

BH-BPR200525003

BR10-PR Series Solid Insulated Recloser



Buheung BH SYSTEM Co., Ltd

Your system more convenient , and more reliable

Introduction

The BR10-PR series reclosers are a kind of automatic circuit recloser installed on poles or in substations on low and medium distribution networks up to 38kV with the dedicated controls to detect and interrupt faults.

These reclosers are used for detecting and interrupting faults up to 16kA , making and breaking loads below rated current by remote and manual operations, and integrating system for operation of distribution automation system using various communications and protocols, site-centered auto-sectionalizing to isolate faulty sections from the system, and load shedding to improve power quality interfacing with dedicated controls.

The BR10-PR series recloser is a three-phase solid insulated recloser adopting the latest HCEP (Hydrophobic Cycloaliphatic Epoxy) insulation technology and superior vacuum breaker to ensure excellent insulation performance and operating characteristics.

The BR10-PR series recloser incorporates a magnetically actuated operating mechanism, PMA(permanent magnetic actuator) with 2 coils, which could operate reliably 10,000 times at full load. The adopted mechanism dose not require any power supply or mechanical components to hold contacts open or closed.

A lever used to trip and block all closing operations is provided as standard on the BR10-PR series reclosers. In addition, the manual closing lever is optionally provided for powering load in the event of an emergency.

The BR10-PR series reclosers have built-in voltage and current sensors for line monitoring, and fault detection and protection. For those operations, voltage sensors are built into each bushing of each side in the recloser, and current sensors are built into the lower bushings of the source side. In addition to the status of main contact position and the trip lever are provided to the recloser control.

Universal clamp or NEMA PAD type terminals are provided as bushing terminal, and wildlife protectors to prevent exposure of the terminal are provided as an option.

Various types of mounting brackets can be provided for round poles, square poles,

frame structure of substations, and gantry structures.

The control cable for interfacing various signals between the recloser and the control is made of high quality materials with ultraviolet resistance, and all connectors are watertight and all parts soldered in the connectors connected to the control cable are molded using moisture resistance material to prevent degradation of characteristics due to moisture.

The enclosure of the BR10-PR series reclosers are basically made of stainless steel, the position indicator and the operation counter are on the bottom of the enclosure, and the tripping and closing lever are located on the side to be operated with a hot stick from the ground.

The circuit for CT open protection and voltage divider of voltage sensors are equipped into the enclosure of the recloser. The BR10-PR reclosers provide voltage and current signals to the control using capacitive voltage sensors and 1000:1 ratio CT by default.

Available Options and Accessories

- Manual closing lever
- Control or power cable of more than standard length
- Surge arrester and mounting bracket
- External PT for auxiliary supply and mounting bracket
- Brackets other than standard mounting brackets
- Terminals other than standard terminals
- BR-10R/RN, BR-10KR, or BR-10KR-DIR control
- Wildlife protectors



