

### Miniature RCBO

# Residual current breaker with overcurrent

#### **Product Description**

MExcel series Residual Current Breaker with Overcurrent is mainly used in AC 50Hz with rated working voltage 230V and with rated current up to 40A. In case of personal electric shock or when the grid leakage current exceeds the specified value, the RCBO can work to quickly cut off the power supply within the very short time for protection of the safety of personnel and electrical equipment. Suitable for industrial, commercial and domestic installations.



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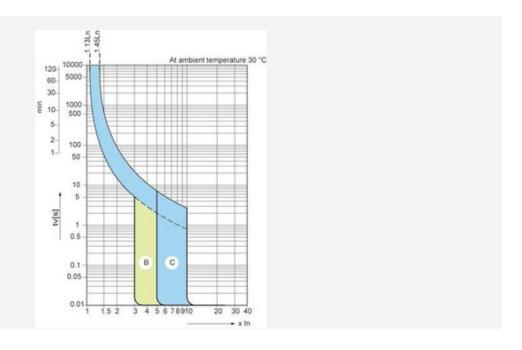
### The main technical parameters

Standards   EC61009-1	Product name	RCBO
Part	Standards	IEC61009-1
Number of poles         1P+N           Rated frequency (Hz)         50/60           Frame current (A)Inm         40           Rated current (A)In         6,10,16,20,32,40           Rated voltage (V)         AC230           Rated insulation voltage (V)Ui         500           Rated insulation voltage (kV)Uimp         4           Rated short-circuit breaking capacity (kA)Ics         6           Rated short-circuit breaking capacity (kA)Icn         6           Instantaneous trip characteristics         B,C           Trip form         Thermal, magnetic and Leakage trip           Pollution level         2           Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical if e         4000           Mechanical if e         10000           Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature         -35*C →70*C           Installation site altitude         ≤ 2000m         Fixed w ith screw           Maximum limit torque Nm         3.5           Install	Certificate	CE, UKCA
Rated frequency (Hz)         50/60           Frame current (A)Inm         40           Rated current (A)In         6,10,16,20,32,40           Rated voltage (V)         AC230           Rated insulation voltage (V)Ui         500           Rated insulation voltage (KY)Uimp         4           Rated short-circuit breaking capacity (kA)Ics         6           Rated short-circuit breaking capacity (kA)Icn         6           Instantaneous trip characteristics         B,C           Trip form         Thermal, magnetic and Leakage trip           Pollution level         2           Rated residual action current (MA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties         Bectrical life           Bectrical life         4000           Mechanical life         10000           Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m         Fixed w ith screw           Maximum limit torque Nm         3.5	⊟ectrical characteristics	
Frame current (A) Inm  Rated current (A) In  Rated current (A) In  Rated voltage (V)  Rated voltage (V)  Rated insulation voltage (V)UI  Rated insulation voltage (V)UI  Rated short-circuit breaking capacity (kA)cs  Rated short-circuit breaking capacity (kA)cs  Rated short-circuit breaking capacity (kA)cs  Rated short-circuit breaking capacity (kA)cn  Rated short-circuit breaking capacity  Rated short-c	Number of poles	1P+N
Rated current (A)in         6,10,16,20,32,40           Rated voitage (V)         AC230           Rated insulation voitage (V)Ui         500           Rated insulation voitage (kV)Uimp         4           Rated short-circuit breaking capacity (kA)ics         6           Rated short-circuit breaking capacity (kA)icn         6           Instantaneous trip characteristics         B,C           Trip form         Thermal, magnetic and Leakage trip           Pollution level         2           Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties         Electrical life           Mechanical life         10000           Mechanical window         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature           Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed with screw           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Rated frequency (Hz)	50/60
Rated voltage (V)         AC230           Rated insulation voltage (V)Ui         500           Rated impulse w ithstand voltage (kV)Uimp         4           Rated short-circuit breaking capacity (kA)Ics         6           Rated short-circuit breaking capacity (kA)Icn         6           Instantaneous trip characteristics         B,C           Trip form         Thermal, magnetic and Leakage trip           Pollution level         2           Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties         Blectrical life         4000           Mechanical life         10000         Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed w ith screw           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Frame current (A)Inm	40
Rated insulation voltage (V)Ui         500           Rated impulse w ithstand voltage (kV)Uimp         4           Rated short-circuit breaking capacity (kA)Ics         6           Rated short-circuit breaking capacity (kA)Icn         6           Instantaneous trip characteristics         B,C           Trip form         Thermal, magnetic and Leakage trip           Pollution level         2           Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties         Blectrical life           Blectrical life         4000           Mechanical ife         10000           Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m         Terminals           Treminals         Fixed w ith screw           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Rated current (A)In	6,10,16,20,32,40
