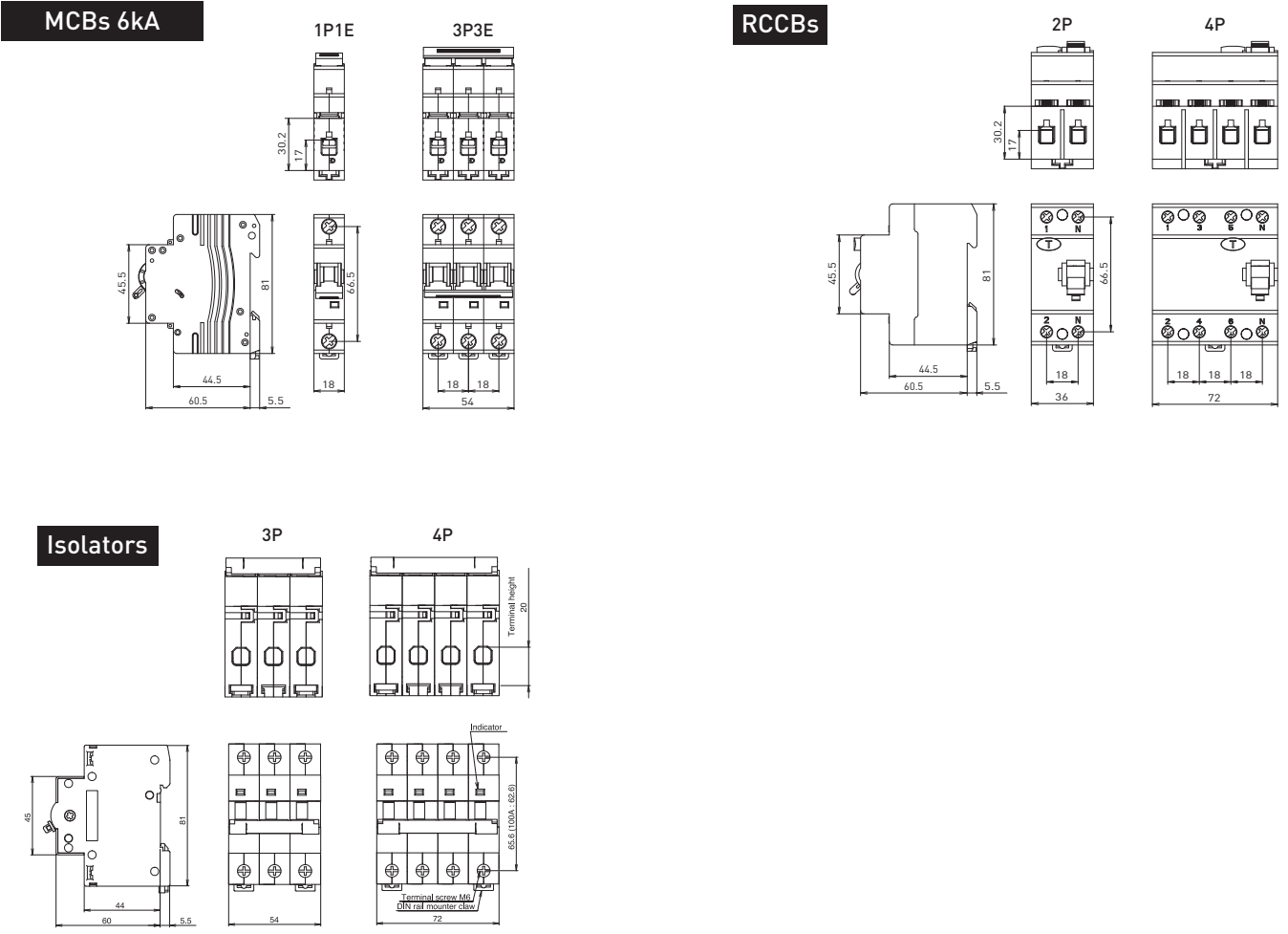


Overall and Installation Dimension (mm)



Precautions for installation and use

- Circuit Breakers conform to the IEC60898-1(or IEC61008-1 or IEC60947-3), which is intended for use in homes and similar facilities. Do not install for other use.
- The personnel for installing and maintaining circuit breakers shall be qualified electric worker.
- Use circuit breakers under environment and conditions defined in IEC standard.

