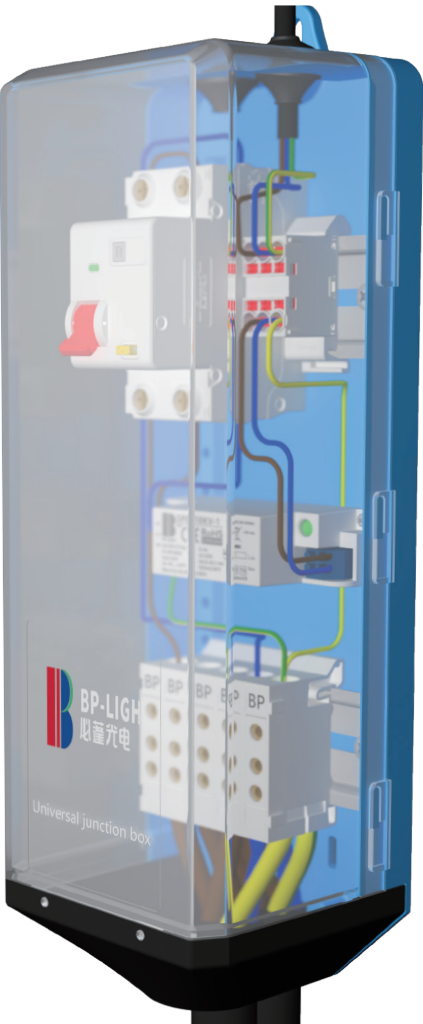




Pole Protection Junction Box

Universal Modular Street Light Junction Box

IP54-IK08 Class 2 Patented Component



Product Overview

The BP-GYJ8000 series intelligent street light junction box is a high-integration, high-flexibility and high-reliability modular power distribution and protection terminal developed specifically for smart city lighting systems. Adopting an innovative structural design, the product fully supports the free combination of DIN rail components and is compatible with mainstream protection, control and intelligent modules. It is widely applied in various outdoor lighting scenarios such as urban roads, parks, tunnels, squares and photovoltaic street lights. This junction box not only meets traditional power distribution demands, but also adapts to the future evolution of smart lighting, realizing "one-time installation and lifelong upgradability".

Product Advantages

- High Modularity** — Configurable on demand, flexible expansion and future upgrade support.
- Strong Compatibility** — Fully compatible with mainstream standard DIN rail devices without brand restriction.
- Simplified Installation** — Sliding quick-mount design greatly reduces construction and operation & maintenance costs.
- High Safety** — High-strength enclosure with IK08 impact resistance to ensure electrical safety.

Application Scenarios

Smart street lights on urban main roads: integrated time control, SPD and remote communication to realize energy saving and intelligent management.
Landscape lighting for parks and scenic spots: modular configuration enables flexible zoning lighting control strategies.
Highway and railway tunnel lighting: high protection grade adapts to humid, vibrating and dusty environments.
Integrated PV & energy storage street lights: built-in DC power supply and protection modules to support off-grid operation.