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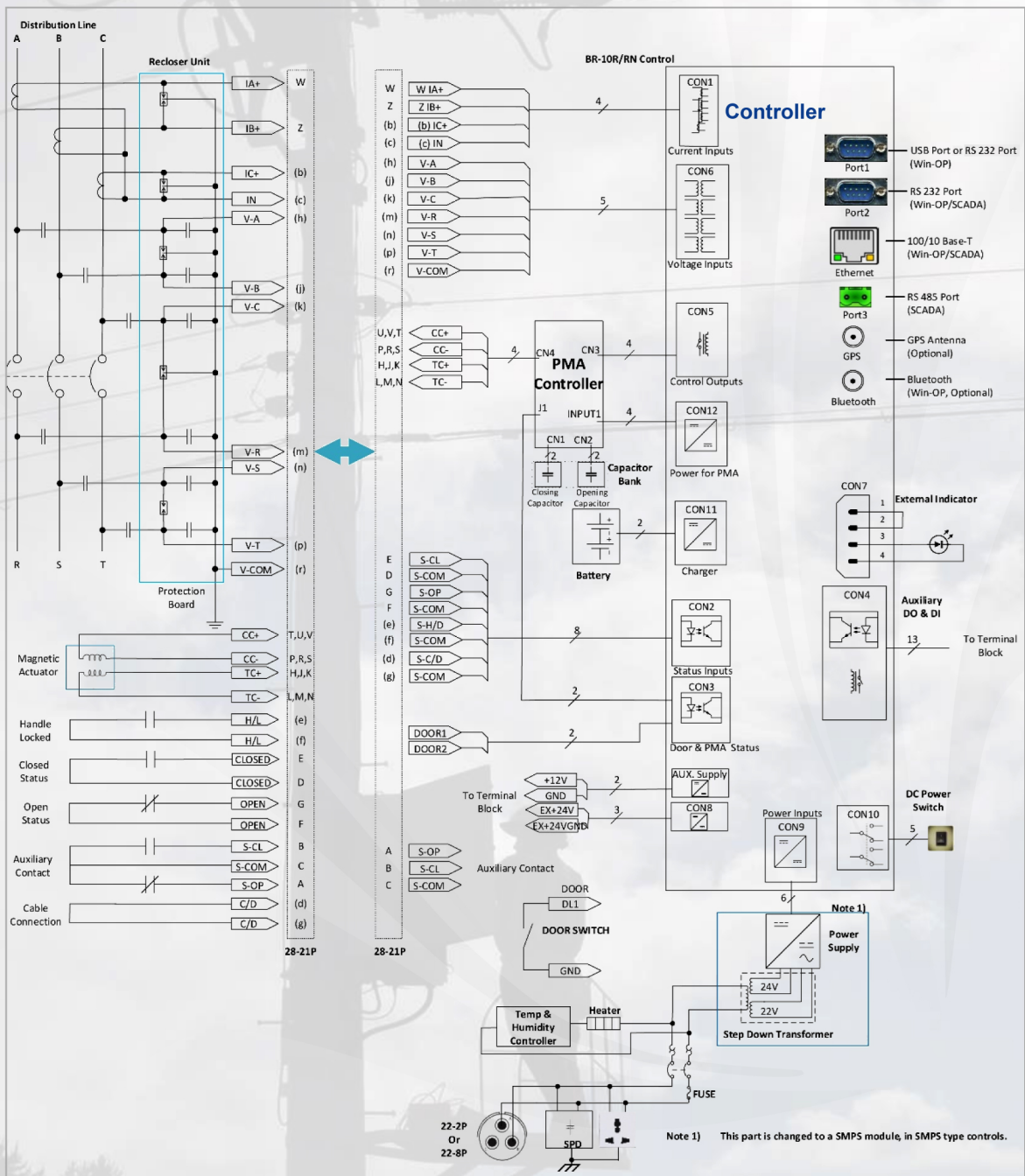
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1. Universal Clamp 2. NEMA 2 Holes Pad 3. Wildlife Protector for Upper Terminal 4. Wildlife Protector for Lower terminal

Interface between the BR10-PR Recloser and Control

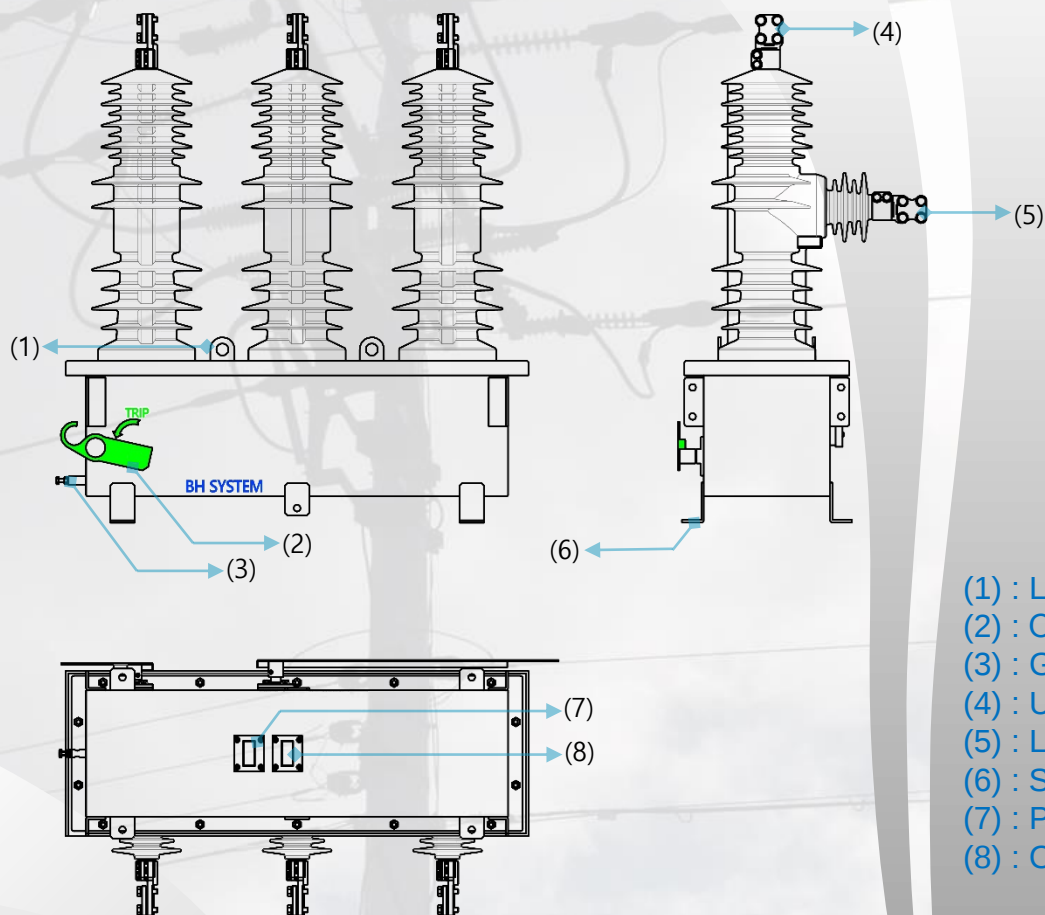
The BR10-PR series reclosers are connected to the BR-10R/RN, BR-10RN-KR, or BR-10RN-KR-DIR controls via control cables as shown below.