[Category of warranty]

If the products become defective which are responsible to manufacturer, replacements of the defective products will be done. However, in case of the following cases, the warranty is invalid.

- (1) Applied to the safety equipment or control system used for the area listed below:
  - ☐ Railway, aviation or medical
  - ☐ There is the possibility to harm human/animal life, to damage human body or to influence personal property.As these products are designed to be used only for electrical equipment, the customer is requested to consider safer design, like redundant design, fire-spread or anti-malfunction design when the customer intend to use the products under the area listed above.
- (2) Improper use or incorrect installation/operation by the customer which are not complied to the specification of the products.
- (3) Defects caused by any reasons originating from other products or matters.
- (4) Defects caused by unauthorized modifications or repairs by the customer.
- (5) Other defects caused by natural disaster.

This warranty compensates only replacement of the products and excludes the induced damage by defect of the products.

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Specifications are subject to change without notice.

■ 202306

Panasonic

A High Quality Breaker  
for Every Home's Protection



DIN MODULAR TYPE

MCBs, RCCBs, Isolators

Miniature Circuit Breakers  
Residual Current Circuit Breakers

2023.6





## Safe and comfortable life delivered by Panasonic

Panasonic, with more than 100 years of expertise forged in the Electrical Construction Material field with its Wiring Devices series, has also been expanding Switchgear devices business throughout the world. Panasonic focuses on providing high durability and performance for many years of reliable use, and selects materials with full consideration of the global environment. Certification by third-party institutions and compliance with a wide range of international standards attest to these efforts. This approach is also used with Panasonic's MCBs, to allow our worldwide customers to experience a new level of safety and comfort in your life.



### Adequate Line-Up

Rated breaking capacity (Icn): 6kA  
Rated current (In): 6,8,10,13,16,20,25,32,40,50,63  
Thermo-magnetic release characteristic: C

### Clear Indicator

Current markings indicated by 2 colors(Green / Red)  
Easy to know the status(ON / OFF)



On : Red



Off ,Trip : Green



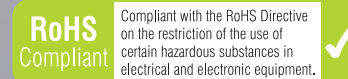
IEC60898-1

### Compliant with IEC standards

Panasonic's products have been recognized and certified by worldwide famous organizations as the complied products with IEC(International Electrotechnical Commission) standards, the top reference for electrical and electronic safety standards.

### Compliant with the ECAS & UAE RoHS Directive

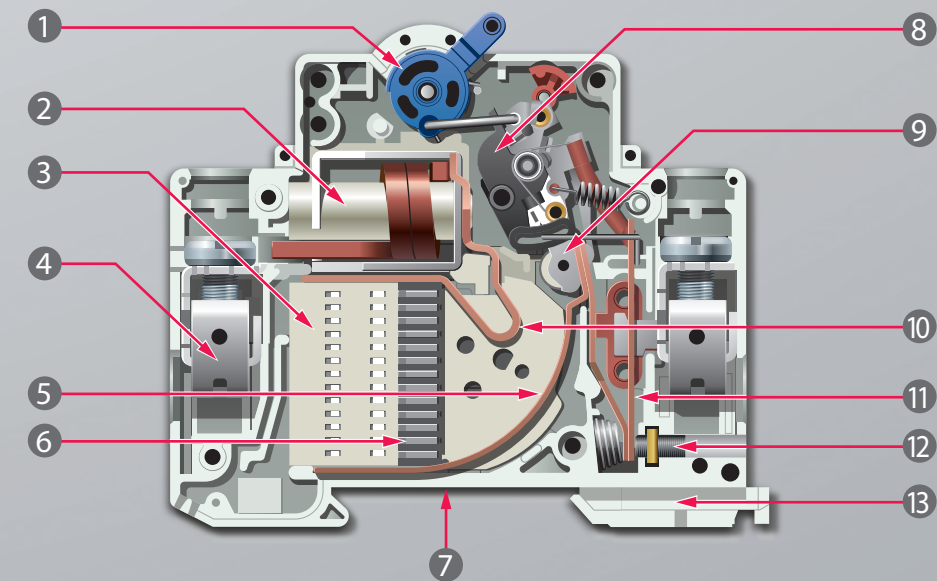
Panasonic's manufacturing processes are based on management standards for chemical substances by complying with the ECAS & UAE RoHS Directive in order to provide with all of our customers safer products with less impact on the environment.