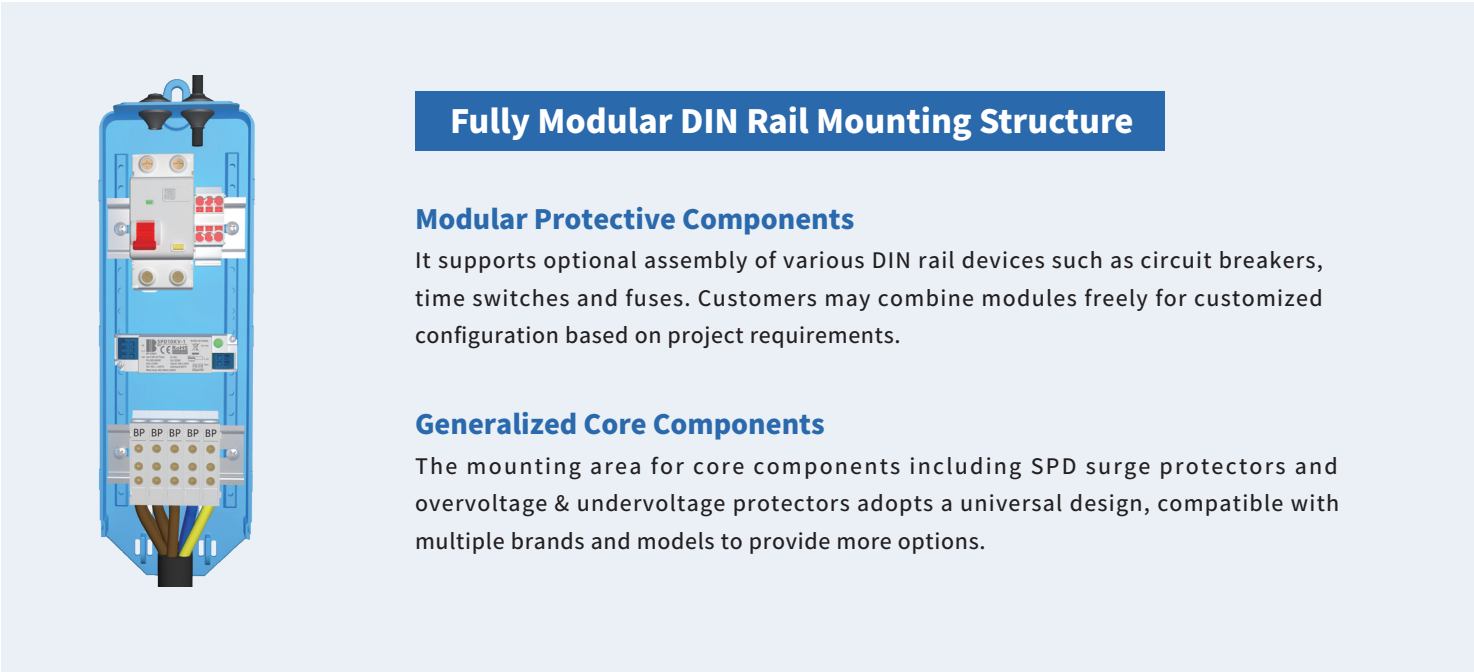
Flexible layout and free combination

35mm Standard DIN Rail

Fully compliant with the international DIN 35mm standard, ensuring universal applicability and wide market compatibility for seamless integration with existing electrical cabinets.

Adjustable Rail Position

The movable DIN rail inside the enclosure allows users to adjust its mounting position on the base plate according to component dimensions, maximizing space utilization.



Fully Modular DIN Rail Mounting Structure

Modular Protective Components

It supports optional assembly of various DIN rail devices such as circuit breakers, time switches and fuses. Customers may combine modules freely for customized configuration based on project requirements.