Rated impulse w ithstand voltage (kV)Uimp  Rated short-circuit breaking capacity (kA)Ics  Rated short-circuit breaking capacity (kA)Icn  Rated short-circuit breaking capacity (kA)Icn  Rated short-circuit breaking capacity (kA)Icn  Instantaneous trip characteristics  B,C  Trip form  Thermal, magnetic and Leakage trip  Pollution level  2  Rated residual action current (mA)  Max. breaking time at the rated residual current  0.1s  Wave form of earth leakage sensed  AC/A  Mechanical properties  Electrical life  4000  Mechanical life  10000  Protection grade  IP20  Indicator w indow  Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature  -35°C ~+70°C  Installation site altitude  \$ 2000m  Terminals  Fixed w ith screw  Maximum w iring capacity  In 16mm2 Out 6mm2  Maximum limit torque Nm  3.5  Installation category  ClassII , III  Installation method	Rated voltage (V)	AC230
Rated short-circuit breaking capacity (kA)lcs  Rated short-circuit breaking capacity (kA)lcn  Instantaneous trip characteristics  B,C  Trip form  Thermal, magnetic and Leakage trip  Pollution level  Rated residual action current (mA)  Max. breaking time at the rated residual current  Wave form of earth leakage sensed  Mechanical properties  Electrical life  4000  Mechanical life  10000  Protection grade  IP20  Indicator w indow  Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature  -35°C ~+70°C  Installation site altitude  \$\frac{2}{2000m}\$  Fixed w ith screw  Maximum w iring capacity  Maximum limit torque Nm  3.5  Installation method  35mm standard rail	Rated insulation voltage (V)Ui	500
Rated short-circuit breaking capacity (kA)lon Instantaneous trip characteristics B,C Trip form Thermal, magnetic and Leakage trip Pollution level 2 Rated residual action current (mA) 30 Max. breaking time at the rated residual current 0.1s Wave form of earth leakage sensed AC/A  Mechanical properties Electrical life 4000 Mechanical life 10000 Protection grade IP20 Indicator w indow Contact status indication Normal operation conditions and installationcharacteristics Storage temperature -35°C ~+70°C Installation site altitude  \$ 2000m Terminals Fixed w ith screw Maximum w iring capacity In 16mm2 Out 6mm2 Maximum limit torque Nm 3.5 Installation category ClassII , III Installation method	Rated impulse w ithstand voltage (kV)Uimp	4
Instantaneous trip characteristics  Trip form  Thermal, magnetic and Leakage trip  Pollution level  2  Rated residual action current (mA)  Max. breaking time at the rated residual current  0.1s  Wave form of earth leakage sensed  AC/A  Mechanical properties  Electrical life  4000  Mechanical life  10000  Protection grade  IP20  Indicator w indow  Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature  -35°C →70°C  Installation site altitude  ≤ 2000m  Terminals  Fixed w ith screw  Maximum w iring capacity  Maximum limit torque Nm  3.5  Installation category  ClassII , III  Installation method	Rated short-circuit breaking capacity (kA)lcs	6
Trip form Thermal, magnetic and Leakage trip  Pollution level 2  Rated residual action current (mA) 30  Max. breaking time at the rated residual current 0.1s  Wave form of earth leakage sensed AC/A  Mechanical properties  Electrical life 4000  Mechanical life 10000  Protection grade IP20  Indicator w indow Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature 35°C ∼+70°C  Installation site altitude ≤ 2000m  Terminals Fixed w ith screw  Maximum w iring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Rated short-circuit breaking capacity (kA)lcn	6
Pollution level         2           Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties           Electrical life         4000           Mechanical life         10000           Protection grade         IP20           Indicator window         Contact status indication           Normal operation conditions and installationcharacteristics         Contact status indication           Storage temperature         -36°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed with screw           Maximum wiring capacity         In 16mm2 Out 6mm2           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Instantaneous trip characteristics	B,C
Rated residual action current (mA)         30           Max. breaking time at the rated residual current         0.1s           Wave form of earth leakage sensed         AC/A           Mechanical properties         Electrical life           Bectrical life         4000           Mechanical life         10000           Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         Storage temperature           Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed with screw           Maximum w iring capacity         In 16mm2 Out 6mm2           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Trip form	Thermal, magnetic and Leakage trip
Max. breaking time at the rated residual current       0.1s         Wave form of earth leakage sensed       AC/A         Mechanical properties       Bectrical life       4000         Mechanical life       10000       10000         Protection grade       IP20       Indicator window       Contact status indication         Normal operation conditions and installationcharacteristics       Storage temperature       -35°C ~+70°C         Installation site altitude       ≤ 2000m       Fixed with screw         Maximum wiring capacity       In 16mm2 Out 6mm2         Maximum limit torque Nm       3.5         Installation category       ClassII , III         Installation method       36mm standard rail	Pollution level	2
