ETEK®

www.etek-china.com

T Series

Circuit Protection Solutions

—

- MCB
- RCCB
- RCBO
- AFDD
- Modular Accessories

ZHEJIANG ETEK ELECTRICAL TECHNOLOGY CO.,LTD.

COMPANY INTRODUCTION

Zhejinag Wenzhou Factory

Zhejiang ETEK Electrical Technology Co., Ltd. is a professional manufacturing company specializing in the research, development, production, and sales of low-voltage electrical appliances. Established in 2011 and headquartered in Wenzhou, Zhejiang Province, ETEK Electric operates two modern manufacturing bases in Wenzhou and Wuhu, covering an area of 40,000 square meters. The company employs over 500 staff, including more than 20 R&D and technical professionals.

ETEK Electric has multiple production workshops for mold design, parts manufacturing, welding, and assembly. Additionally, it operates multiple automated production lines for MCB and RCCB. Its product portfolio includes MCB, RCCB, RCBO, AFDD, MCCB, ACB, EV Chargers, and Photovoltaic DC products, which are widely used in residential, commercial, and industrial sectors.

ETEK Electric has established its own low-voltage electrical testing center, where testing projects meet international IEC standards. The company has obtained ISO9001, ISO14001, and ISO45001 certifications, and its products are certified by international standards such as CB, TUV, VDE, CE, RoHS, among others.

40k+ m^2
Floor Area

100+
Export Countries

30+
Brand Agents

15+ Years
Industry Experience

20 Mio+ Poles
Annual Production

≥50%
Automation Rate

Anhui Wuhu Factory

With over 100 national patents, ETEK Electric continues to master core technologies in circuit breakers and remains committed to building its independent brand. The "ETEK" trademark is registered in over 80 countries, with products exported to more than 100 regions, including Europe, South America, the Middle East, Africa, and Southeast Asia.

Additionally, ETEK Electric supports OEM, ODM, OBM, SKD, CKD, and other business cooperation models, offering a complete suite of services including market cultivation, technical training, and assistance with factory construction.

Looking to the future, ETEK Electric is committed to becoming a globally renowned manufacturer in the power distribution and electrical industry, safeguarding the power safety of its customers around the world and contributing to the development of green and digital energy.

Values

- Integrity
- Innovation
- Focus
- Win-win

Vision

Dedicated to becoming a globally renowned manufacturer in the power distribution equipment industry.

Mission

Manufacturing safer and smarter distribution electrical products to support the development of green and digital energy

QUALITY ASSURANCE

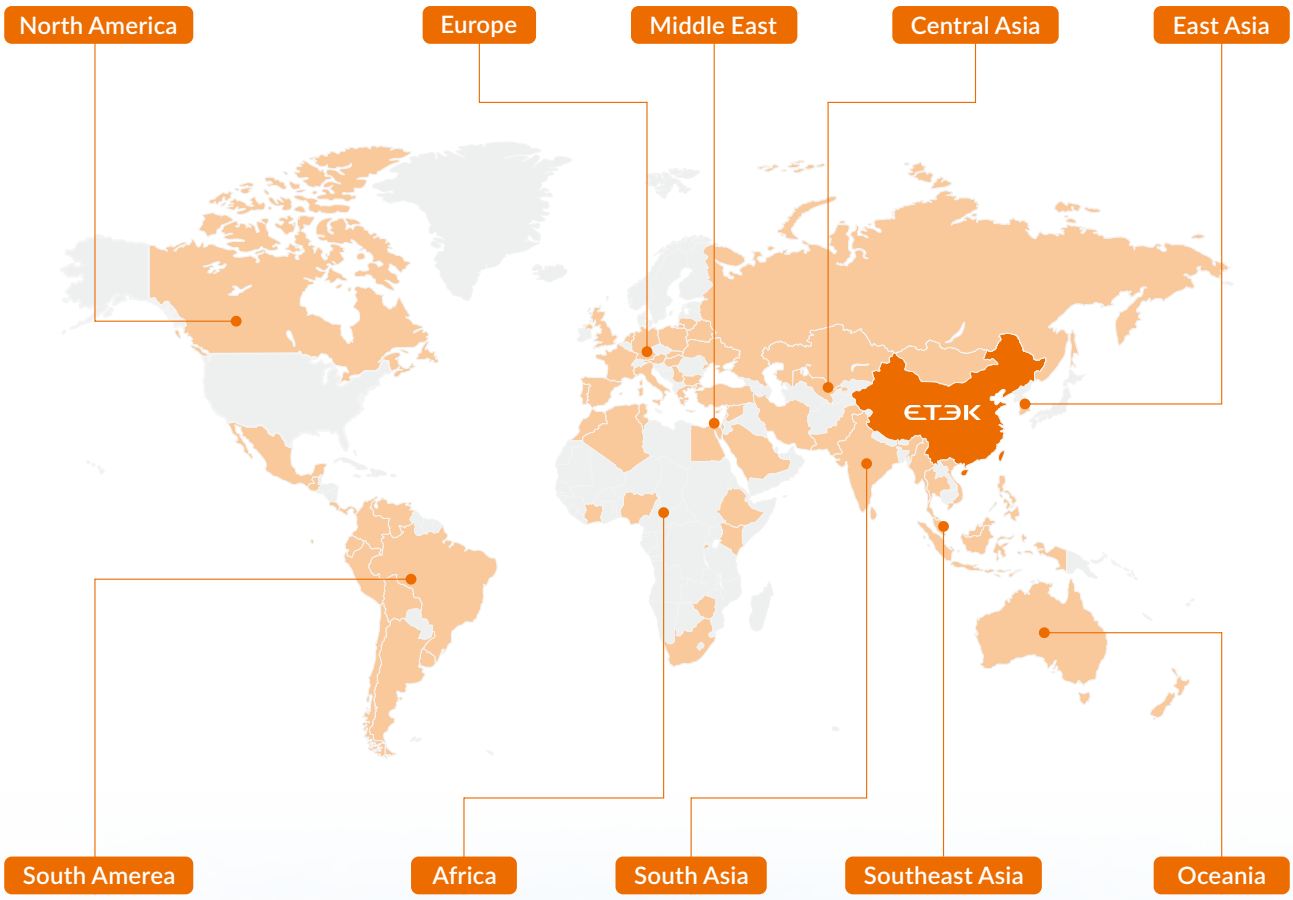
System Certificate

Product Certificate

RoHS

GLOBAL REACH

- "ETEK" registered in 80+ countries
- Exports to 100+ countries
- Supports OEM, ODM, OBM, SKD, and CKD partnerships



CONTENTS

Thermal-magnetic Type | MCB | 4.5kA

ETM1-63S

Mini Circuit Breaker

IP20 protection

Finger protected connection terminals.

Modular accessory expansion

Suitable for the quick and easy mounting of additional components, such as auxiliary switches and fault signal contacts.

EAN code

The shell comes with pad printed EAN code.

Standard

IEC 60898-1: Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1.

Multiple termination

Both incoming and outgoing terminals are suitable for: normal cable, pin type busbars.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for MCBs, it is now possible to recycle the MCBs completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETM1-63S Series Miniature Circuit Breaker is specifically designed for terminal power distribution protection in commercial office buildings, residential premises, and general industrial applications. It is suitable for circuits with AC 50/60Hz, a rated voltage of 110/240/415V, and a rated current up to 63A.

Featuring overload and short-circuit protection, it can also be used for infrequent line switching operations under normal conditions. With a rated short-circuit capacity (Icn) of up to 4.5kA, it ensures reliable circuit protection.

This product incorporates finger-safe combination terminals and provides contact open/close status indication, significantly enhancing operational safety. Additionally, various modular accessories can be configured to meet diverse application needs.

Product Tips

1. Reversible line and load connection
2. EAN-13 barcodes
3. The position of handle lock
4. Rated current up to 63A
5. Contacts position indication window
6. Rated short circuit breaking capacity 6kA

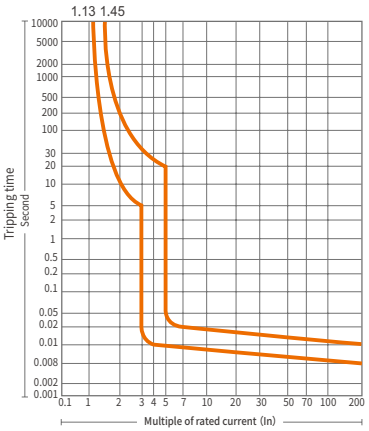
Technical Data

General data	
Protection	Overcurrent and short circuit
Type of trip	Thermal-magnetic
No. of poles	1P, 2P, 3P, 4P
Rated operational voltage (Ue)	1P: 110/230V, 120/240V, 230/400V, 240/415V 2P,3P,4P: 230/400V, 240/415V, 400/415V
Rated current (In)	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated insulation voltage (Ui)	500V
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Pollution degree	2
Data acc. to IEC/EN 60898-1	
Rated short-circuit capacity (Icn)	4.5kA
Rated service short-circuit breaking capacity (Ics)	4.5kA
Thermal tripping characteristics	1.13×In No tripping within an hour; 1.45×In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In; D: 10In-20In
Mechanical data	
Electrical life	4,000 Cycles
Mechanical life	20,000 Cycles
Contact position indication	green OFF / red ON
Protection degree	IP20
Reference temperature	30°C
Operating ambient temperature (with daily average≤35°C)	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Installation	
Terminal connection type	Cable/ Pin-type
Terminal block	Screw press-connected
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Mounting type	Mounting on 35mm DIN rail
Incoming method	Bi-Directional
Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes
Mechanical Interlock	Yes