Generalized Core Components

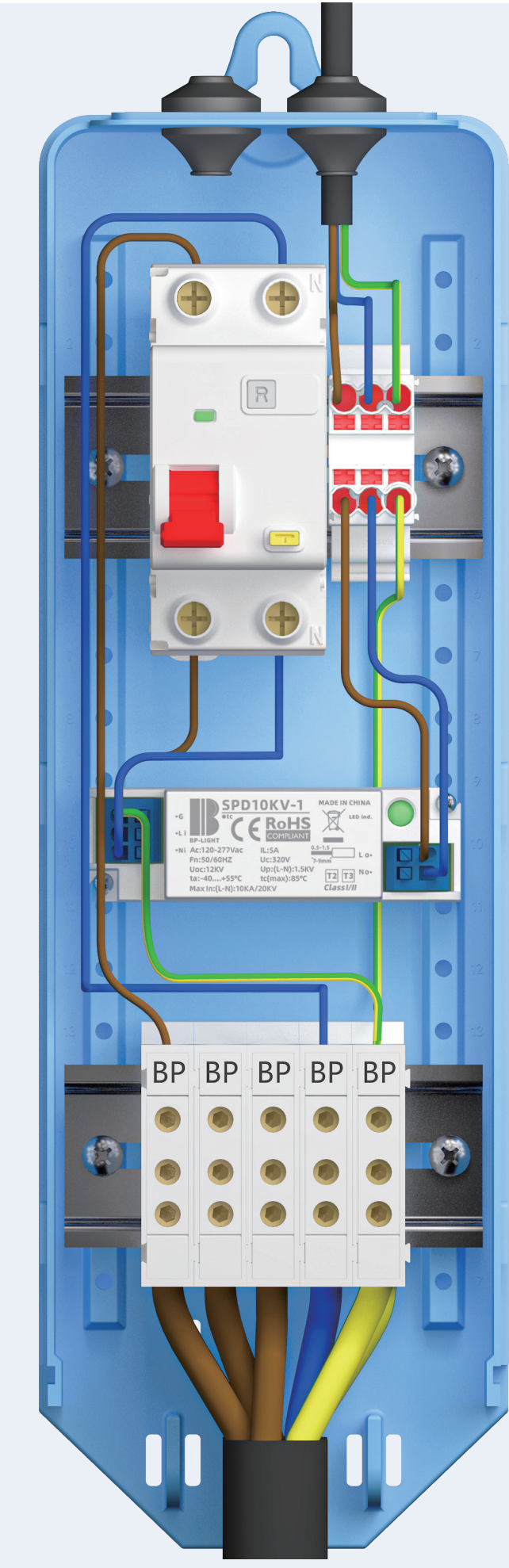
The mounting area for core components including SPD surge protectors and overvoltage & undervoltage protectors adopts a universal design, compatible with multiple brands and models to provide more options.

Fast & Convenient Installation

Sliding Quick-Mount Upper Cover Structure

Featuring an innovative sliding structure, the upper cover can be firmly fixed to the base plate without tools. It enables fast one-person operation, boosting installation efficiency by over 80% and greatly reducing labor costs and construction time.





Modular Protection Expansion System

It allows customers to select various standard DIN rail-mounted functional modules as required, including but not limited to:

- Miniature Circuit Breaker (MCB)
- Residual Current Device (RCD / RCBO)
- Time Control Switch (Time Switch)
- Fuse Holder
- Compact Switching Power Supply

All modules are plug-and-play with no custom opening required, greatly reducing project deployment and later maintenance costs.

Central Functional Expansion Area with High Versatility

A standardized mounting space is reserved in the middle section for flexible integration of:

- Surge Protective Device (SPD, Type II/III)
- Overvoltage & Undervoltage Protector (OVP/UVP)
- Compact switching power supply (e.g. 12V/24V DC output)
- Intelligent communication module (LoRa / NB-IoT, optional)

Compatible with mainstream DIN rail devices on the market, realizing "one enclosure for multiple functions and universal application".

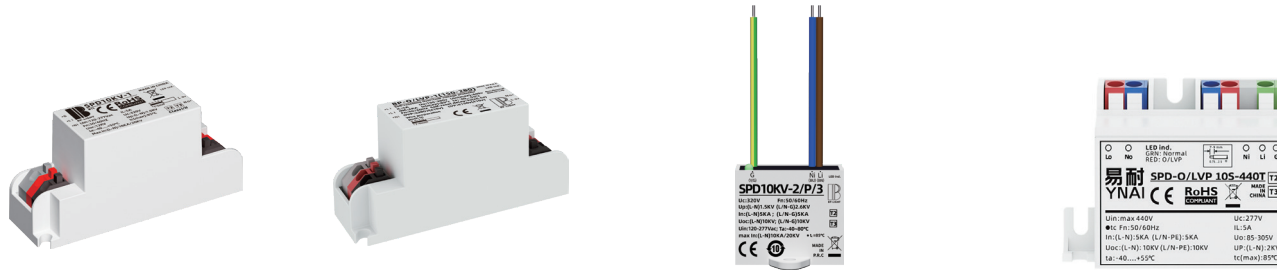
Connection Section: Innovative Two-in-One-Out Terminal Design

Equipped with patented two-in-one-out quick wiring terminals, it supports wire gauges from 0.5 to 25mm², simplifies main circuit tapping and eliminates the need for additional transition busbars.

