

# Miniature Circuit Breakers & Residual Current Circuit Breakers

**CÔNG TY CỔ PHẦN THIẾT BỊ ĐIỆN HOÀNG PHƯƠNG**

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# Miniature Circuit Breakers



**BK63 series**



**BTK63 series**



**Alarm switch**  
(for BK63)

**Auxiliary switch**

MCB is applicable to electric circuit with rated voltage 230/400V, 240/415V AC, frequency 50/60Hz and rated current is up to 63A.

The product provides against overload and short circuit and equipments in household and commercial installations. MCB is also used as non-frequent changeover of electric circuit.

## Tripping characteristics

### Type B

Instant tripping characteristics :  $3 \sim 5I_n$   
Application : computers and electronic equipments

### Type C

Instant tripping characteristics :  $5 \sim 10I_n$   
Application : general load such as bulbs , motors

### Type D

Instant tripping characteristics :  $10 \sim 20I_n$   
Application : high current surge device  
such as transformers, motors with heavy load

## Approval

CE marking


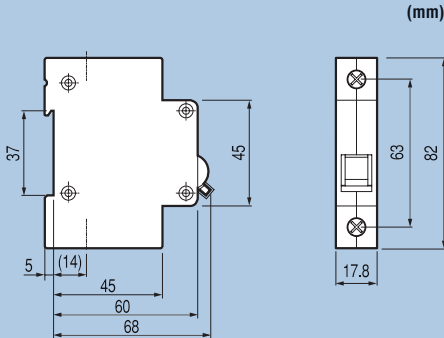
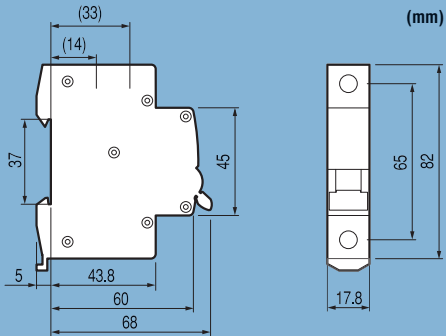
CB Certificate

## Colored handles

Easy to distinguish the rated current of the MCB by means of colored handle.

1A	Black
2A	Pink
3A	Pink
4A	Brown
6A	Green
10A	Red
16A	Grey
20A	Blue
25A	Yellow
32A	Purple
40A	Black
50A	White
63A	Copper-colored

