

Miniature Circuit Breakers & Residual Current Circuit Breakers



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 : 3~5I_n
Application : computers and electronic equipments

Type C

Instant tripping characteristics : 5~10I_n
Application : general load such as bulbs , motors

Type D

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

Approval

CE marking


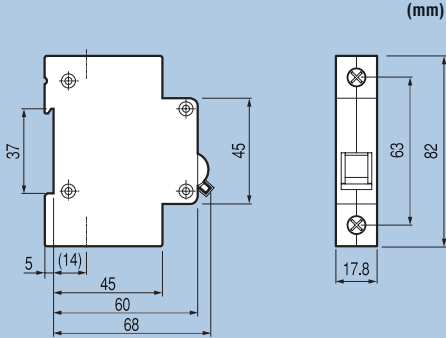
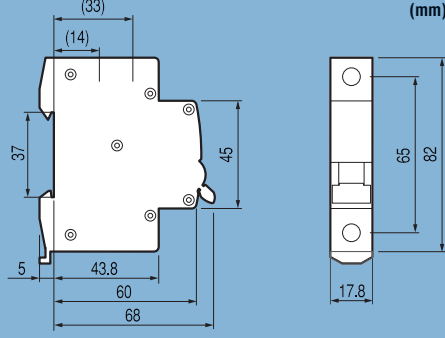
CB Certificate

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

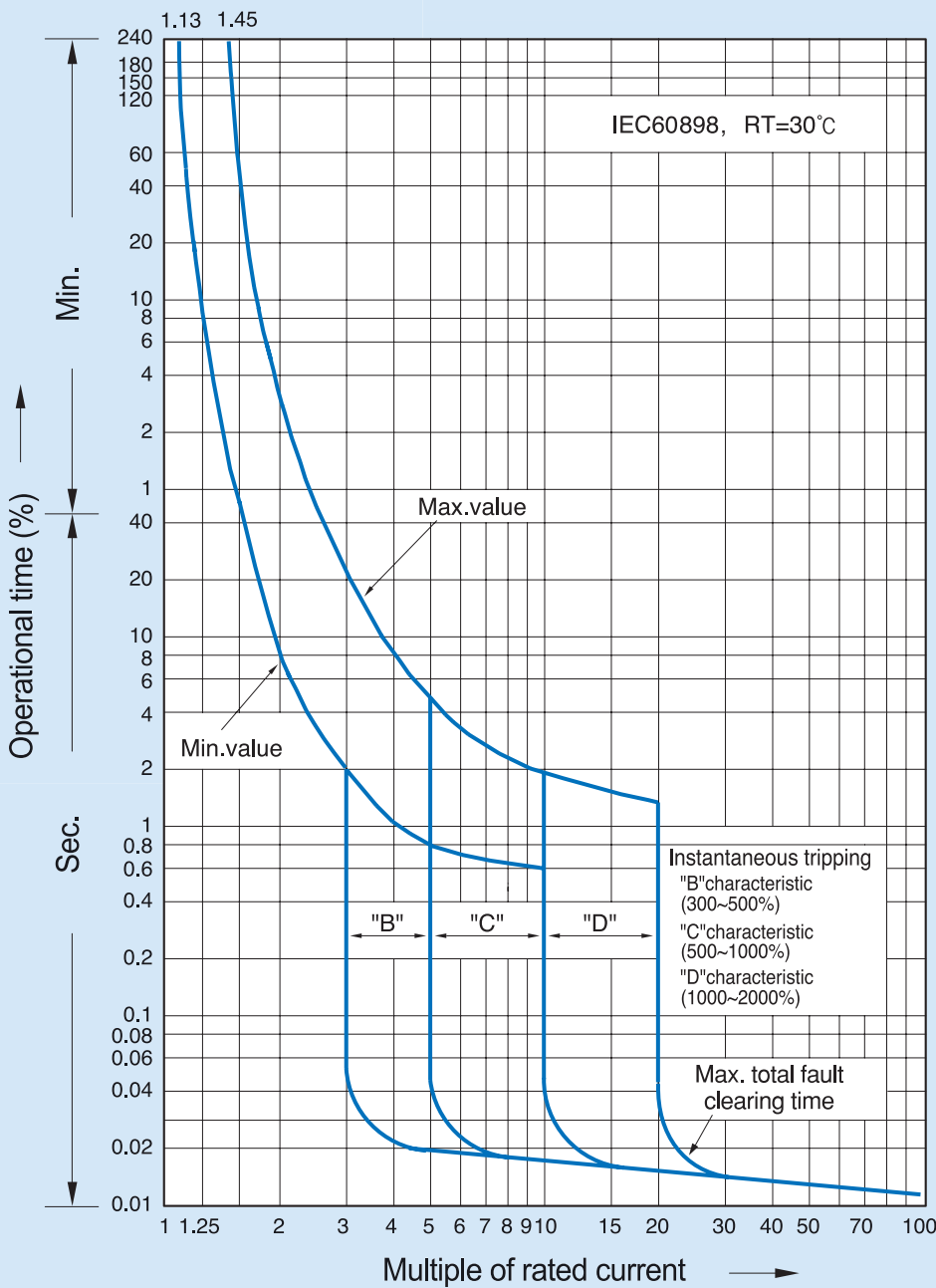
Specifications

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 25mm ²)			
Alarm switch (Optional)	 <p>1 changeover contact 6A at 230VAC, 3A at 415VAC (AX) 6A at 230VAC, 3A at 415VAC (AL) 2A at 48VAC, 1A at 125VAC</p> <p>Lug terminal Cable capacity 2.5mm² 9mm wide</p>		Not applicable	
Dimension	 <p style="text-align: right;">(mm)</p>		 <p style="text-align: right;">(mm)</p>	