It is also compatible with mainstream spring-type and screw-type wiring terminals on the market, allowing users to replace and upgrade freely.



Wire Connector	Air Circuit Breaker	Residual Current Protector	Fuse Holder
Fast and neat wiring with stable electrical conductivity. Wire stripping-free connection, easy for wiring, assembly, disassembly and later maintenance.	Manual switch on/off available, with overload and short-circuit protection. Reusable without replacement, safe, durable and easy to inspect.	Sensitive leakage and electric shock detection, tripping within milliseconds. Effectively prevent personal electric shock and leakage-caused fires.	Supports quick fuse replacement with safe and insulated structure. Automatic fusing under overload to protect rear electrical circuits at low cost.



Network configuration	TN	Input Voltage Range	0-440V	Network configuration	TN	Input Voltage Range:	0-440V
IEC SPD Type	Class II + III	Output Voltage range	150-280Vac	IEC SPD Type	Class II + III	Output Voltage range:	150-280Vac
EN SPD Type	Type 2+3	OVP	disconnected when mains voltage>280Vac	EN SPD Type	Type 2+3	OVP:	disconnected when mains voltage>280Vac
Format	Screwless connection	LVP	disconnected when mains voltage<150Vac	Format	Wire connection	LVP:	disconnected when mains voltage<150Vac
Product standards	IEC 61643-11 EN 61643-11	Anti-flickering from mains voltage spikes(3s)		Product standards	IEC 61643-11;EN 61643-11	Anti-flickering from mains voltage spikes(3s)	
Additional information	Class I luminaire	Soft start for lower inrush current		Additional information	Class I luminaire	Soft start for lower inrush current	
		Protection	L-N			Protection:	L-N, L-PE, N-PE
		OVP/LVP indicator indicator				Open Circuit Voltage (Uoc)	20kV, 1.2/50μs
		Series installation				Max discharge current: 20KA(one time), 8/20us	
		Terminal version ≤1.52				20KV SPD thermally protected	
		Suitable for Class I and II luminaire				O/LVP indicator and SPD EOL indicator	
						EN 61643-11 - T2&3	
						Series installation	
						Wire and terminal version	



Rail-mounted Connector	Rail-mounted Terminal Block MRK50	3-pole Rail-mounted Spring Terminal Block
Max. compatible with 3×25mm ² wires, specially designed for street lamp pole wiring.	Rated voltage: 750V. Optional terminal specifications: 2×16mm ² , 2×25mm ² , 2×35mm ² , 2×50mm ² .	Compatible with German WAGO 3×16mm ² terminal blocks with reliable brand support.

Technical Features

Maximum Capacity

- The input cable port can connect 2 pieces of 25mm² three-phase cables.
- Street lamp connection port is compatible with cables of 2.5mm² and below.
- For input cable ports, each terminal block max. supports 3 holes × 2 cables × 5 cores per cable × 25mm² per core.
- The input cable port can be equipped with 2 Cat5e Ethernet cables.

Optional Accessories

- Terminal block: for terminal marking and convenient maintenance.
- Wogo 3*16mm² Port

