperature	T _u	-40°C ~80°C
Status indicator		Green / red
Mounting		36mm Standard Guide
Cross section of wire (Min.)	mm ²	4mm ²
Cross section of wire (Max.)	mm ²	35mm ²
Casing material		Thermoplastic UL94-V0
Degree of protection		IP20
Remote Signalling		Optional
Poles		1P+N/3P/3P+N



Standard		EBS6U
According to IEC61643-11		T2
Max. continuous operation AC voltage	Uc	275V AC (Can be customized)
Nominal discharge current (8/20μs)	In	20kA
Maximum discharge current (8/20μs)	I _{max}	40kA
Peak current (10/350)	I _{peak}	/
Voltage protection level (L-N)	Up	1.5kV
Response time (L-N)	t _A	25ns
Environment temperature	T _u	-40°C ~ 80°C
Status indicator		Green / red
Mounting		36mm Standard Guide
Cross section of wire (Min.)	mm ²	2.5mm ²
Cross section of wire (Max.)	mm ²	35mm ²
Casing material		Thermoplastic UL94-V0
Degree of protection		IP20
Remote Signalling		Optional
Poles		1P 1P+N 2P 2P+N 3P 3P+N 4P



Standard		EBS7U
According to IEC61643-11		Type 2
Max. continuous operation AC voltage	Uc	275V AC
Nominal discharge current (8/20μs)	In	20kA
Maximum discharge current (8/20μs)	I _{max}	40kA
Voltage protection level (L-N)	Up	1.5kV
Response time (L-N)	t _A	25ns
Environment temperature	T _u	-40°C ~ 80°C
Status indicator		Green / red
Mounting		36mm Standard Guide
Cross section of wire (Min.)	mm ²	4mm ²
Cross section of wire (Max.)	mm ²	35mm ²
Casing material		Thermoplastic UL94-V0
Degree of protection		IP20
Remote Signalling		Optional
Poles		1P+N/3P/3P+N

4. Main structure and working principle

In a three-phase four-wire system, protectors are connected between three phase lines and a zero line to the ground (Figure 1). Under normal circumstances, the protector is in a high resistance state. When surge overvoltage occurs in the power grid due to lightning or other reasons, the protector is turned on quickly in nanosecond time, and the surge overvoltage is introduced into the earth, thus protecting the electrical equipment on the power grid. When the surge voltage passes through the protector and disappears, the protector returns to the high resistance state again, thus not affecting the normal operation of the power grid. The electrical principle of surge protector is shown in Figure 2.