Wave form of earth leakage sensed  Mechanical properties  Electrical life 4000  Mechanical life 10000  Protection grade 1P20  Indicator w indow Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature -35°C ~+70°C  Installation site altitude ≤ 2000m  Terminals Fixed w ith screw  Maximum w iring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Rated residual action current (mA)	30
Mechanical properties  Electrical life 4000  Mechanical life 10000  Protection grade IP20  Indicator w indow Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature -35°C ~+70°C  Installation site altitude ≤ 2000m  Terminals Fixed w ith screw  Maximum w iring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Max. breaking time at the rated residual current	0.1s
Electrical life         4000           Mechanical life         10000           Protection grade         IP20           Indicator w indow         Contact status indication           Normal operation conditions and installationcharacteristics         -35°C ~+70°C           Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed w ith screw           Maximum w iring capacity         In 16mm2 Out 6mm2           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Wave form of earth leakage sensed	AC/A
Mechanical life       10000         Protection grade       IP20         Indicator w indow       Contact status indication         Normal operation conditions and installationcharacteristics         Storage temperature       -35°C ~+70°C         Installation site altitude       ≤ 2000m         Terminals       Fixed w ith screw         Maximum w iring capacity       In 16mm2 Out 6mm2         Maximum limit torque Nm       3.5         Installation category       ClassII , III         Installation method       35mm standard rail	Mechanical properties	
Protection grade Indicator w indow Contact status indication  Normal operation conditions and installationcharacteristics  Storage temperature -35°C ~+70°C Installation site altitude ≤ 2000m  Terminals Fixed w ith screw  Maximum w iring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5 Installation category ClassII , III Installation method  IP20  Contact status indication  -35°C ~+70°C  Installation site altitude  ≤ 2000m  Fixed w ith screw  In 16mm2 Out 6mm2  3.5 Installation method	Electrical life	4000
Indicator w indow  Normal operation conditions and installationcharacteristics  Storage temperature  -35°C ~+70°C  Installation site altitude  Fixed w ith screw  Maximum w iring capacity  In 16mm2 Out 6mm2  Maximum limit torque Nm  3.5  Installation category  ClassII , III  Installation method  Contact status indication  -35°C ~+70°C  ≤ 2000m  Fixed w ith screw  In 16mm2 Out 6mm2  ClassII , III  35mm standard rail	Mechanical life	10000
Normal operation conditions and installationcharacteristics  Storage temperature -35°C ~+70°C  Installation site altitude ≤ 2000m  Terminals Fixed with screw  Maximum wiring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Protection grade	IP20
Storage temperature         -35°C ~+70°C           Installation site altitude         ≤ 2000m           Terminals         Fixed with screw           Maximum wiring capacity         In 16mm2 Out 6mm2           Maximum limit torque Nm         3.5           Installation category         ClassII , III           Installation method         35mm standard rail	Indicator window	Contact status indication
Installation site altitude ≤ 2000m  Terminals Fixed with screw  Maximum wiring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Normal operation conditions and installationcharacteristics	
Terminals Fixed with screw  Maximum wiring capacity In 16mm2 Out 6mm2  Maximum limit torque Nm 3.5  Installation category ClassII , III  Installation method 35mm standard rail	Storage temperature	-35°C ~+70°C
Maximum w iring capacity  Maximum limit torque Nm  3.5  Installation category  ClassII , III  Installation method  35mm standard rail	Installation site altitude	≤ 2000m
Maximum limit torque Nm 3.5 Installation category ClassII , III Installation method 35mm standard rail	Terminals	Fixed with screw
Installation category ClassII , III Installation method 35mm standard rail	Maximum w iring capacity	In 16mm2 Out 6mm2
Installation method 35mm standard rail	Maximum limit torque Nm	3.5
	Installation category	ClassII , III
Incoming method Upper and low er	Installation method	35mm standard rail
	Incoming method	Upper and low er

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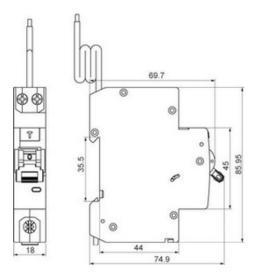
## Miniature RCBO





#### Product and installation dimensions(MM)

Miniature RCBO should be installed on DIN rail terminal and can be connected to the wire less than 16mm2



#### Order information

- Please specify the product model and specification, and the type, rated current, number of poles, and orderquantity of the instantaneous release when ordering.
- Order example: Miniature RCBO series, such as: RCBO-132B-030 residual current operated circuitbreaker
- Trip type, such as: B Curve
- Number of poles of product, such as 1P+N
- Rated current, such as 32A
- Rated residual operating current, such as: 30mA
- type wave form of earth leakage sensed such as: A type
- Order quantity, such as: 1000 units
- Specified as: RCBO-132B-030 1000 units