Compliance Standards

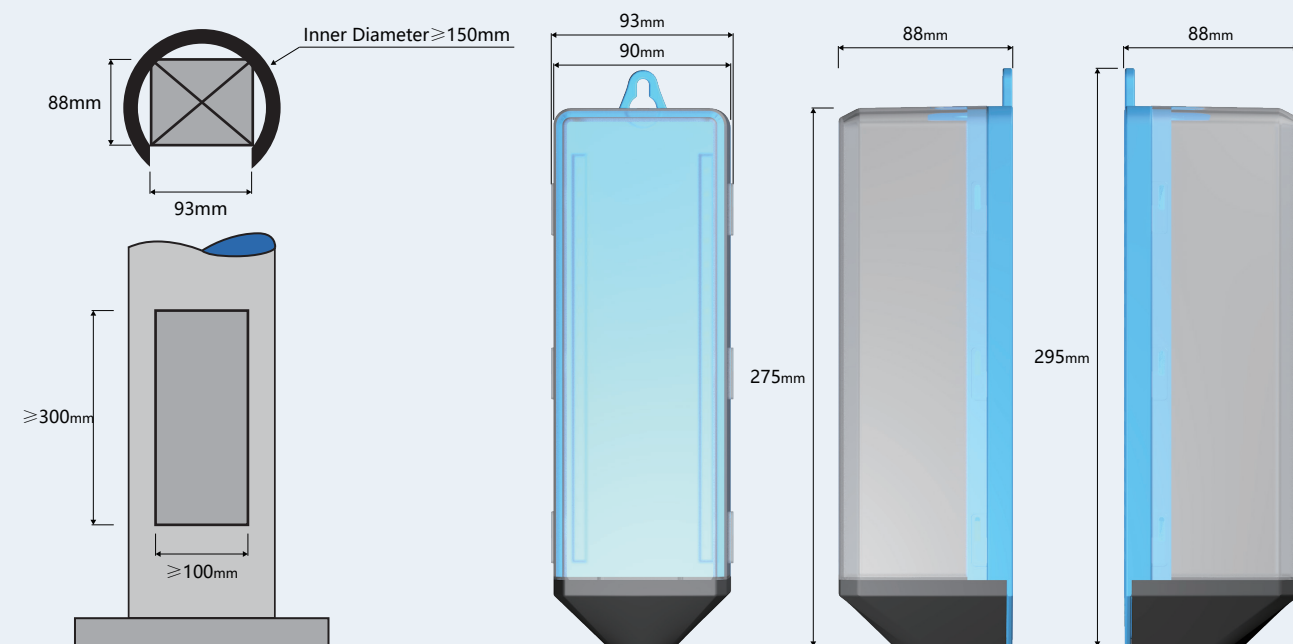
- EN 61439-2
- Compliant with IEC 60529
- IK08 Compliant with EN 62262 Standard
- Class 2
- 40°C ~ +105°C

Installation

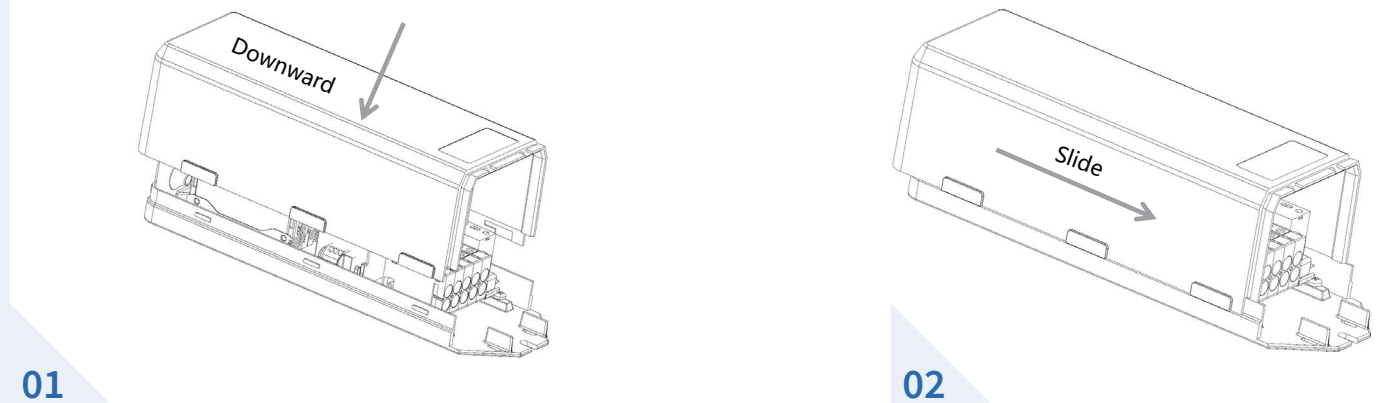
- Mounting lugs with 1 or 2 hooks.
- Fixed installation with M6 screws is available.