Tripping Characteristic

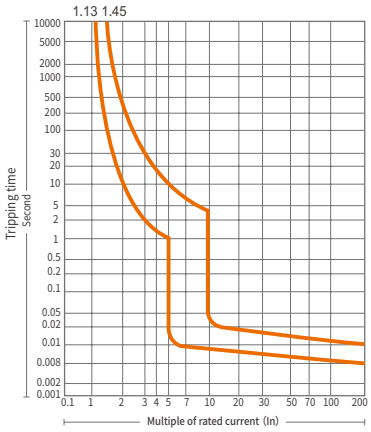
Data acc. to IEC/EN 60898-1										
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	1-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	1-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	
D	1-63A	1.13In		≤1h			10In		≥0.1	
			1.45In		<1h			20In	<0.1	

B curve



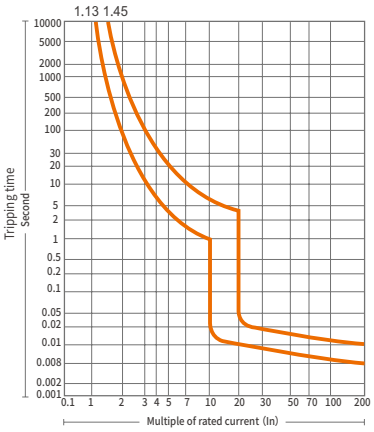
Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve

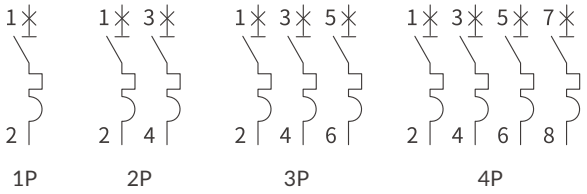


Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

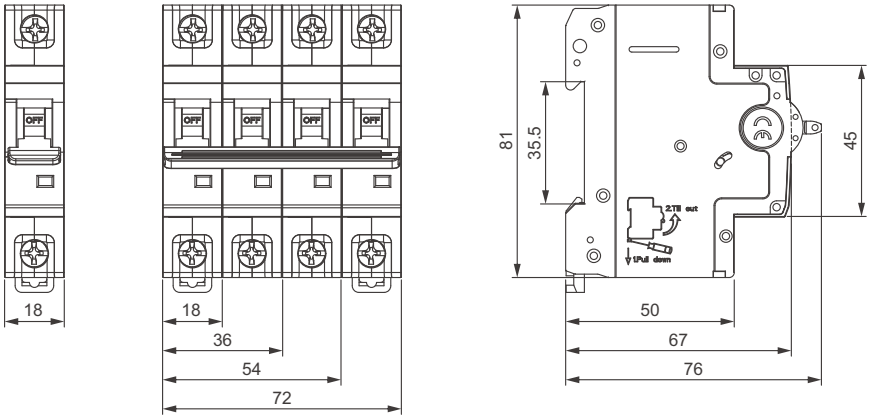
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



Thermal-magnetic Type | MCB | 6kA

ETM1-63X

Mini Circuit Breaker

IP20 protection

Finger protected connection terminals.

Modular accessory expansion

Suitable for the quick and easy mounting of additional components, such as auxiliary switches and fault signal contacts.

EAN code

The shell comes with pad printed EAN code.

Standard

IEC 60898-1: Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1.

Multiple termination

Both incoming and outgoing terminals are suitable for: normal cable, pin type busbars.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for MCBs, it is now possible to recycle the MCBs completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETM1-63X Series Miniature Circuit Breaker is specifically designed for terminal power distribution protection in commercial office buildings, residential premises, and general industrial applications. It is suitable for circuits with AC 50/60Hz, a rated voltage of 110/240/415V, and a rated current up to 63A.

Featuring overload and short-circuit protection, it can also be used for infrequent line switching operations under normal conditions. With a rated short-circuit capacity (Icn) of up to 6kA, it ensures reliable circuit protection.

This product incorporates finger-safe combination terminals and provides contact open/close status indication, significantly enhancing operational safety. Additionally, various modular accessories can be configured to meet diverse application needs.

Product Tips

1. Reversible line and load connection
2. EAN-13 barcodes
3. The position of handle lock
4. Rated current up to 63A
5. Contacts position indication window
6. Rated short circuit breaking capacity 6kA

Technical Data

General data	
Protection	Overcurrent and short circuit
Type of trip	Thermal-magnetic
No. of poles	1P, 2P, 3P, 4P
Rated operational voltage (Ue)	1P: 110/230V, 120/240V, 230/400V, 240/415V 2P,3P,4P: 230/400V, 240/415V, 400/415V
Rated current (In)	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated insulation voltage (Ui)	500V
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Pollution degree	2

Data acc. to IEC/EN 60898-1	
Rated short-circuit capacity (Icn)	6kA
Rated service short-circuit breaking capacity (Ics)	6kA
Energy limiting class	3
Thermal tripping characteristics	1.13×In No tripping within an hour; 1.45×In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In; D: 10In-20In

Mechanical data	
Electrical life	4,000 Cycles
Mechanical life	20,000 Cycles
Contact position indication	green OFF / red ON
Protection degree	IP20
Reference temperature	30°C
Operating ambient temperature (with daily average≤35°C)	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C

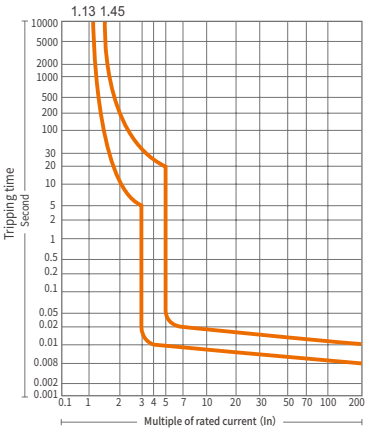
Installation	
Terminal connection type	Cable/ Pin-type
Terminal block	Screw press-connected
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Mounting type	Mounting on 35mm DIN rail
Incoming method	Bi-Directional

Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes
Mechanical Interlock	Yes

Tripping Characteristic

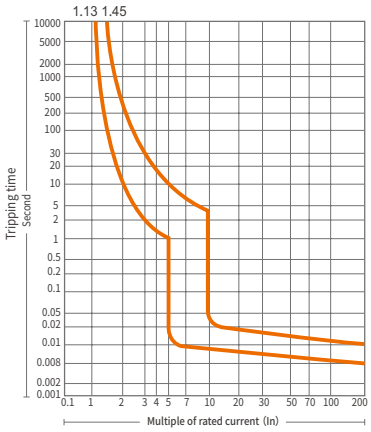
Data acc. to IEC/EN 60898-1										
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	1-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	1-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	
D	1-63A	1.13In		≤1h			10In		≥0.1	
			1.45In		<1h			20In	<0.1	

B curve



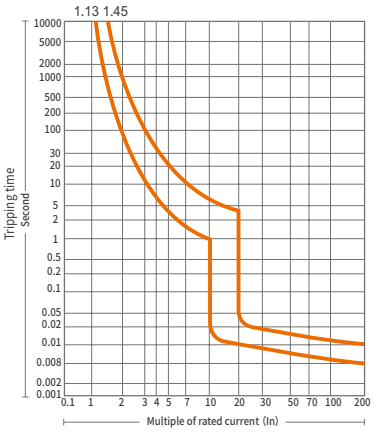
Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve

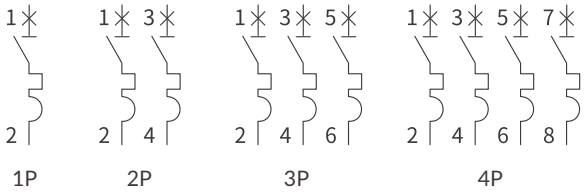


Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

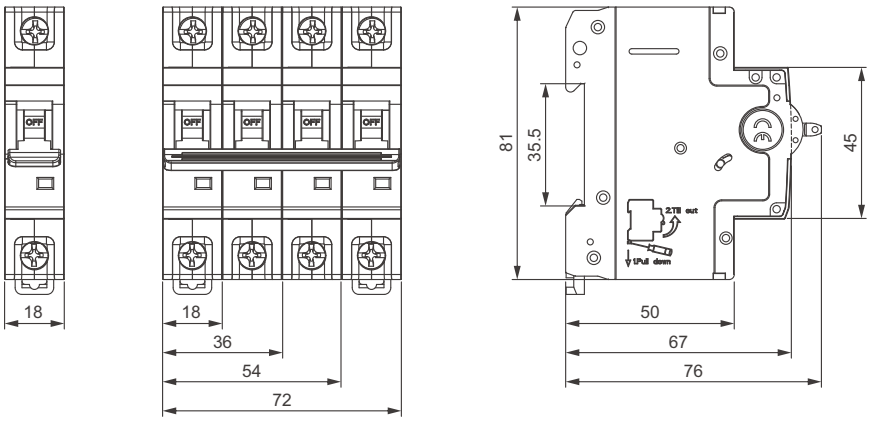
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



ETM1-63

Mini Circuit Breaker

IP20 protection

Finger protected connection terminals.