## THE TRIPPING MECHANISM OF MCBs IS THERMAL MAGNETIC TYPE

**Thermal operation** - The thermal operation provides protection from moderate overloads. Under overload condition, a thermo-metallic element (bimetallic strip) deflects until it operates a latching mechanism allowing the main contacts to open.

**Magnetic operation** - In magnetic operation, large overloads or short circuit current actuates a solenoid causing a plunger to strike the latching mechanism, rapidly opening the main contacts.





- |                      |                          |                                |
|----------------------|--------------------------|--------------------------------|
| 1 Operating Knob     | 6 Arc Chute Plate        | 11 Thermostatic Bi-metal Strip |
| 2 Magnetic Element   | 7 Body or Housing of MCB | 12 Calibration Screw           |
| 3 Arc Chute Assembly | 8 Operating Mechanism    | 13 DIN Clip                    |
| 4 Terminal           | 9 Moving Contact         |                                |
| 5 Arc Runner         | 10 Arc Horn              |                                |


## TRIPPING CHARACTERISTICS

Based on the tripping Characteristics, MCBs are available in C Curves to suit different types of applications.

**C CURVE:** For protection of the electrical circuits with equipments that cause surge current (Inductive Loads and Motor Circuits). Short Circuit release is set to 5-10 times the rated current (In).

Table of Specifications by series

Category	MCBs	RCCBs
	BD-63AA	BDR-63AA(ACType)
		
Reference Standard	IEC60898-1	IEC61008-1
Electrical properties		
Pole	1P, 3P	2P, 4P
Rated current(In)	6,8,10,13,16,20,25,32,40,50,63A	25,40,50,63A
Rated voltage(Ue)	240~[1P] / 415V~[3P]	240~[2P] / 415V~[4P]
Rated conditional residual operating current (IΔn)	-	30mA, 100mA
Rated frequency	50/60Hz	
Rated impluse withstand voltage(1.2/50)(Uimp)	4,000V	
Rated short-circuit breaking capacity[Icn]	6kA	-
Mechanical properties		
Mechanical endurance	20,000 cycles	4,000 cycles
Electrical endurance	4,000 cycles	2,000 cycles
Protection degree	IP20	
Operating temperature	-10°C~60°C	
Other properties		
Terminal connection type	Cable/Pin-typebusbar	
Connections	1mm² to 25mm² for Cu conductors	
Tightening torque	2.0Nm	
Status display	On: Red Off,Trip: Green	



Category	Isolators
	 * Utilization category: AC 22A
Reference Standard	IEC60947-3
Electrical properties	
Pole	3P, 4P
Rated current(In)	40,63,100A
Rated voltage(Ue)	415V~[3,4P]
Rated conditional residual operating current (IΔn)	-
Rated frequency	50/60Hz
Rated impluse withstand voltage(1.2/50)(Uimp)	6,000V
Rated short-circuit breaking capacity[Icn]	-
Mechanical properties	
Mechanical endurance	30,000 cycles
Electrical endurance	20,000 cycles (40A,63A)/10,000 cycles (100A)
Protection degree	IP20
Operating temperature	-10°C~60°C
Other properties	
Terminal connection type	Cable/Pin-type busbar
Connections	40A/63A: 4 mm² to 25 mm² for Cu conductors 100A: 10 mm² to 50 mm² for Cu conductors
Tightening torque	2.5 Nm
Status display	On: Red Off: Green