## Specifications

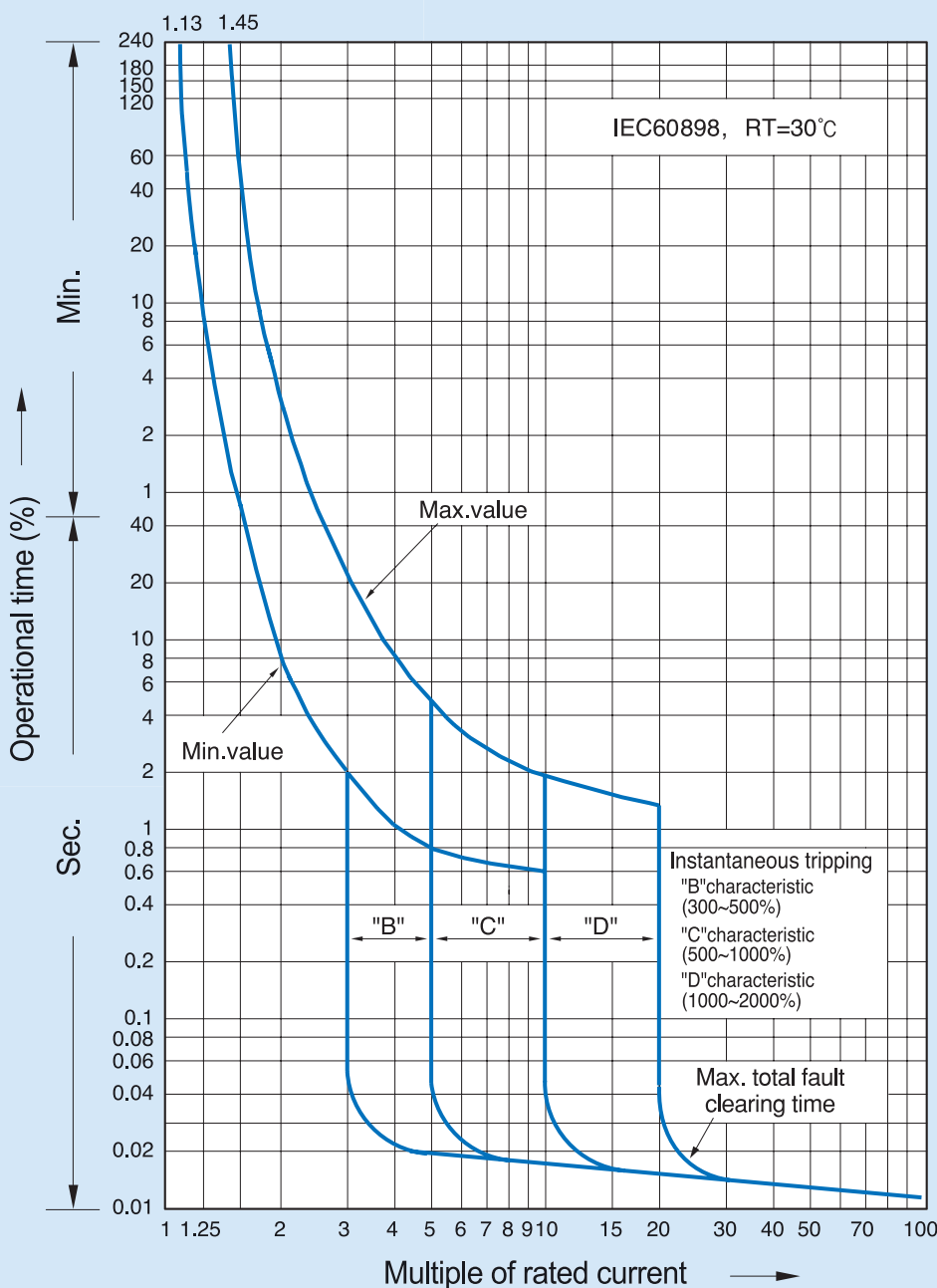
Type	BK63		BTK63	
Protection	Overload and short circuit			
Rated current	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63A			
Characteristics	B, C, D curve			
Number of poles	1P, 1P+N, 2P, 3P, 3P+N, 4P			
Breaking capacity	1P	2, 3, 4P	1P	2, 3, 4P
	6kA at 230/400VAC	6kA at 400VAC	10kA at 240/415VAC	10kA at 415VAC
Standards	IEC60898			
Approval	SEMKO CB scheme		KEMA CB scheme	
Type of trip	Thermal magnetic release			
Electrical endurance	6,000 operations		8,000 operations	
Installation	35mm DIN rail			
Width	17.8mm per pole			
Type of terminal	Lug type (Cable up to 25mm²)			
Alarm switch (Optional)	 <p><b>1changeover contact</b> 6A at 230VAC, 3A at 415VAC (AX) 6A at 230VAC, 3A at 415VAC (AL) 2A at 48VAC, 1A at 125VAC <b>Lug terminal</b> Cable capacity 2.5mm² <b>9mm wide</b></p>		Not applicable	
Dimension				

## Characteristic curve and compensation curve

Characteristic curve For type BK63, BTK63

Compensation table

Operating curves

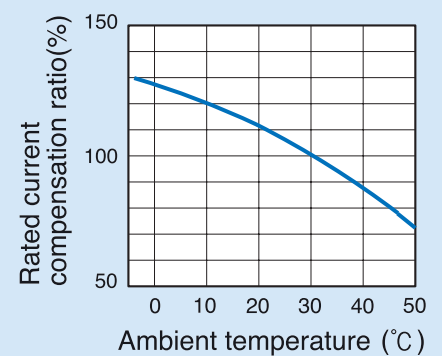


[Temperature compensation table](IEC60898-1)