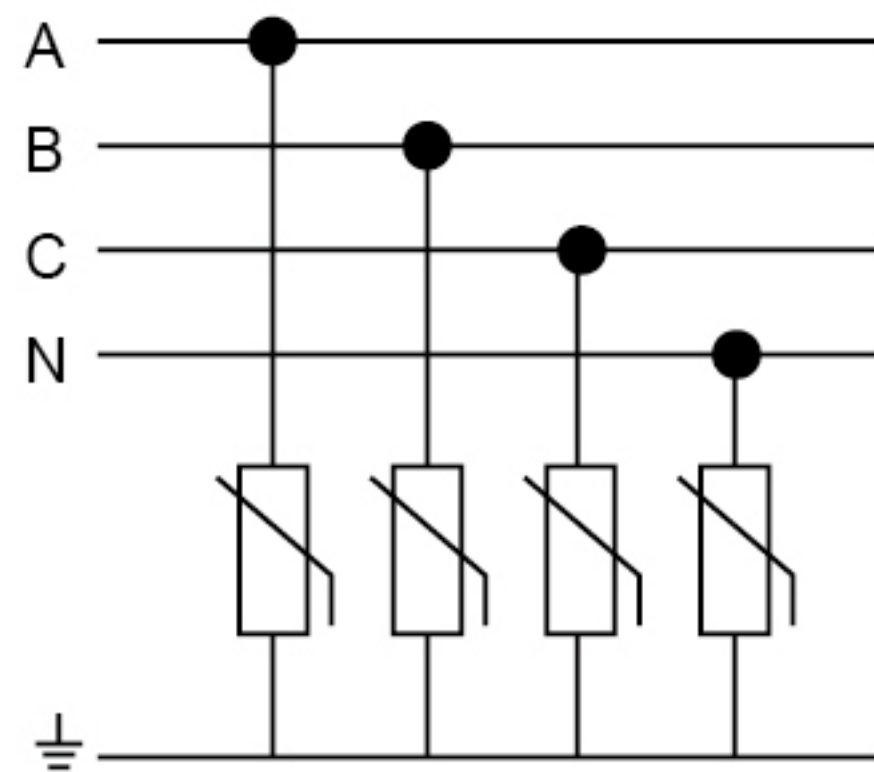


Figure 1 380V network

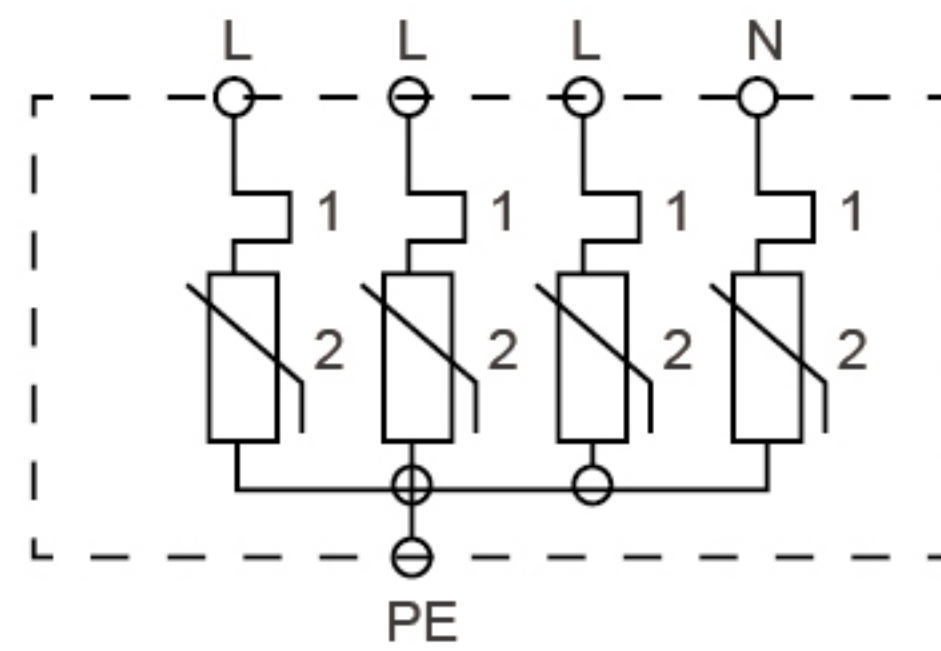


Figure 2 Note: 1. Thermal failure release
2. Varistor

5. Installation and Maintenance

- The protector is connected by copper wire, with a cross-sectional area of: Soft wire: 2.5-16mm² Hard wire: 2.5-25mm².
- The grounding wire shall be applied with double-color wires over 4 mm.
- In order to prevent the surge protector from being damaged due to various factors or burned out due to transient overvoltage, each SPD must be protected by fuse or circuit breaker (MCB), and the breaking capacity of the circuit breaker must be greater than the short-circuit current at that place. The characteristic curve is C curve, and it can withstand the impact of SPD surge current without action or damage.
- See Figure 3, Figure 4, Figure 5 and Figure 6 for wiring diagram of low voltage system.
Wiring diagram of low voltage system.
- After the protector is installed as required, it can automatically protect the Internet without adjustment.
- During the operation, it is necessary to regularly check whether the module signs are red, observe whether the fuse signs are red, and replace the failed components in time.