Standard Color

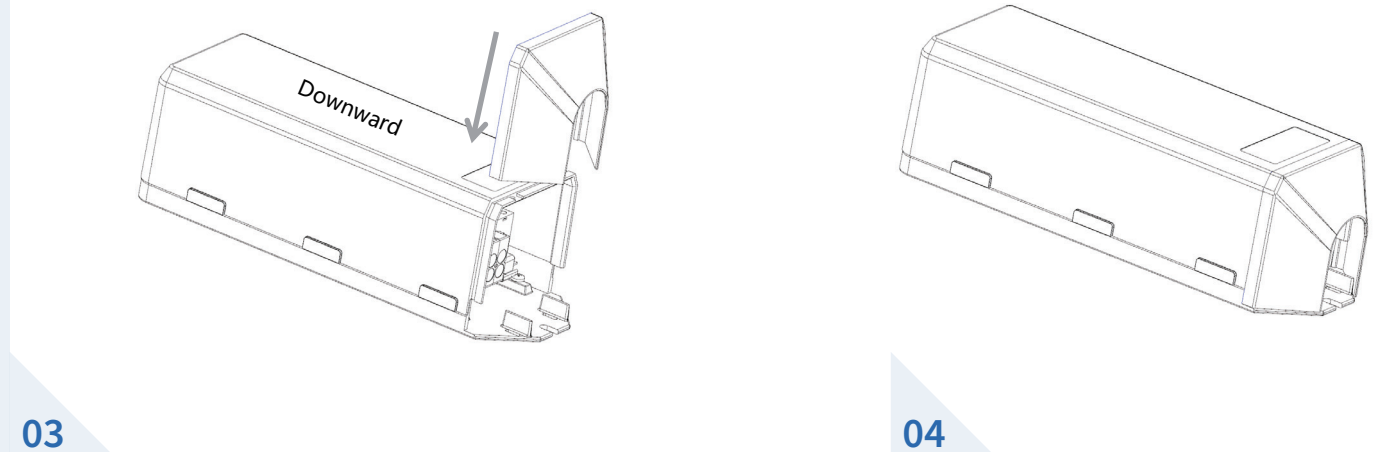
- Contact us for customized colors.