Modular accessory expansion

Suitable for the quick and easy mounting of additional components, such as auxiliary switches and fault signal contacts.

EAN code

The shell comes with pad printed EAN code.

Standard

IEC 60898-1: Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1.
IEC 60947-2: Low-voltage switchgear and controlgear -Part 2.

Multiple termination

Both incoming and outgoing terminals are suitable for: normal cable, fork type busbar, pin type busbars, fork busbar + cable simultaneous connection.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for MCBs, it is now possible to recycle the MCBs completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

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Electrical safety assurance in public facilities

Overview

ETM1-63 Series Miniature Circuit Breaker is specifically designed for terminal power distribution protection in commercial office buildings, residential premises, and general industrial applications. It is suitable for circuits with AC 50/60Hz, a rated voltage of 110/240/415V, and a rated current up to 63A.

Featuring overload and short-circuit protection, it can also be used for infrequent line switching operations under normal conditions. With a maximum ultimate short-circuit breaking capacity (Icu) of up to 6kA, it ensures reliable circuit protection.

This product incorporates finger-safe combination terminals and provides contact open/close status indication, significantly enhancing operational safety. Additionally, various modular accessories can be configured to meet diverse application needs.

Product Tips

1. Reversible line and load connection
2. EAN-13 barcodes
3. The position of handle lock
4. Rated current up to 63A
5. PIN/ Fork busbar
6. Contacts position indication window

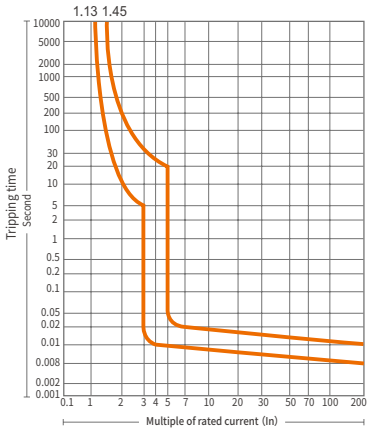
Technical Data

General data	
Protection	Overcurrent and short circuit
Type of trip	Thermal-magnetic
No. of poles	1P, 2P, 3P, 4P
Rated operational voltage (Ue)	1P: 110/230V, 120/240V, 230/240V, 240/415V 2P,3P,4P: 230/400V, 240/415V, 400/415V
Rated current (In)	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated insulation voltage (Ui)	440V
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Pollution degree	2
Data acc. to IEC/EN 60898-1	
Rated short-circuit capacity (Icn)	6kA
Rated service short-circuit breaking capacity (Ics)	6kA
Energy limiting class	3
Thermal tripping characteristics	1.13×In No tripping within an hour; 1.45×In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In; D: 10In-20In
Data acc. to IEC/EN 60947-2	
Rated ultimate short circuit breaking capacity Icu (kA)	6kA
Rated service short circuit breaking capacity Ics (kA)	6kA
Thermal tripping characteristics	1.05×In No tripping within an hour; 1.3×In Tripping within an hour
Instantaneous tripping characteristics	8In-12In
Mechanical data	
Electrical life	10,000 Cycles
Mechanical life	20,000 Cycles
Contact position indication	green OFF / red ON
Protection degree	IP20
Reference temperature	30°C
Operating ambient temperature (with daily average≤35°C)	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Installation	
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Terminal block	Screw press-connected
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Mounting type	Mounting on 35mm DIN rail
Incoming method	Bi-Directional
Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes
Mechanical Interlock	Yes

Tripping Characteristic

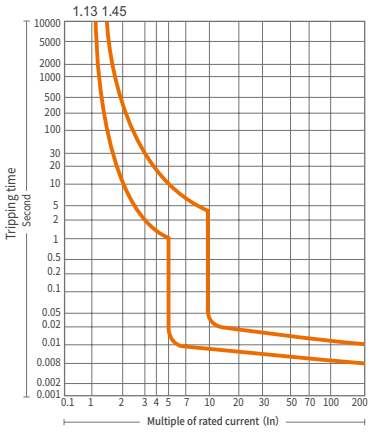
Data acc. to IEC/EN 60898-1										
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	1-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	1-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	
D	1-63A	1.13In		≤1h			10In		≥0.1	
			1.45In		<1h			20In	<0.1	

B curve



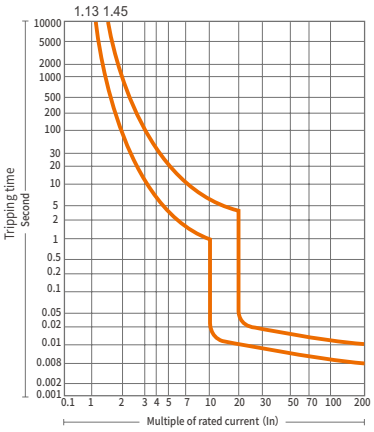
Universal use
- socket outlet, lighting device

C curve



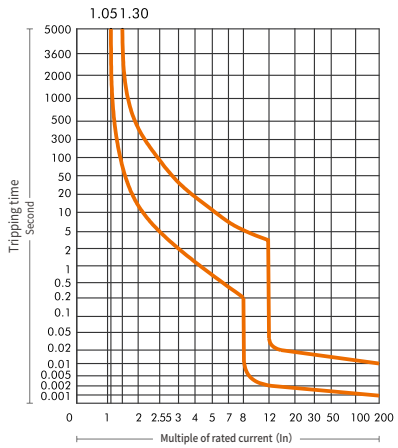
Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve



Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

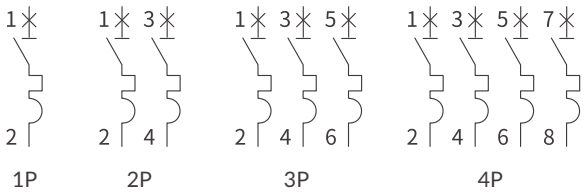
Data acc. to IEC/EN 60947-2						
Rated current (In)	Tripping Characteristic	Initial state	Test current (A)	Trip time (t)	Result to be obtained	Ambient temperature
≤63A	Thermal release	Cold state	1.05In	≥1h	No trip	30±2°C
		Hot state (Follow the above test)	1.30In	<1h	Trip	
	Magnetic release	Cold state	8In	≤0.2s	No trip	Normal temperature
			12In	<0.2s	Trip	



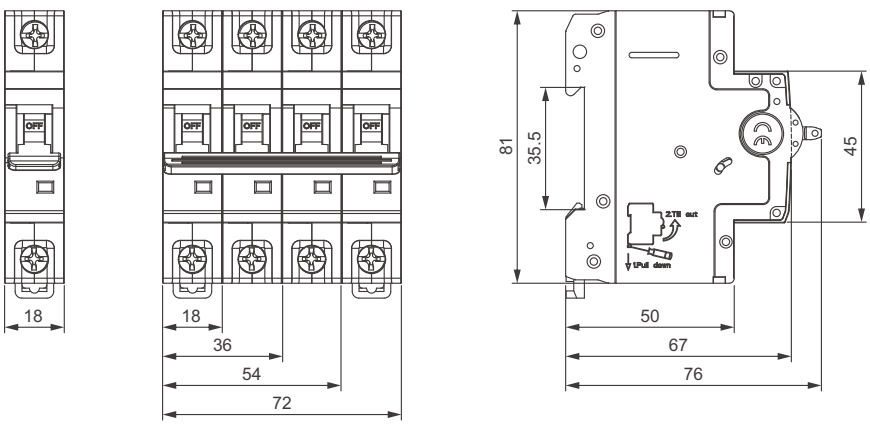
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



Thermal-magnetic Type | MCB | 10kA

ETM1-63H

Mini Circuit Breaker

IP20 protection

Finger protected connection terminals.

Modular accessory expansion

Suitable for the quick and easy mounting of additional components, such as auxiliary switches and fault signal contacts.

EAN code

The shell comes with pad printed EAN code.

Standard

IEC 60898-1: Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1.
IEC 60947-2: Low-voltage switchgear and controlgear -Part 2.

Multiple termination

Both incoming and outgoing terminals are suitable for: normal cable, fork type busbar, pin type busbars, fork busbar + cable simultaneous connection.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for MCBs, it is now possible to recycle the MCBs completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETM1-63H Series Miniature Circuit Breaker is specifically designed for terminal power distribution protection in commercial office buildings, residential premises, and general industrial applications. It is suitable for circuits with AC 50/60Hz, a rated voltage of 110/240/415V, and a rated current up to 63A.

Featuring overload and short-circuit protection, it can also be used for infrequent line switching operations under normal conditions. With a maximum ultimate short-circuit breaking capacity (Icu) of up to 10kA, it ensures reliable circuit protection.

This product incorporates finger-safe combination terminals and provides contact open/close status indication, significantly enhancing operational safety. Additionally, various modular accessories can be configured to meet diverse application needs.