a) TN-C System

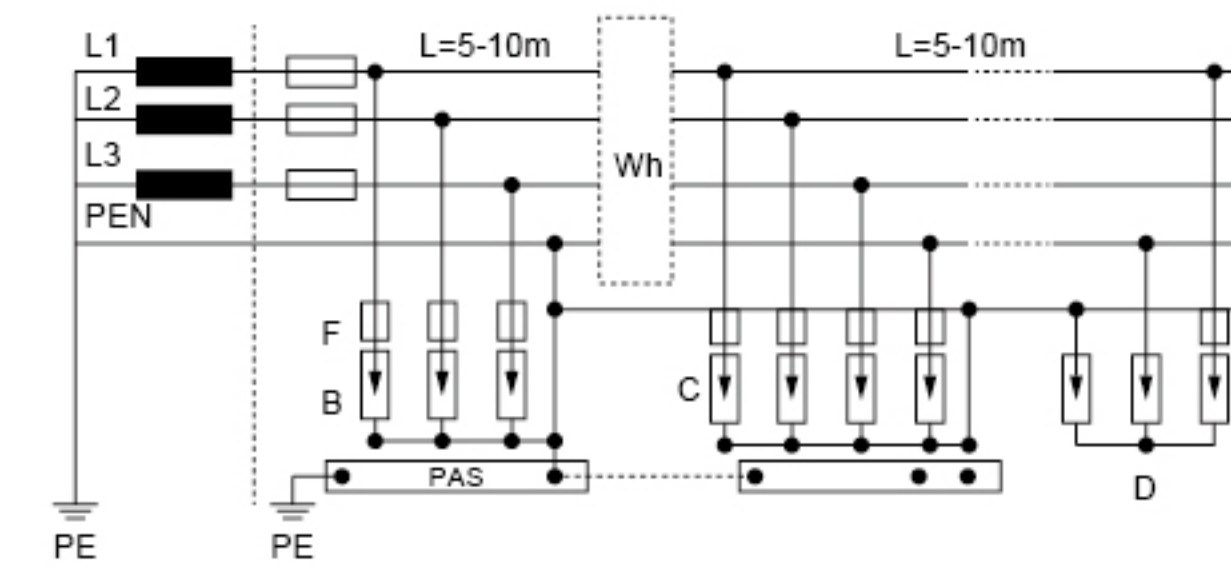


Figure 3

b) TN-S System

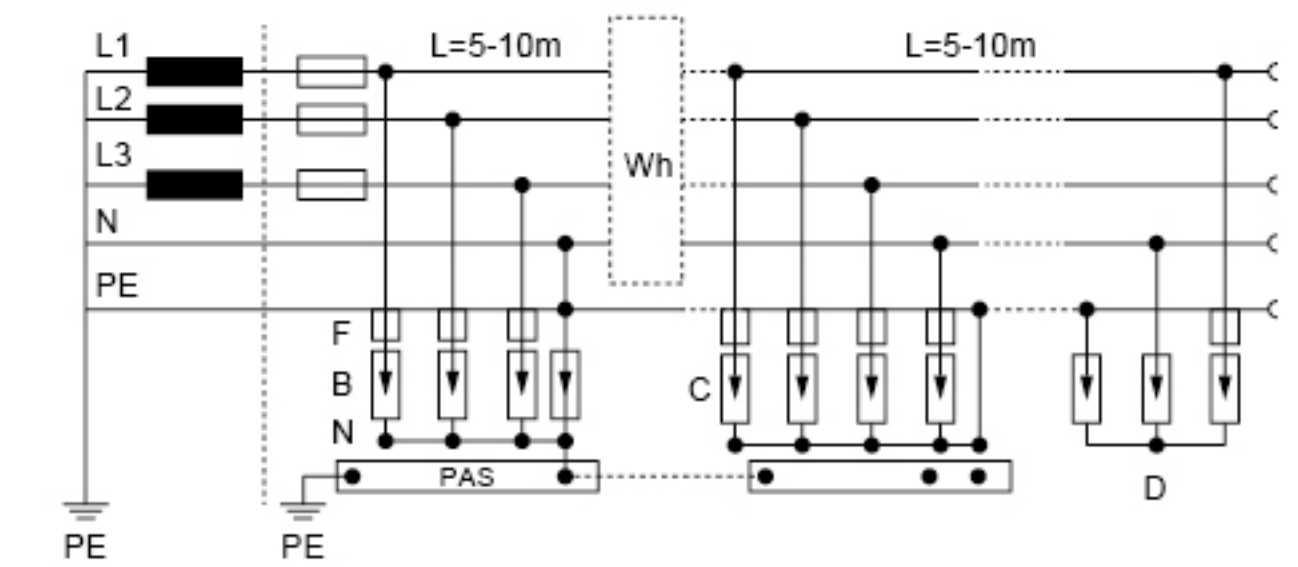


Figure 4

c) TT System

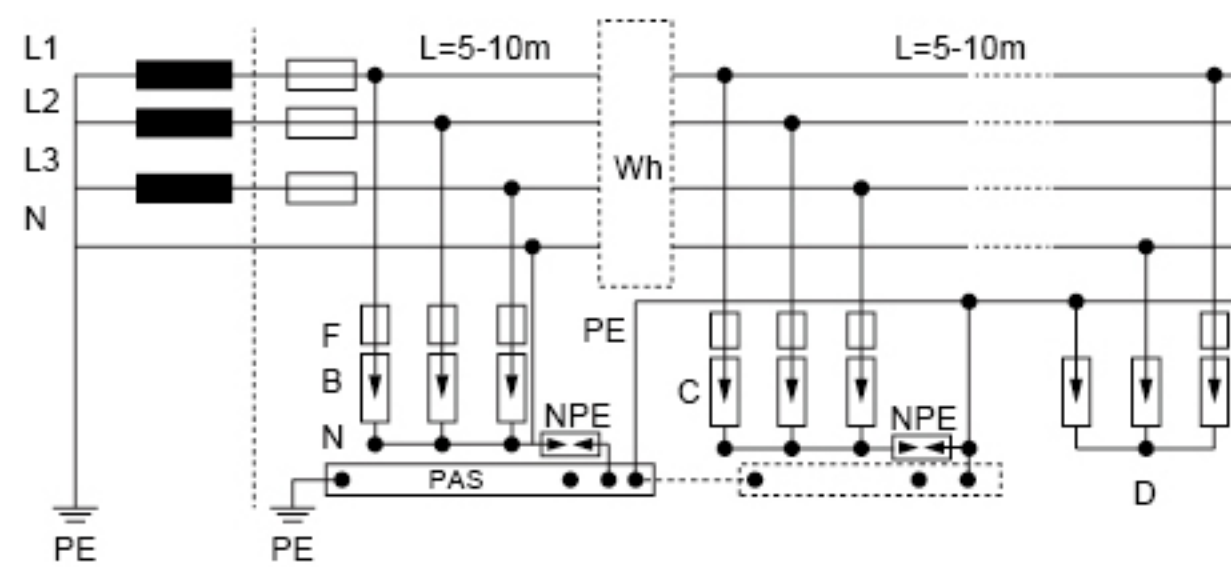


Figure 5

d) IT System