Convenient installation method diagram

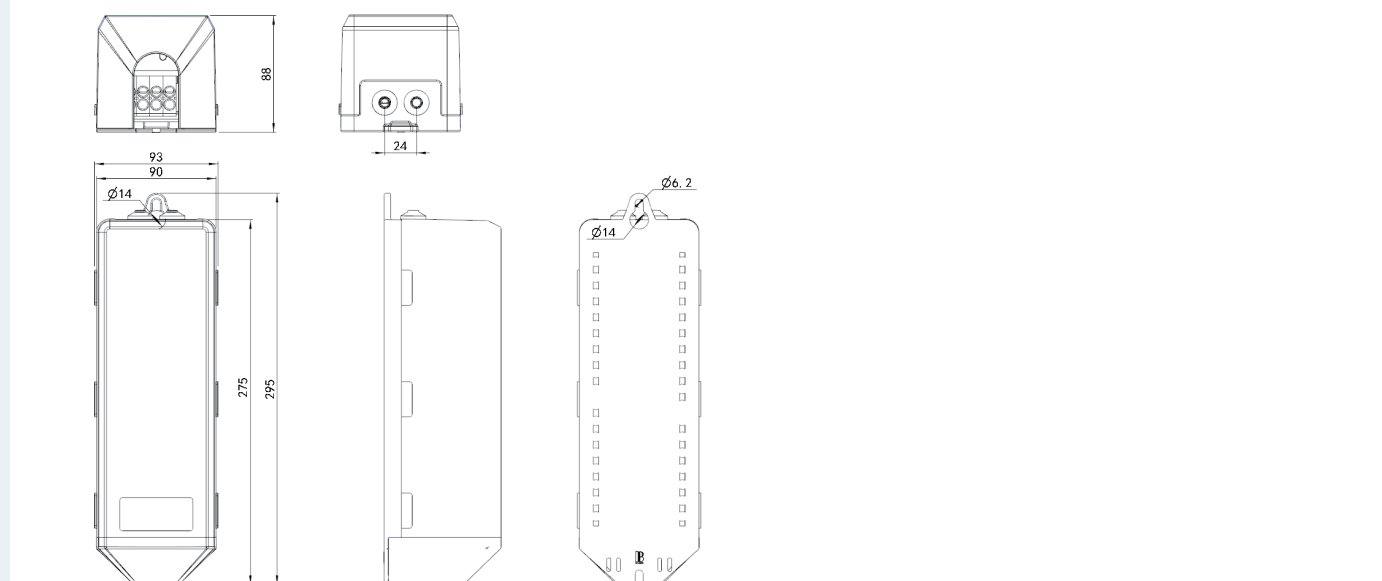


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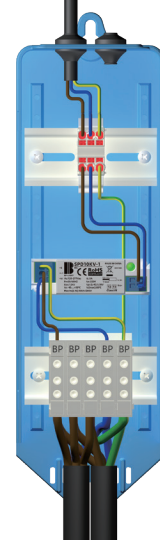
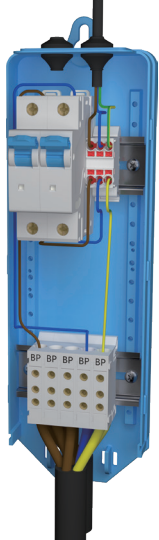
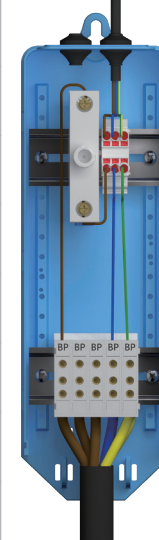
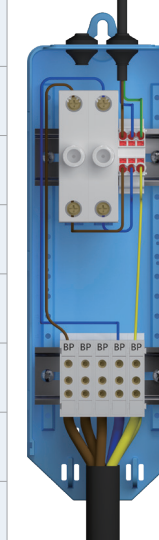
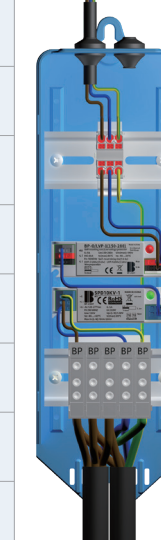
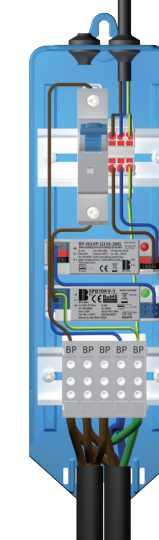
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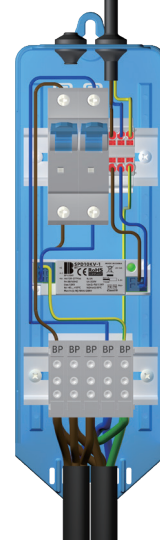
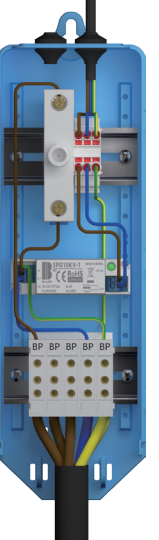
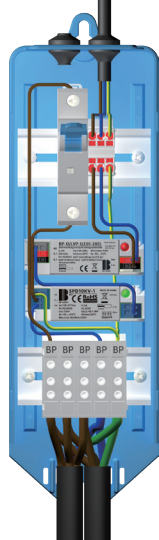
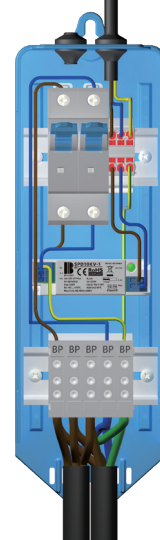
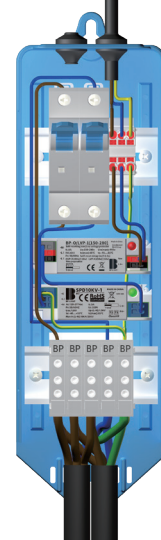
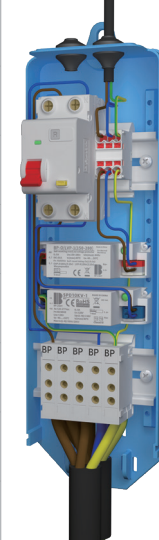
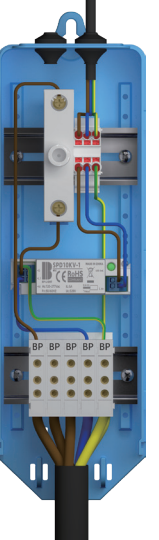
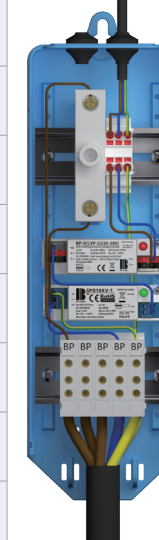
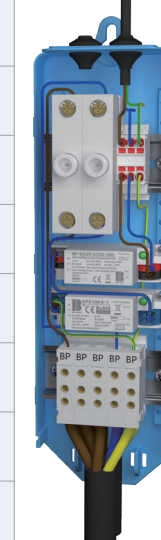
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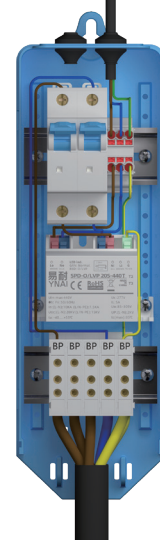
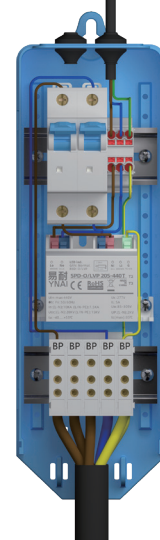
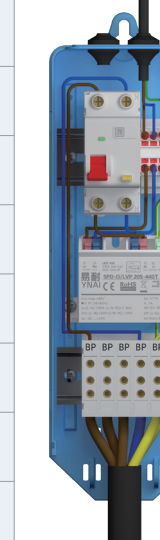