Product Tips

1. Reversible line and load connection
2. EAN-13 barcodes
3. The position of handle lock
4. Rated current up to 63A
5. PIN/ Fork busbar
6. Contacts position indication window

Technical Data

General data	
Protection	Overcurrent and short circuit
Type of trip	Thermal-magnetic
No. of poles	1P, 2P, 3P, 4P
Rated operational voltage (Ue)	1P: 110/230V, 120/240V, 230/240V, 240/415V 2P,3P,4P: 230/400V, 240/415V, 400/415V
Rated current (In)	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated insulation voltage (Ui)	440V
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Pollution degree	2

Data acc. to IEC/EN 60898-1	
Rated short-circuit capacity (Icn)	10kA
Rated service short-circuit breaking capacity (Ics)	7.5kA
Energy limiting class	3
Thermal tripping characteristics	1.13×In No tripping within an hour; 1.45×In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In; D: 10In-20In

Data acc. to IEC/EN 60947-2	
Rated ultimate short circuit breaking capacity Icu (kA)	10kA
Rated service short circuit breaking capacity Ics (kA)	7.5kA
Thermal tripping characteristics	1.05×In No tripping within an hour; 1.3×In Tripping within an hour
Instantaneous tripping characteristics	8In-12In

Mechanical data	
Electrical life	10,000 Cycles
Mechanical life	20,000 Cycles
Contact position indication	green OFF / red ON
Protection degree	IP20
Reference temperature	30°C
Operating ambient temperature (with daily average≤35°C)	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C

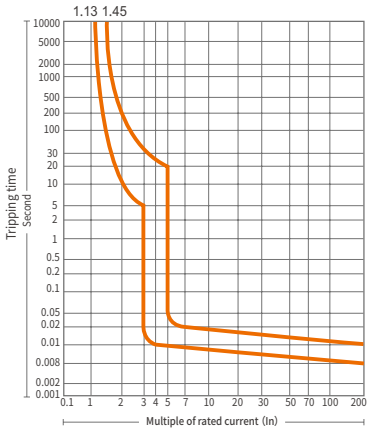
Installation	
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Terminal block	Screw press-connected
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Mounting type	Mounting on 35mm DIN rail
Incoming method	Bi-Directional

Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes
Mechanical Interlock	Yes

Tripping Characteristic

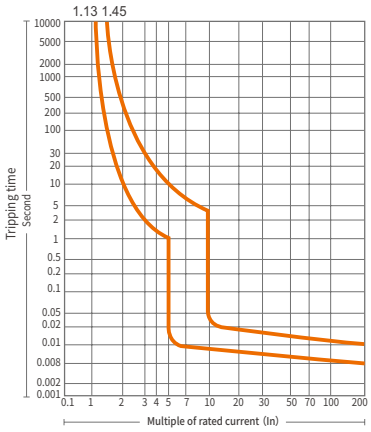
Data acc. to IEC/EN 60898-1										
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	1-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	1-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	
D	1-63A	1.13In		≤1h			10In		≥0.1	
			1.45In		<1h			20In	<0.1	

B curve



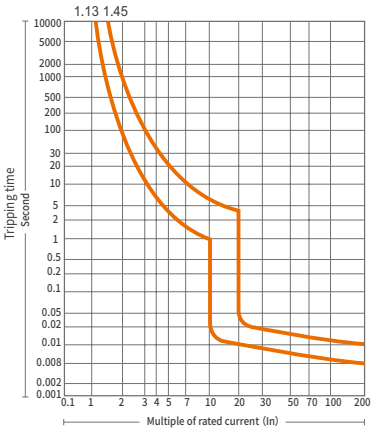
Universal use
- socket outlet, lighting device

C curve



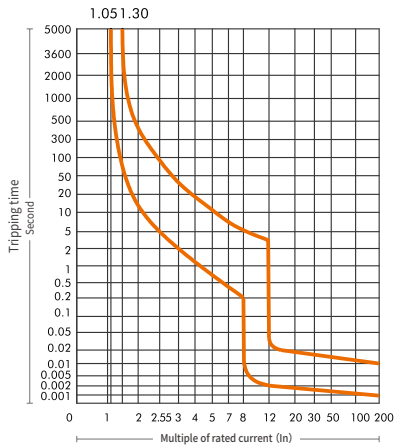
Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve



Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

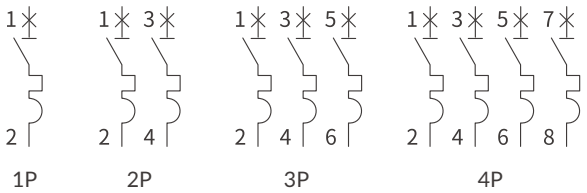
Data acc. to IEC/EN 60947-2						
Rated current (In)	Tripping Characteristic	Initial state	Test current (A)	Trip time (t)	Result to be obtained	Ambient temperature
≤63A	Thermal release	Cold state	1.05In	≥1h	No trip	30±2°C
		Hot state (Follow the above test)	1.30In	<1h	Trip	
	Magnetic release	Cold state	8In	≤0.2s	No trip	Normal temperature
			12In	<0.2s	Trip	



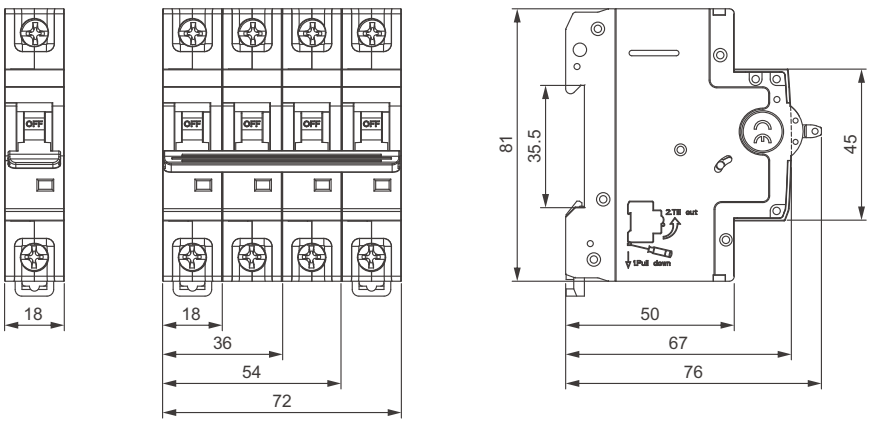
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



ETM1-63UH

Mini Circuit Breaker

IP20 protection

Finger protected connection terminals.

Modular accessory expansion

Suitable for the quick and easy mounting of additional components, such as auxiliary switches and fault signal contacts.

EAN code

The shell comes with pad printed EAN code.

Standard

IEC 60947-2: Low-voltage switchgear and controlgear -Part 2.

Multiple termination

Both incoming and outgoing terminals are suitable for: normal cable, fork type busbar, pin type busbars, fork busbar + cable simultaneous connection.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for MCBs, it is now possible to recycle the MCBs completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETM1-63UH Series Miniature Circuit Breaker is specifically designed for terminal power distribution protection in commercial office buildings, residential premises, and general industrial applications. It is suitable for circuits with AC 50/60Hz, a rated voltage of 110/240/415V, and a rated current up to 63A.

Featuring overload and short-circuit protection, it can also be used for infrequent line switching operations under normal conditions. With a maximum ultimate short-circuit breaking capacity (Icu) of up to 15kA, it ensures reliable circuit protection.

This product incorporates finger-safe combination terminals and provides contact open/close status indication, significantly enhancing operational safety. Additionally, various modular accessories can be configured to meet diverse application needs.

Product Tips

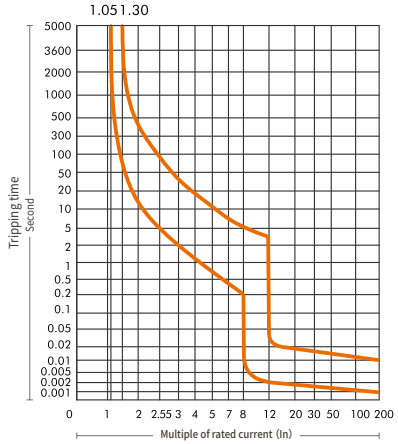
1. Reversible line and load connection
2. EAN-13 barcodes
3. The position of handle lock
4. Rated current up to 63A
5. PIN/ Fork busbar
6. Contacts position indication window

Technical Data

General data	
Protection	Overcurrent and short circuit
Type of trip	Thermal-magnetic
No. of poles	1P, 2P, 3P, 4P
Rated operational voltage (Ue)	1P: 110/230V, 120/240V, 230/400V, 240/415V 2P,3P,4P: 230/400V, 240/415V, 400/415V
Rated current (In)	1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63A
Rated frequency	50/60Hz
Rated insulation voltage (Ui)	440V
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Pollution degree	2
Data acc. to IEC/EN 60947-2	
Rated ultimate short circuit breaking capacity Icu (kA)	15kA
Rated service short circuit breaking capacity Ics (kA)	7.5kA
Thermal tripping characteristics	1.05×In No tripping within an hour; 1.3×In Tripping within an hour
Instantaneous tripping characteristics	8In-12In
Mechanical data	
Electrical life	10,000 Cycles
Mechanical life	20,000 Cycles
Contact position indication	green OFF / red ON
Protection degree	IP20
Reference temperature	30°C
Operating ambient temperature (with daily average≤35°C)	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Installation	
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Terminal block	Screw press-connected
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Mounting type	Mounting on 35mm DIN rail
Incoming method	Bi-Directional
Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes
Mechanical Interlock	Yes