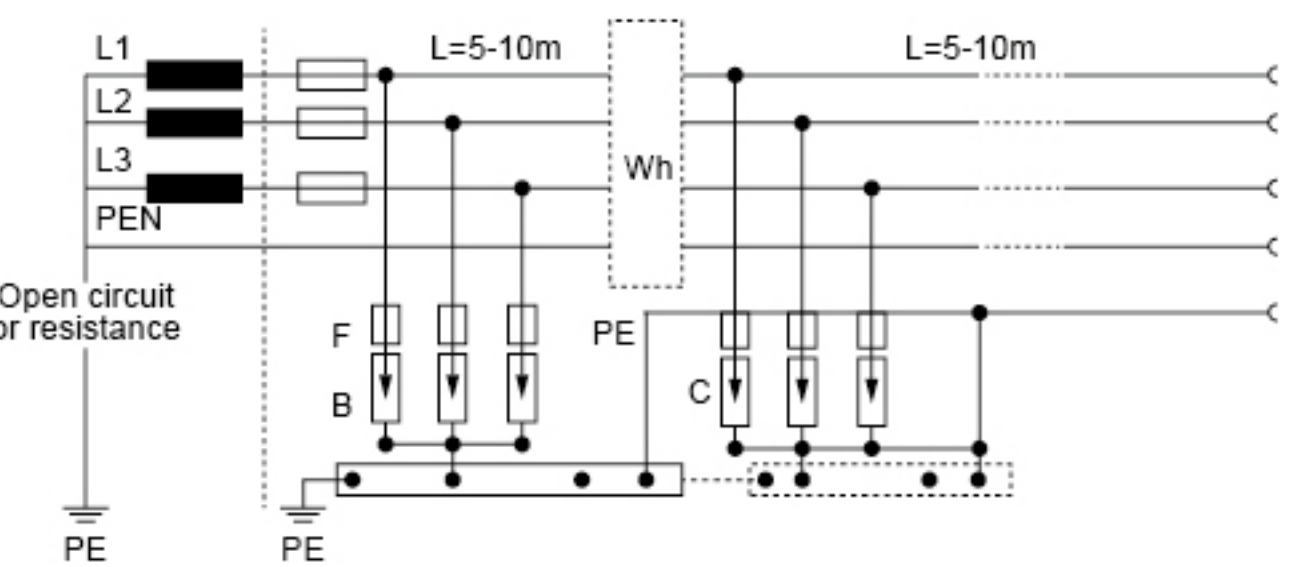
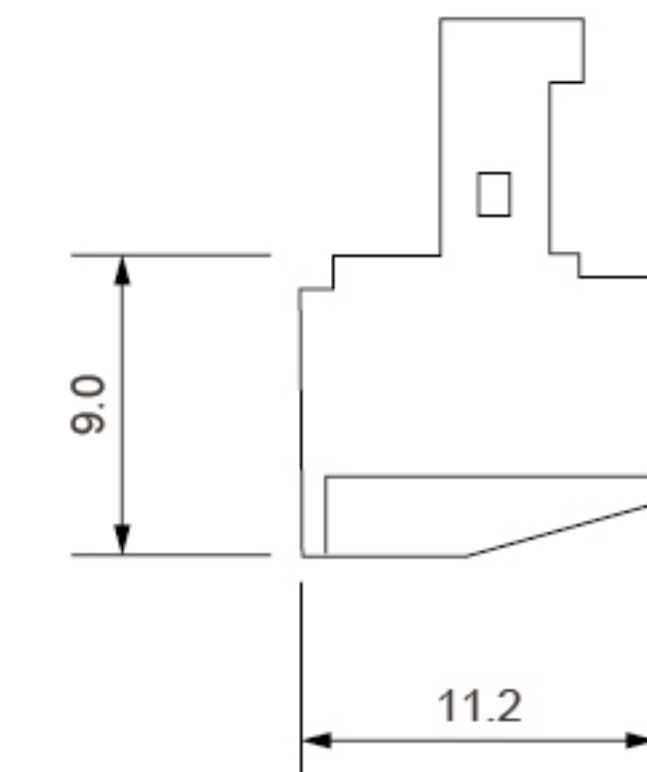
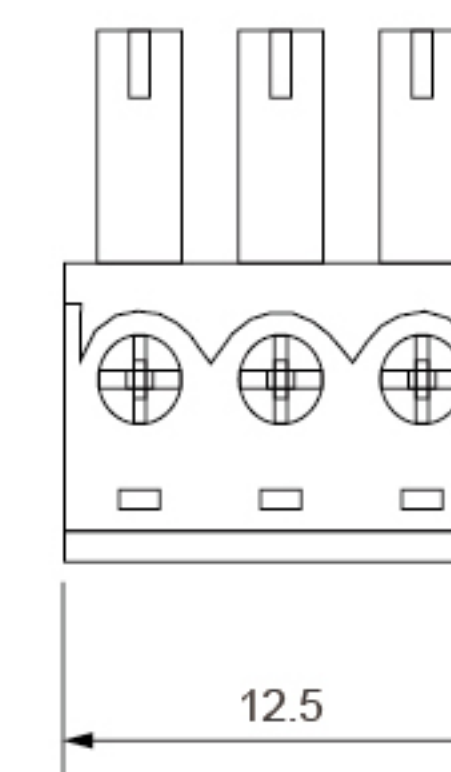
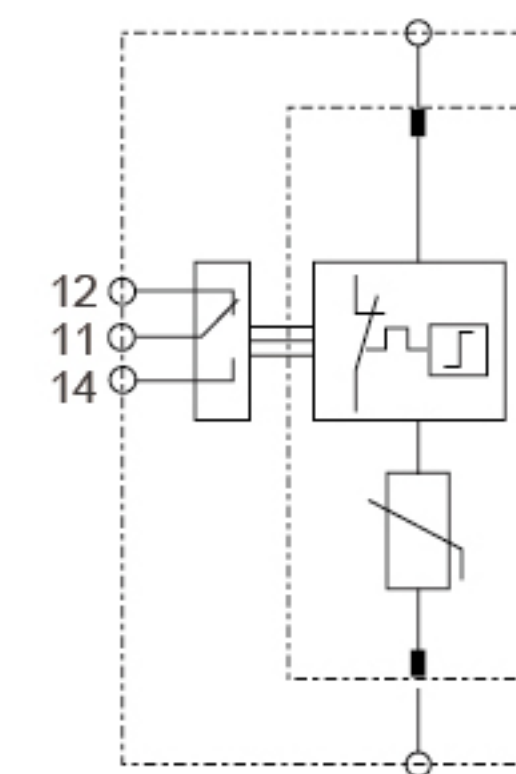
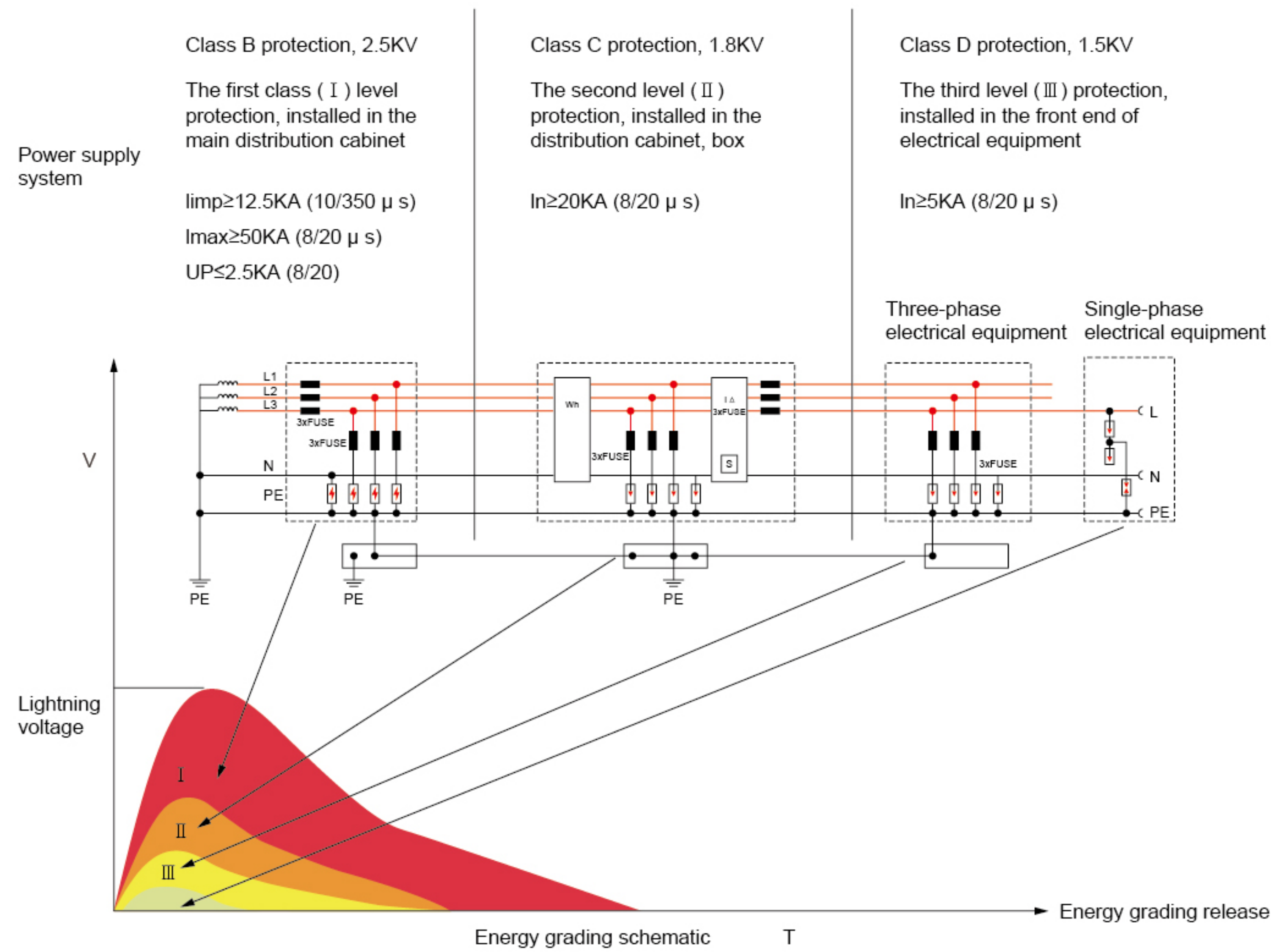


Figure 6



6.Application Schematic Selection of Surge Protective Device



7.Order Note

Following items should be marked when ordering	Ordering sample
Product name, model&Poles	To order the EBS2U Surge Protector, $I_{max}=60\text{KA}$ $I_n=10\text{KA}$, protection level is C, 1 Poles, $U_c=140$ and quantity is 100 pieces, should be marked:
Protection level	
Max.release current	
Max. continuous working voltage	surge protector EBS2U-60/C10/1P/140, 100PCS.
Quantity	