Three phase voltages on the source and load side, three phase currents, main contact position information and its auxiliary contact, and tripping lever status are provided to the control through the control cable. In addition, the driving signal to operate the recloser from the control is connected to the recloser.



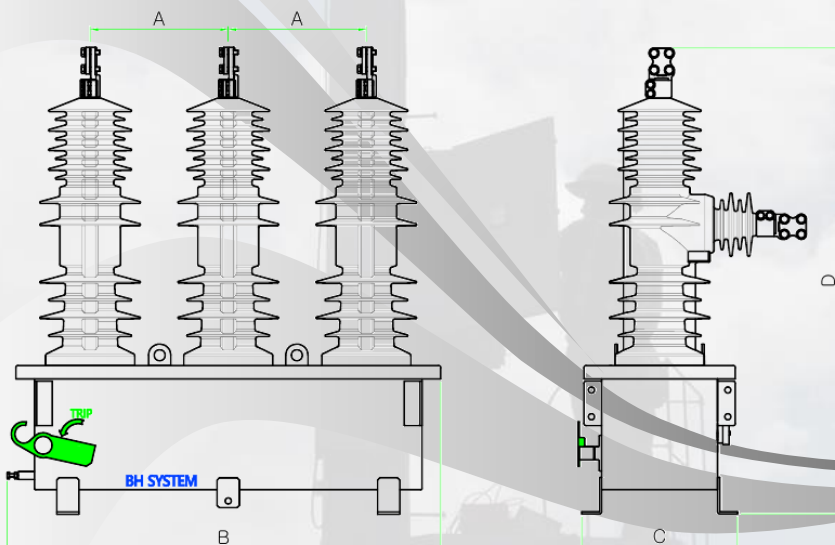
Connection diagram of BR10-PR recloser and its control

External Appearance



- (1) : Lifting Eye
- (2) : Operating handle
- (3) : Ground Terminal
- (4) : Upper Terminal
- (5) : Lower Terminal
- (6) : Stabilizer
- (7) : Position Indicator
- (8) : Operations Counter

Dimensions(mm)