Tripping Characteristic

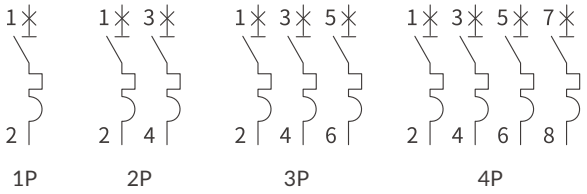
Data acc. to IEC/EN 60947-2						
Rated current (In)	Tripping Characteristic	Initial state	Test current (A)	Trip time (t)	Result to be obtained	Ambient temperature
≤63A	Thermal release	Cold state	1.05In	≥1h	No trip	30±2°C
		Hot state (Follow the above test)	1.30In	<1h	Trip	
	Magnetic release	Cold state	8In	≤0.2s	No trip	Normal temperature
			12In	<0.2s	Trip	



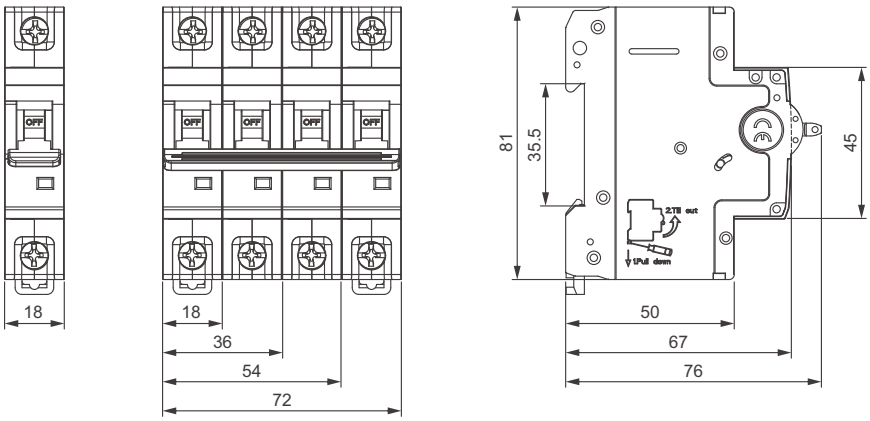
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



ETM1-63DC

Non-Polarity DC Mini Circuit Breaker

- Standard: IEC/EN 60947-2
- Rated current: 6~63A
- Poles: 1P, 2P, 3P, 4P
- Rated breaking capacity: 6kA
- Insulation voltage: 1200V
- Incoming method: According to the wiring diagram
- Rated operated voltage: 300VDC(1P), 600VDC(2P), 900VDC(3P), 1200VDC(4P)

Applications

Photovoltaic (PV) Systems

Energy Storage System

Communications and Data Center

Industrial and Automation Equipment

Overview

EKM1-63DC is a non-polarized DC miniature circuit breaker designed for photovoltaic, energy storage, and other high-voltage DC applic-ations. Supporting 6-63A at up to 1200VDC and available in 1P/2P/3P/4P configurations, its polarity-free design simplifies installation, eliminates wiring errors, and enables fast, efficient field deployment.

With high-voltage capability, dependable arc suppression, and precise tripping, it ensures reliable performance and enhanced safety for modern systems.

Product Tips

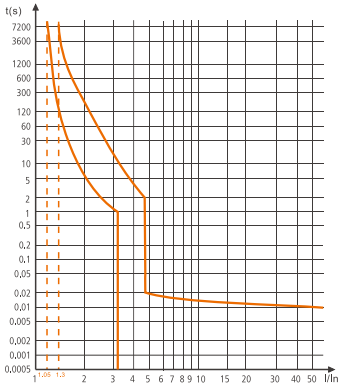
1. Line and load connection
2. The position of handle lock
3. Rated current up to 63A
4. Contacts position indication window

Technical Data

Standard		IEC/EN 60947-2			
Protection		Overcurrent and short circuit			
Type of trip		Thermal-magnetic			
No. of poles		1P	2P	3P	4P
Rated voltage (Ue)		300VDC	600VDC	900VDC	1200VDC
Rated currents (In)		6, 10, 16, 20, 25, 32, 40, 50, 63A			
Rated insulation voltage (Ui)		1200V			
Rated impulse withstand voltage (Uimp) (1.2/50μs)		6kV			
Rated service short circuit breaking capacity (Ics)		6kA			
Rated ultimate short circuit breaking capacity (Icu)		6kA			
Thermal tripping characteristics		1.05×In No tripping within an hour; 1.3×In Tripping within an hour			
Instantaneous tripping characteristics		B: 4In±20%, C: 8In±20%, K: 10In±20%			
Electrical life	Actual value	>1,000 Cycles			
	Standard value	1,000 Cycles			
Mechanical life	Actual value	>20,000 Cycles			
	Standard value	8500 Cycles			
Contact position indicator		green OFF/ red ON			
Overvoltage category		3			
Pollution degree		3			
Ingress protection		IP40, Wiring port IP20			
Resistance to humidity and heat		Class 2			
Reference temperature		-30°C			
Operating ambient temperature (with daily average≤35°C)		-25°C ~ +55°C			
Ambient temperature		-30°C ~ +70°C			
Terminal connection type		Cable			
Max. terminal size for cable		16mm² flexible/ 25mm² rigid			
Max. tightening torque		2.5N.m			
Installation		Mounting on 35mm DIN rail			
Incoming method		According to the wiring diagram			

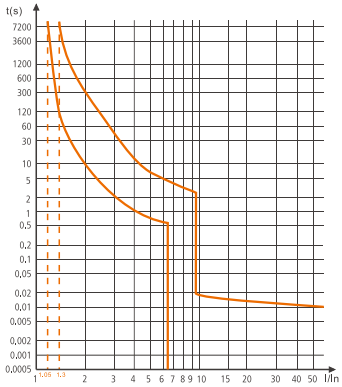
Tripping Characteristic

B curve: 4In±20%



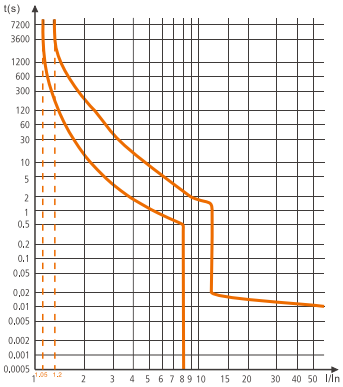
- I=1.05In, t≥1h, not trip
- I=1.3In, t<1h, trip
- I=2.55In,t≥1-120s(In=6-63A)
- Instantaneous trip: 4In±20%

C curve: 8In±20%



- I=1.05In, t≥1h, not trip
- I=1.3In, t<1h, trip
- I=2.55In,t≥1-120s(In=6-63A)
- Instantaneous trip: 8In±20%

K curve: 10In±20%



- I=1.05In, t≥1h, not trip
- I=1.3In, t<1h, trip
- I=2.55In,t≥1-120s(In=6-63A)
- Instantaneous trip: 10In±20%

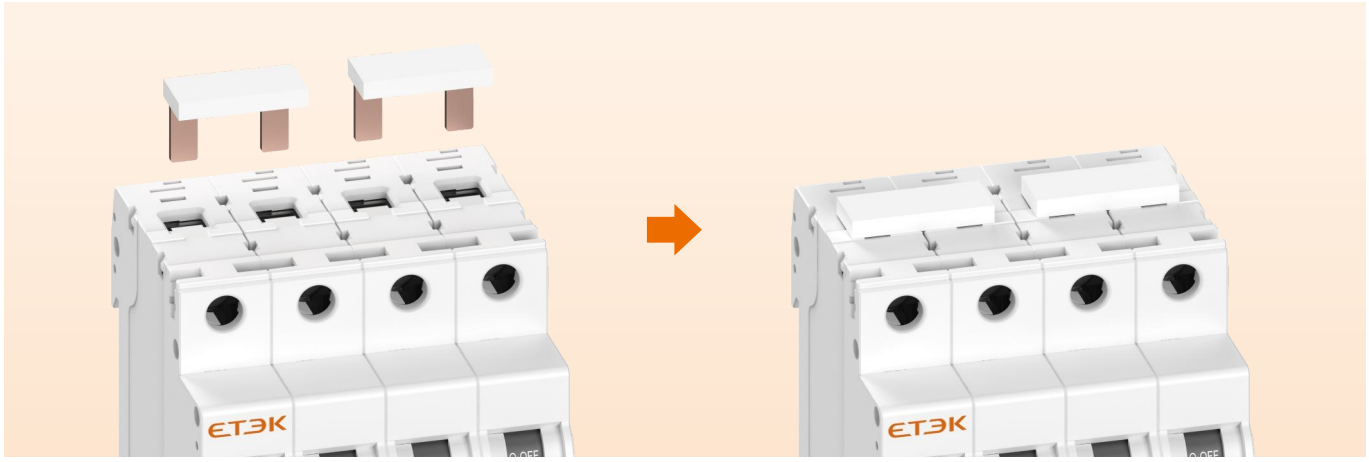
Temperature Derating Table

Rated voltage (Ue)	Correction factor for ambient temperature																		
	-30°C	-25°C	-20°C	-15°C	-10°C	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
16A	1.24	1.22	1.20	1.18	1.16	1.14	1.11	1.09	1.07	1.05	1.02	1.00	1.00	1.00	1.00	0.90	0.87	0.84	0.81
20A	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.05	1.02	1.00	1.00	1.00	1.00	0.90	0.87	0.84	0.81
25A	1.24	1.22	1.20	1.18	1.16	1.14	1.11	1.09	1.07	1.05	1.02	1.00	1.00	1.00	1.00	0.90	0.87	0.85	0.82
32A	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.04	1.02	1.00	1.00	1.00	1.00	0.91	0.88	0.85	0.78
40A	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.05	1.02	1.00	1.00	1.00	1.00	0.91	0.88	0.85	0.82
50A	1.23	1.21	1.19	1.17	1.15	1.13	1.11	1.09	1.07	1.05	1.02	1.00	1.00	1.00	1.00	0.91	0.88	0.85	0.82
63A	1.27	1.25	1.22	1.17	1.18	1.15	1.13	1.11	1.08	1.05	0.87	1.00	1.00	1.00	1.00	0.88	0.85	0.82	0.78