In(A)	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
1	1.05	1.02	1.0	0.98	0.95	0.93	0.9	0.89	0.85
2	2.03	2.04	2.0	1.96	1.92	1.88	1.84	1.8	1.74
3	3.18	3.09	3.0	2.91	2.82	2.7	2.61	2.49	2.37
4	4.24	4.12	4.0	3.88	3.75	3.64	3.52	3.36	3.24
6	5.24	6.12	6.0	5.88	5.76	5.64	5.52	5.4	5.3
10	10.6	10.3	10.0	9.7	9.3	9.0	8.6	8.2	7.8
16	16.8	16.5	16.0	15.5	15.2	14.7	14.2	13.8	13.3
20	21.0	20.6	20.0	19.4	19.0	18.4	17.8	17.4	16.8
25	26.2	25.7	25.0	24.2	23.7	23.0	22.2	21.5	20.7
32	33.5	32.9	32.0	31.4	30.4	29.8	28.4	28.2	27.5
40	42.0	41.2	40.0	38.8	38.0	36.8	35.6	34.4	33.2
50	52.5	51.5	50.0	48.5	47.4	45.5	44.0	42.5	40.5
63	66.2	64.9	63.0	61.0	58.0	56.7	54.2	51.7	49.2

[1:113% In 12:145% In according to IEC60898-1]

Compensation curve





# Residual Current Circuit Breakers



**RK63 series**

RCCB is applicable to electric circuits with rated voltage 240/415VAC, frequency 50/60Hz and rated current up to 63A. The RCCBs provides indirect protection to the operator's body under such condition that the exposed live parts should be connected to a proper earthing pole. The RCCB also provides protection against the fire danger caused by earth fault current due to function failure of over current protection device.

## Feature

- RCCBs with rated sensitivity up to 30mA can be used as supplementary protecting device in case other protecting device fails its protection against electric shock.
- RCCBs designed for household installation and other similar application, is for non-professional operation, and no maintenance is required.
- RCCBs provides no protection against electric shock resulted from direct contacts of both protected lines, or leakage current between these two lines.
- Particular devices such as surge protective devices, surge arresters etc are recommended to installation at upstream line to RCCBs as precaution against potential surge voltage and current occurring at its power input side.
- Satisfying conditions and applications as mentioned above, RCCBs with ON-OFF indicating device is considered suitable for isolation function.

## Approval

CE marking

CB Certificate

## Color of handles

- Black only.

## Specifications

Type	RK63
Protection	Ground fault
Rated current	25, 32, 40, 63A
Rated residual current	
Operating $I_{\Delta n}$	30, 100, 300 mA (non-adjustable)
Non operating $I_{\Delta n}$	$0.5I_{\Delta n}$
Number of poles	2, 4 pole
Rated voltage	240VAC (2P), 240/415VAC(4P)
Residual current off time	$\leq 0.1$ sec.
Standards	IEC61008
Approval	SEMKO CB scheme
Type of trip of grand fault	Electro-magnetic (No over current relay)
Conditional short circuit capacity (Inc)	6kA
Rated making capacity( $I_m$ )	500A for $I_n=25,32,40A$ 630A for $I_n=63A$
Electrical endurance	6,000 times
Installation	35mm DIN rail
Width	17.8mm per pole
Type of terminal	Lug type (Cable up to 35mm <sup>2</sup> )
Dimension	<p style="text-align: right;">(mm)</p>

*Min. sales lot***MCBs**

Type		Min. sales lot (pcs.)
BK63 1P	BTK63 1P	120
BK63 2P	BTK63 2P	60
BK63 3P	BTK63 3P	40
BK63 4P	BTK63 4P	30

**RCCBs**

Type	Min. sales lot (pcs.)
RKN 2P	60
RKN 4P	30

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