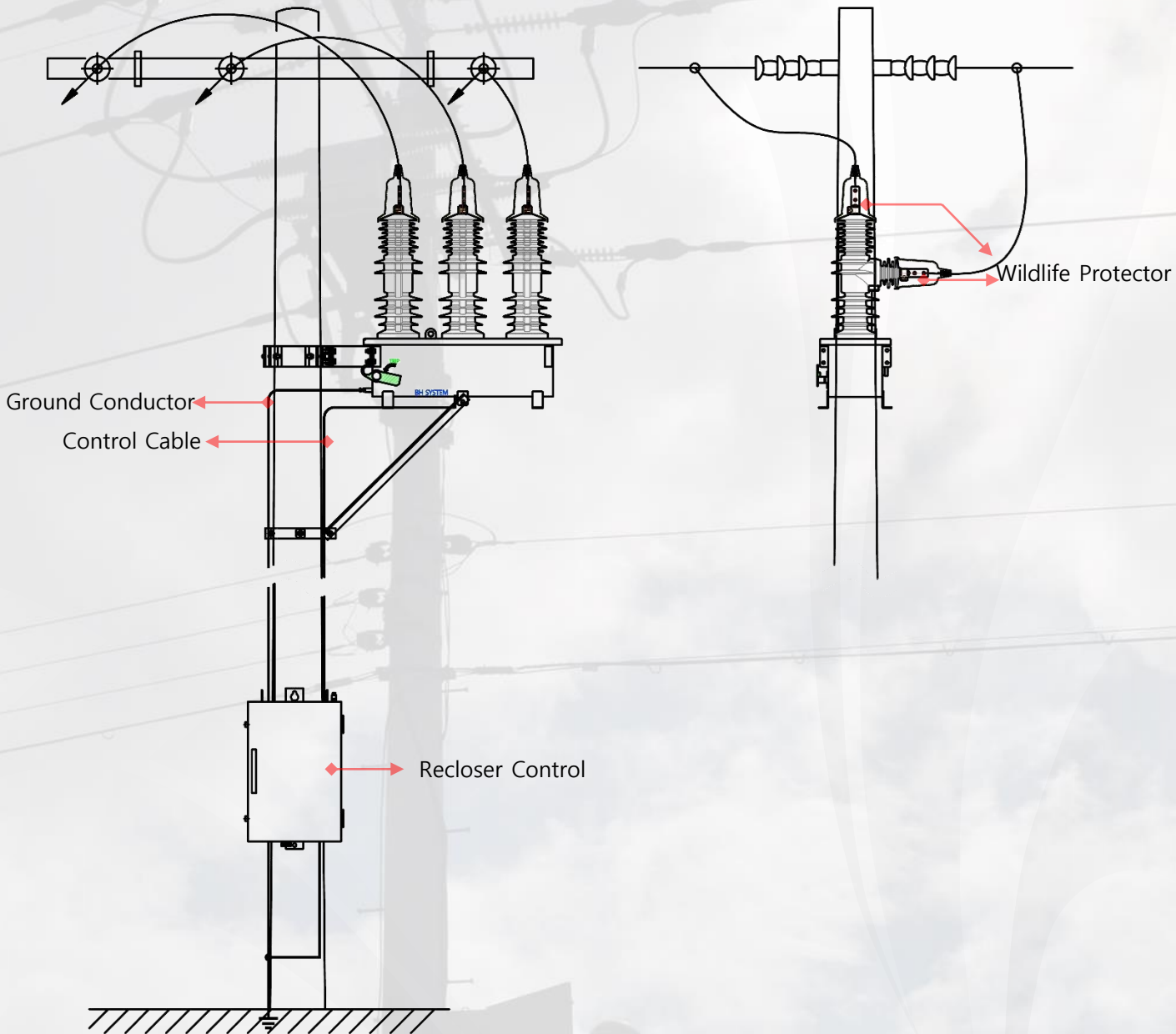
	BR10-PR-27	BR10-PR-38
A	310	400
B	954	1134
C	340	340
D	1045	1258

Dimensions of BR10-PR series reclosers

Ratings

Modem No.	BR10-PR-27	BR10-PR-38
Rated maximum voltage(U_r)	~ 27kV	38kV
Rated continuous normal current(I_r)	800A	
Rated lightning impulse withstand voltage(U_p)	150kV	175kV
Rated power-frequency withstand voltage(U_d) - Dry/Wet, 1min	60/50kV	70/60kV
Rated frequency(F_r)	50/60Hz	
Rated short-time withstand current(I_k) / duration(t_k)	16kA / 3sec	
Rated peak withstand current(I_p)	40kA	
Rated cable charging switching current	25A	40A
Rated line charging switching current	5A	5A
Rated symmetrical interrupting current	16kA	
Creepage distance	1,050mm	1,332mm
H1-H2 creepage distance		
H2-ground creepage distance	790mm	1,205mm
Phase to phase distance	310mm	400mm
Mechanical endurance class	10,000 times	
Electrical endurance class	10,000 times	
Class of CT & voltage sensor	Class 1 or superior	
Operating mechanism	Magnetic actuator with tripping lever	
Recloser unit weight	140kg	210kg
Control unit weight	67kg	
Control Voltage	- SMPS Type : 87 ~ 264Vac - Transformer Type : $\pm 10\%$ of normal rated voltage	
Battery	- Capacity : up to 25AH - Backup hold time : up to 48hours	
Degrees of protection – recloser / control unit	IPX8 / IP54, by default	
Ambient temperature	-30 to +55°C	
Altitude	Up to 2,000m	
Applied Standard	IEC 62271-111(2012 or 2019)	

General Arrangement



Note : The ratings and diagrams in this document may be changed arbitrarily for better performance or user specification.

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