Derating of Altitude

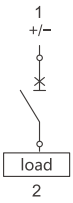
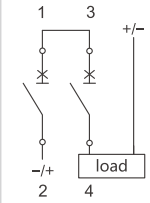
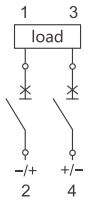
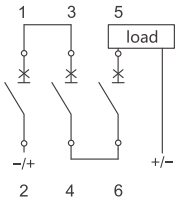
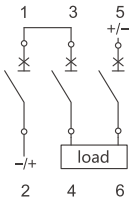
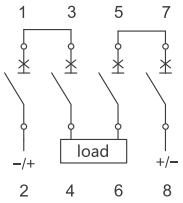
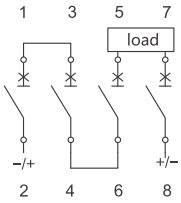
Altitude (m)	2000	3000	4000	5000
Rated current (In)	1	0.97	0.91	0.86
Rated insulation (Ui)	1	0.90	0.82	0.76
Power-frequency dielectric strength	1	0.90	0.82	0.76
Rated impact tolerance voltage (Uimp)	1	0.90	0.82	0.76
Values of rated shour-circuit capacity (Icn)	1	0.87	0.77	0.67
Electrical life (Cycles)	1	0.87	0.77	0.67

Derating of Altitude

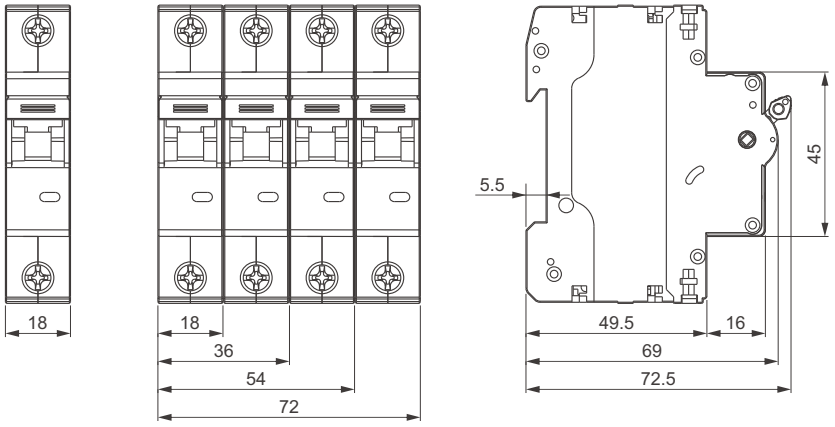


Note: Configure the external bridging busbars as required by the circuit diagram.

Wiring Diagram

1P	2P		3P		4P	
						

Dimension (mm)



Electronic Type | RCBO | 6/10kA

ETL2-63(H)

Residual Current Circuit Breaker with Overcurrent Protection

- Voltage: 230/240V AC systems (50/60Hz)
- Current range: 6A to 63A
- Rated residual current: 10, 30, 100, 300mA
- Tripping curves: Type B/C available
- Breaking capacity: 6kA, 10kA
- Electronic type
- From bottom wiring capability
- AC and A types
- Transparent trip status observation port
- RCBO according to IEC/EN 61009-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

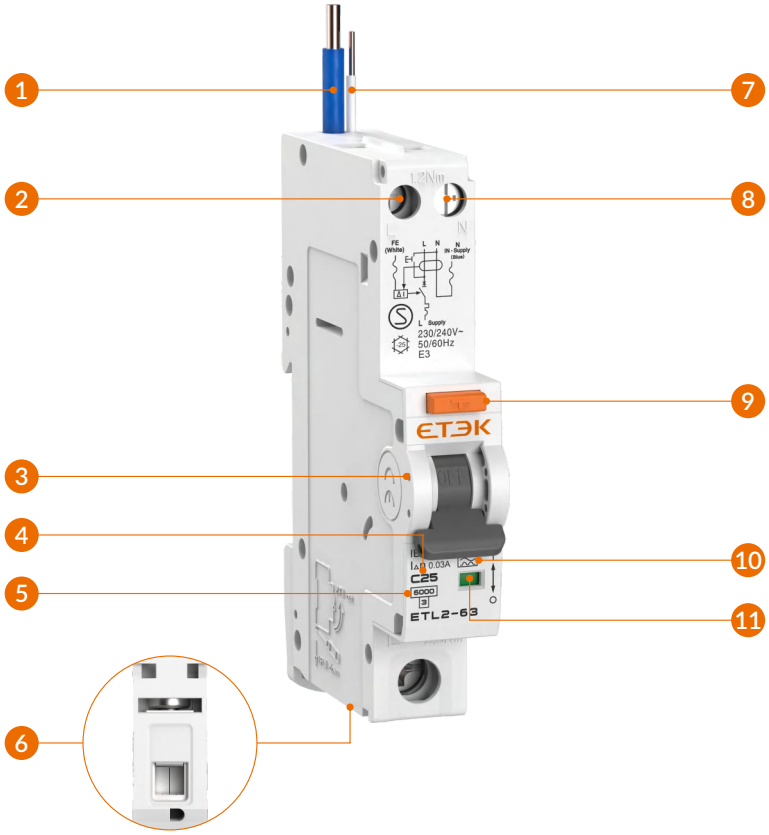
Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETL2-63(H) 1P+N RCBO in 1 module width, suitable for installation in chassis distribution boards. provides comprehensive protection against short-circuits, overloads, and earth faults. This device with a blue neutral cable features a 6kA or 10kA breaking capacity and is available in rated currents up to 63A, making it suitable for residential, commercial, and industrial applications. An optional functional earth cable (white) enhances safety in the event of neutral loss. The neutral is unswitched.

Product Tips



1. Neutral incoming cable
2. Live line interface
3. The position of handle
4. Lock Tripping characteristics B, C
5. Rated short circuit breaking capacity 6kA, 10kA
6. PIN/ Fork busbar
7. Functional earth cable (optional)
8. Neutral line interface
9. Test button
10. Sensitivity to residual current AC, A
11. Contacts position indication window

Technical Data

Standard	IEC/EN 61009-1
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Ground fault: Electronic
	Overload and short circuit: Thermal-magnetic
Residual current type	AC type - AC residual current
	A type - residual AC and pulsating DC current
No. of poles	1P+N, Neutral line is unswitched
Insulation voltage (Ui)	500V
Rated voltage (Ue)	230/240V~
Rated currents (In)	6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (I∆n)	10, 30, 100, 300mA
Residual current off-time under (I∆n)	≤0.1s
Rated residual making and breaking capacity (I∆m)	500A (In≤50A); 10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	ETL2-63: 6kA; ETL2-63H: 10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure); 650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour; 1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	8,000 Cycles
Contact position indicator	green OFF / red ON
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	Line side (bottom): 25mm²; Load side (top) : 16mm² (For 16mm² conductors: crimping terminal lug is mandatory.)
Max. tightening torque	Bottom (line side): 2.5N.m; Top (Load side) : 1.2N.m
Neutral load cable	Bule, 500mm length, 4mm² (Other lengths available upon request)
Functional earth cable	White, 500mm length, 0.6mm² (Other lengths available upon request)
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-Directional

Auxiliary for remote tripping or signaling	
Auxiliary Contact	Yes
Auxiliary & Alarm Contact	Yes
Shunt Release	Yes
Shunt Release & Auxiliary Contact	Yes
Voltage Loss Release	Yes
Over-voltage Release	Yes
Undervoltage Release	Yes
Over-undervoltage Release	Yes

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

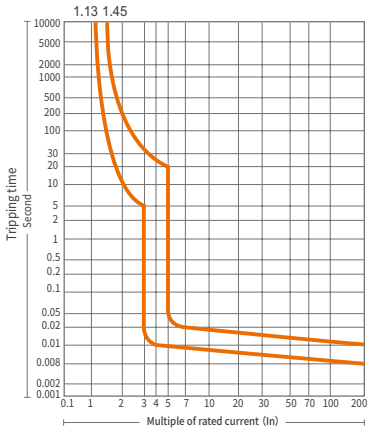
Tripping Sensitivity

10mA	Provides a higher level of protection for the human body and is used in certain situations with very high requirements for electric shock protection, such as children's facilities, swimming pools, bathrooms and other humid environments.
30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Characteristics