Characteristic curve and compensation curve

Characteristic curve For type BK63, BTK63

Operating curves



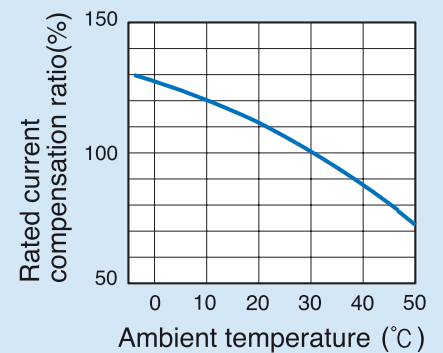
Compensation table

[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	≤ 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 ²)
Dimension	<div style="text-align: right;">(mm)</div>

*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

● Headquarters

AKS Building, 3, Kanda Neribeicho,
Chiyoda-ku, Tokyo, 101-0022, Japan
TEL : <81>(3) 4345-6000
FAX : <81>(3) 4345-6914

● Singapore

Hitachi Asia Ltd.

Power & Industrial Systems Group
24 Jurong Port Road, #03-05 Cwt Stripark,
Office Block, Singapore, 619097
TEL : <65>(6305) 7400
FAX : <65>(6305) 7401

● Vietnam

Hitachi Asia Ltd.(Ho Chi Minh City Office)

7th Floor, The Landmark, 5B Ton Duc Thang
Street District 1, Ho Chi Minh City
TEL : <84>(8) 829-9725
FAX : <84>(8) 829-9729

(Ha Noi Office)

Sun Red River Bldg, 6th Floor,
23 Phan Chu Trinh Street
Hoan Kiem District Hanoi
TEL : <84>(4) 933-3123
FAX : <84>(4) 933-3125

● India

Hitachi India Trading Pvt. Ltd.

Hindustan Times House (10th Floor)
18-20, Kasturba Gandhi Marg., New Delhi, 110001
TEL : <91>(11) 331-5635, 371-2817, -3953, -3958
FAX : <91>(11) 331-3742

● Indonesia

Hitachi Asia Ltd. (Jakarta Office)

Mid Plaza 1, 10th Floor, J.I. Jend.
Sudirman Kav. 10-11, Jakarta 10220
TEL : <62>(21) 574-4313
FAX : <62>(21) 574-4312

● Malaysia

Hitachi Asia (Malaysia) Sdn. Bhd.

Suite 17.3, Level 17, Menara IMC (Letter Box No.5)
No. 8 Jalan Sultan Ismail, 50250, Kuala Lumpur
TEL: <60>(3) 201-8751
FAX: <60>(3) 201-8757, -8758

● Philippines

Hitachi Asia Ltd. (Philippines Branch)

25th Floor, Pacific Star Building, Cor. Makati & Sen. Gil.
Puyat Ave., Makati, Metro Manila
TEL : <63>(2) 819-7528, -7529
FAX : <63>(2) 819-7539

● Thailand

Hitachi Asia (Thailand) Co., Ltd.

18th Floor, Ramaland Building, 952 Rama IV Road
Bangrak, Bangkok 10500
TEL : <66>(2) 632-9292
FAX : <66>(2) 632-9299

● China

Hitachi East Asia Ltd.

4th Floor, North Tower
World Finance Centre, Harbour City
Canton Road, Tsim Sha Tsui, Kowloon
Hong Kong
TEL : <852>2735-9218
FAX : <852>2375-3192

Hitachi China Ltd. (Beijing Office)

Room 1412, Beijing Fortune Building
5 Dong San Huan BeiLu
Chao Yang District, Beijing 100004
TEL : <86>(10) 6590-8851, -8852, -8853, -8854
FAX : <86>(10) 6590-8850

Hitachi (Shanghai) Trading Co., Ltd.

18th Floor, Rui Jin Building,
No.205, Maoming Road(S)
Shanghai, 200030
TEL : <86>(21) 6472-1002
FAX : <86>(21) 6415-8272

Hitachi China Ltd. (Taipei Branch)

3rd Floor, Hung Kuo Building No.167
Tun-Hwa North Road, Taipei (105), Taiwan
TEL : <886>(2) 2718-3666
FAX : <886>(2) 2718-8180

Information in this brochure is subject to change without notice.

For further information, please contact your nearest sales representative.

 **Hitachi Industrial Equipment Systems Co., Ltd.**

<http://www.hitachi-ies.co.jp/english/index.htm>