MCBs (IEC60898-1)

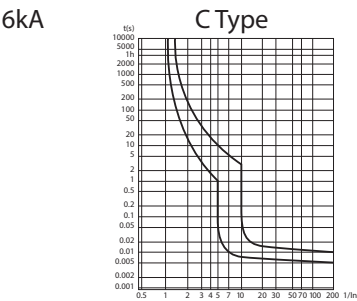
Miniature Circuit Breakers

BD-63AA 6kA

Rated short-circuit breaking capacity[ <i>I</i> <sub>cn</sub> ]	6kA
Rated voltage ( <i>U</i> <sub>e</sub> )	240V~(1P) / 415V~(3P)
Mechanical endurance	20,000 Cycles
Electrical endurance	4,000 Cycles
Operating temperature	-10°C~60°C
Terminal connection type	Cable / Pin-type busbar
Connections	25mm <sup>2</sup>
Thermo-magnetic release characteristic	C
Energy limiting class	Class3

		
	MCBs 6kA	
	1P1E	3P3E
6A	BBD1061CNTF	BBD3063CNTF
8A	BBD1081CNTF	BBD3083CNTF
10A	BBD1101CNTF	BBD3103CNTF
13A	BBD1131CNTF	BBD3133CNTF
16A	BBD1161CNTF	BBD3163CNTF
20A	BBD1201CNTF	BBD3203CNTF
25A	BBD1251CNTF	BBD3253CNTF
32A	BBD1321CNTF	BBD3323CNTF
40A	BBD1401CNTF	BBD3403CNTF
50A	BBD1501CNTF	BBD3503CNTF
63A	BBD1631CNTF	BBD3633CNTF

Characteristics Curves





RCCBs (IEC61008-1)

Residual Current Circuit Breakers

BDR-63AA (AC Type)



Rated conditional short-circuit current[ <i>I</i> <sub>cn</sub> ]	10kA
Rated voltage ( <i>U</i> <sub>e</sub> )	240V~(2P) / 415V~(4P)
Rated conditional residual operating current ( <i>I</i> <sub>Δn</sub> )	30mA, 100mA
Rated residual non-operating current ( <i>I</i> <sub>Δno</sub> )	15mA, 50mA
Break time under <i>I</i> <sub>Δn</sub>	≤0.1s
Mechanical endurance	4,000 Cycles
Electrical endurance	2,000 Cycles
Operating temperature	-10°C ~ 60°C
Terminal connection type	Cable / Pin-type busbar
Connections	25mm <sup>2</sup>
Type	AC

			
Rated current ( <i>I</i> <sub>n</sub> )	Rated residual short-circuit current ( <i>I</i> <sub>Δc</sub> )	RCCBs	
		2P	4P
40A	30mA	BBDR24030TF	BBDR44030TF
	100mA	BBDR24040TF	BBDR44040TF
63A	30mA	BBDR26330TF	BBDR46330TF
	100mA	BBDR26340TF	BBDR46340TF

Isolators (IEC60947-3)

Isolators

Rated voltage( <i>U</i> <sub>e</sub> )	415V~(3,4P)
Mechanical endurance	30,000
Electrical endurance	20,000 cycles (40A,63A)/10,000 cycles (100A)
Operating temperature	-10°C ~ 60°C
Terminal connection type	Cable/Pin-type busbar
Connection	25mm <sup>2</sup>
UtilizationCategory	AC 22A

		
Rated current ( <i>I</i> <sub>n</sub> )	Isolators	
	3P	4P
40A	BBDS340HF	BBDS440HF
63A	BBDS363HF	BBDS463HF
100A	BBDS3100HF	BBDS4100HF