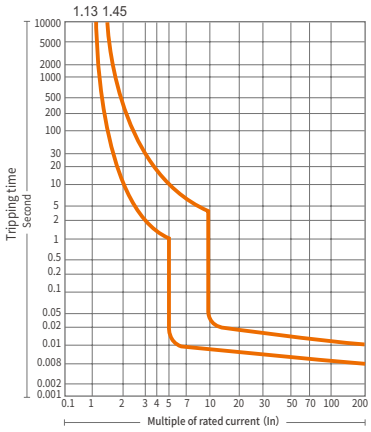
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-63A	1.13×In		≤1h		3×In		≥0.1
			1.45×In		<1h		5×In	<0.1
C	6-63A	1.13×In		≤1h		5×In		≥0.1
			1.45×In		<1h		10×In	<0.1

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

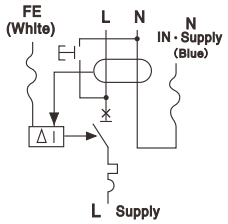
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
6,10,16,20,25,32,40,50,63	10,30, 100, 300	0.1s	0.08s	0.04s	0.04s

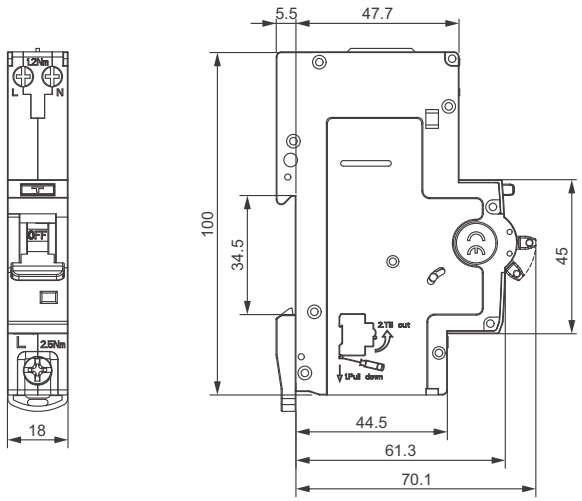
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)



ETL3-40M(H)

Residual Current Circuit Breaker with Overcurrent Protection

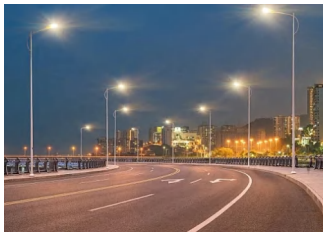
- Voltage: 400/415V AC systems (50/60Hz)
- Current range: 6A to 40A
- Rated residual current: 30, 100, 300mA
- Tripping curves: Type B/C available
- Breaking capacity: 6kA/10kA options
- Protects against overload, short circuit, and leakage faults
- Electro-magnetic type
- AC and A types
- Bidirectional wiring capability
- Visual leakage fault indication window
- Transparent trip status observation port
- RCBO according to IEC/EN 61009-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment



Electrical safety assurance in public facilities

Overview

ETL3-40M Residual Current Circuit Breakers with Overcurrent Protection (RCBO) provide combined protection against overload, short-circuit and earth leakage faults. Designed for 400/415 V (3P+N) power systems with rated currents up to 40A, they are suitable for both residential and industrial installations.

The range offers breaking capacities of 6 kA and 10 kA and is equipped with a reliable electromagnetic trip unit for fast fault clearance.

Product Tips

1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C
5. Rated short circuit breaking capacity 6kA, 10kA
6. Neutral line interface
7. Test button
8. Residual current trip indicator
9. Sensitivity to residual current AC, A
10. Contacts position indication window

Technical Data

Standard	IEC/EN 61009-1
Type of trip	Electro-magnetic type
Residual current type	AC type - AC residual current
	A type - residual AC and pulsating DC current
No. of poles	3P+N
Insulation voltage (Ui)	500V
Rated voltage (Ue)	400/415V
Rated currents (In)	6, 10, 16, 20, 25, 32, 40A
Rated sensitivity currents (IΔn)	30, 100, 300mA
Residual current off-time under (IΔn)	<0.3s
Rated residual making and breaking capacity (IΔm)	500A
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	ETL3-40M: 6kA
	ETL3-40MH: 10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour
	1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	8,000 Cycles
Contact position indicator	green OFF / red ON
Ground fault indicator	White: Normal
	Blue: Leakage fault
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

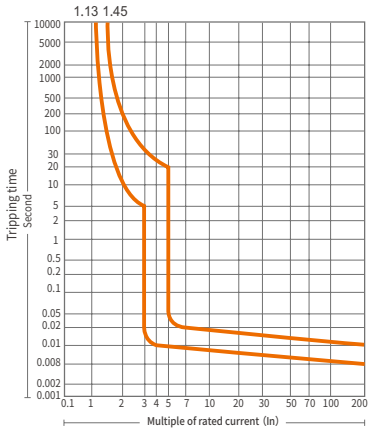
Tripping Sensitivity

30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Characteristics

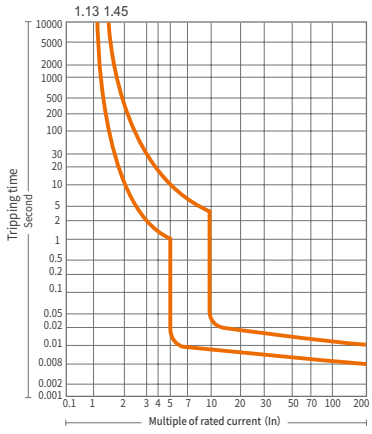
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-40A	1.13×In		≤1h		3×In		≥0.1
			1.45×In		<1h		5×In	<0.1
C	6-40A	1.13×In		≤1h		5×In		≥0.1
			1.45×In		<1h		10×In	<0.1

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

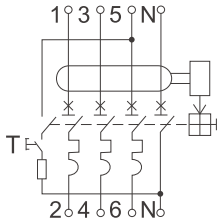
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
6,10,16,20,25,32,40	30, 100, 300	0.3s	0.15s	0.04s	0.04s

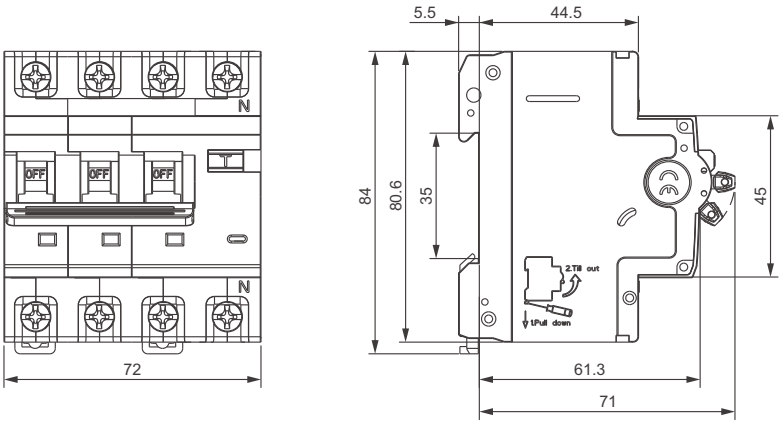
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8

Wiring Diagram



Dimension (mm)



ETL3-63M(H)

Residual Current Circuit Breaker with Overcurrent Protection

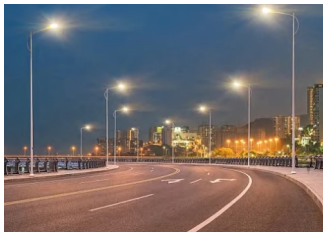
- Voltage: 240/415V AC systems (50/60Hz)
- Electro-magnetic type
- Current range: 6A to 63A
- AC and A types
- Rated residual current: 30, 100, 300mA
- Bidirectional wiring capability
- Tripping curves: Type B/C available
- Visual leakage fault indication window
- Breaking capacity: 6kA/10kA options
- Transparent trip status observation port
- Protects against overload, short circuit, and leakage faults
- RCBO according to IEC/EN 61009-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

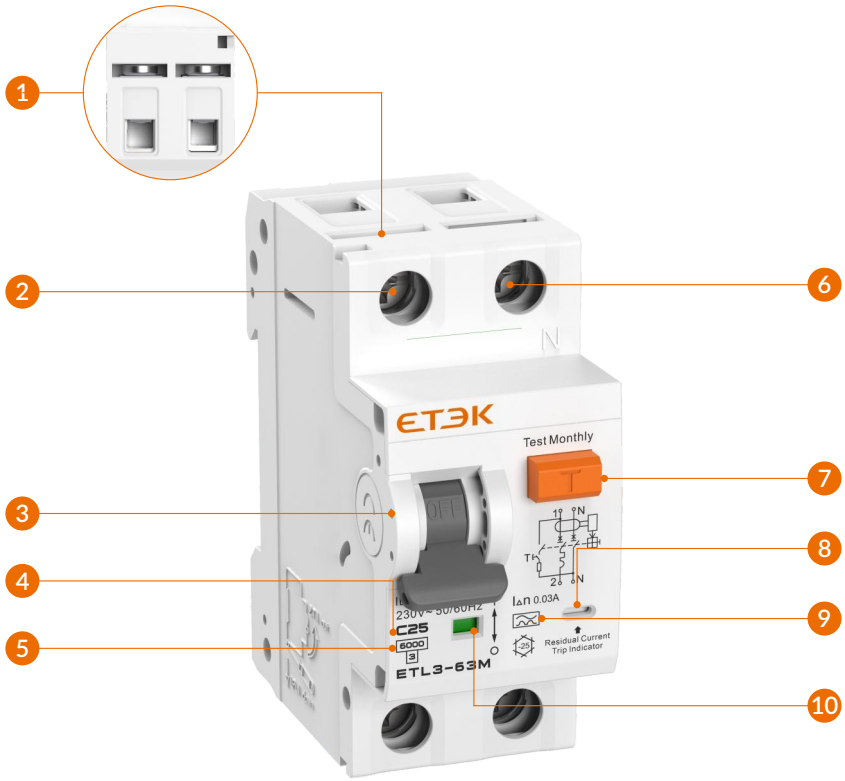


Electrical safety assurance in public facilities

Overview

ETL3-63M Residual Current Circuit Breaker with Overcurrent Protection (RCBO) provide protects against overload, short circuit, and leakage faults, supporting 230/240V (1P+N) or 400/415V (3P+N) power systems with ratings up to 63A, its reliable operation across residential and industrial applications.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C
5. Rated short circuit breaking capacity 6kA, 10kA
6. Neutral line interface
7. Test button
8. Residual current trip indicator
9. Sensitivity to residual current AC, A
10. Contacts position indication window