04

Convenient installation method diagram

Product description	10KV SPD	O/LVP	SPD-O/LVP	Circuit breaker(1P)	Circuit breaker(2P)	Residual Current Device (RCD)	Fuse(1P)	Fuse(2P)	10KV SPD+O/LVP	10KV SPD+Circuit breaker(1P)
10KV SPD										
O/LVP										
SPD-O/LVP										
Circuit breaker(1P)										
Circuit breaker(2P)										
Residual Current Device (RCD)										
Fuse(1P)										
Fuse(2P)										
10KV SPD+O/LVP										
10KV SPD+Circuit breaker(1P)										

Product description	10KV SPD+ Circuit breaker(2P)	10KV SPD+ Residual Current Device (RCD)	10KV SPD+Fuse(1P)	10KV SPD+Fuse(2P)	10KV SPD+ O/LVP+Circuit breaker(1P)	10KV SPD+ O/LVP+Circuit breaker(2P)	10KV SPD+O/LVP+ Residual Current Device (RCD)	10KV SPD+O/LVP+Fuse(1P)	10KV SPD+O/LVP+Fuse(2P)	SPD-O/LVP+ Circuit breaker(1P)
10KV SPD										
O/LVP										
SPD-O/LVP										
Circuit breaker(1P)										
Circuit breaker(2P)										
Residual Current Device (RCD)										
Fuse(1P)										
Fuse(2P)										

Product description	SPD-O/LVP+Circuit breaker(2P)	SPD-O/LVP+ Residual Current Device (RCD)	SPD-O/LVP+Fuse(1P)	SPD-O/LVP+Fuse(2P)	O/LVP +Circuit breaker(1P)	O/LVP +Circuit breaker(2P)	O/LVP + Residual Current Device (RCD)	O/LVP +Fuse(1P)	O/LVP+Fuse(2P)
10KV SPD									
O/LVP									
SPD-O/LVP									
Circuit breaker(1P)									
Circuit breaker(2P)									
Residual Current Device (RCD)									
Fuse(1P)									
Fuse(2P)				