Technical Data

Standard	IEC/EN 61009-1
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Electro-magnetic type
Residual current type	AC type - AC residual current
	A type - residual AC and pulsating DC current
No. of poles	1P+N, 3P+N
Insulation voltage (Ui)	500V
Rated voltage (Ue)	1P+N: 230/240V~; 3P+N: 400/415V~
Rated currents (In)	6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (IΔn)	30, 100, 300mA
Residual current off-time under (IΔn)	<0.3s
Rated residual making and breaking capacity (IΔm)	500A (In≤50A)
	10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	ETL3-63M: 6kA
	ETL3-63MH: 10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour
	1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	8,000 Cycles
Contact position indicator	green OFF / red ON
Ground fault indicator	White: Normal
	Blue: Leakage fault
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

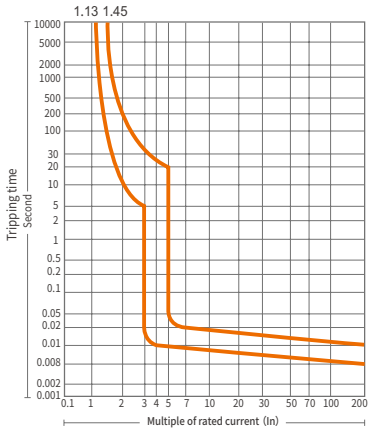
Tripping Sensitivity

30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Characteristics

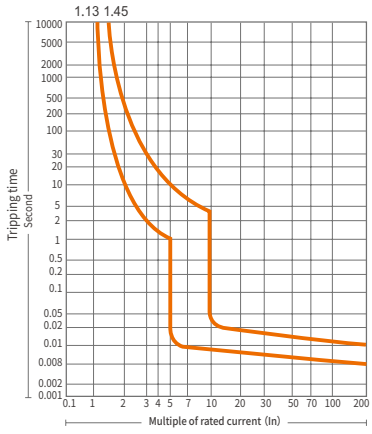
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-63A	1.13×In		≤1h		3×In		≥0.1
			1.45×In		<1h		5×In	<0.1
C	6-63A	1.13×In		≤1h		5×In		≥0.1
			1.45×In		<1h		10×In	<0.1

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

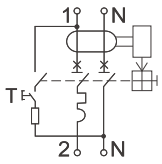
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
6,10,16,20,25,32,40,50,63	30, 100, 300	0.3s	0.15s	0.04s	0.04s

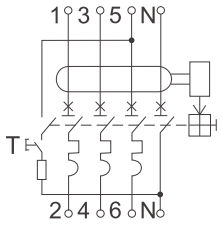
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram

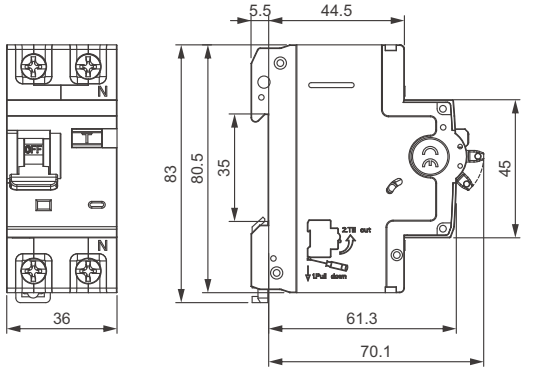


1P+N

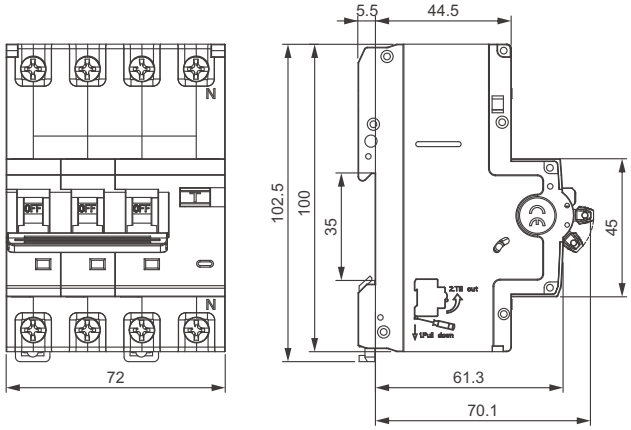


3P+N

Dimension (mm)



1P+N



3P+N

Electronic Type | RCBO | 6/10kA

ETL3-63(H)

Residual Current Circuit Breaker with Overcurrent Protection

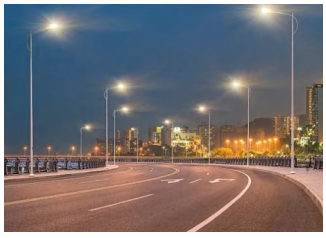
- Voltage: 240/415V AC systems (50/60Hz)
- Current range: 6A to 63A
- Rated residual current: 10, 30, 100, 300mA
- Tripping curves: Type B/C available
- Breaking capacity: 6kA/10kA options
- Protects against overload, short circuit, and leakage faults
- Electronic type
- AC and A types
- Bidirectional wiring capability
- Visual leakage fault indication window
- Transparent trip status observation port
- RCBO according to IEC/EN 61009-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

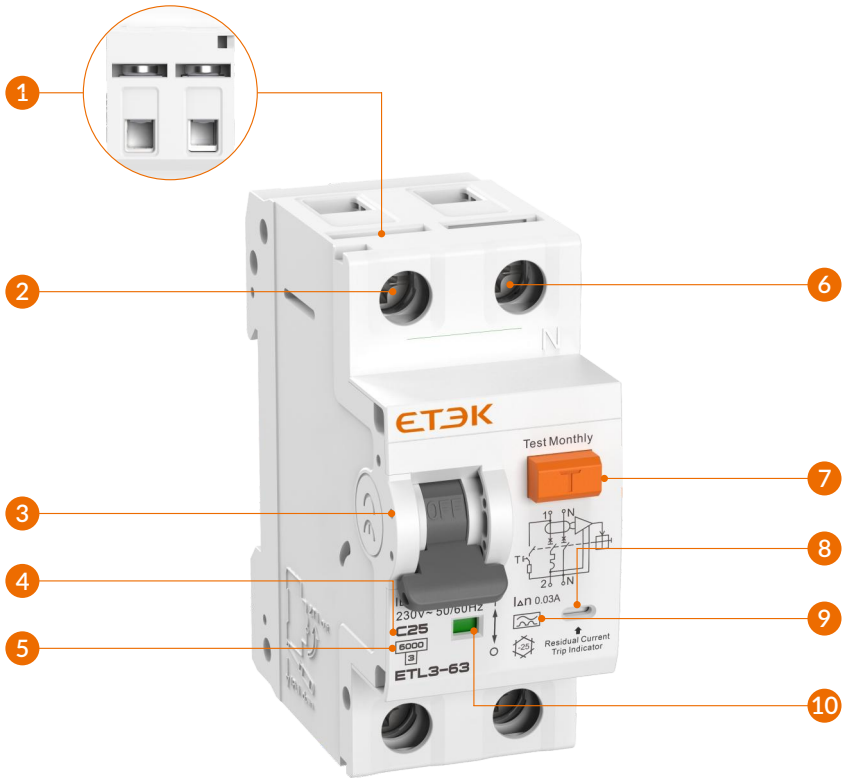


Electrical safety assurance in public facilities

Overview

ETL3-63 Residual Current Circuit Breaker with Overcurrent Protection (RCBO) provide protects against overload, short circuit, and leakage faults, supporting 230/240V (1P+N) or 400/415V (3P+N) power systems with ratings up to 63A, its reliable operation across residential and industrial applications.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C
5. Rated short circuit breaking capacity 6kA, 10kA
6. Neutral line interface
7. Test button
8. Residual current trip indicator
9. Sensitivity to residual current AC, A
10. Contacts position indication window

Technical Data

Standard	IEC/EN 61009-1
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Ground fault: Electronic
	Overload and short circuit: Thermal-magnetic
Residual current type	AC type - AC residual current
	A type - residual AC and pulsating DC current
No. of poles	1P+N, 3P+N
Insulation voltage (Ui)	500V
Rated voltage (Ue)	1P+N: 230/240V~; 3P+N: 400/415V~
Rated currents (In)	6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (IΔn)	10, 30, 100, 300mA
Residual current off-time under (IΔn)	≤0.1s
Rated residual making and breaking capacity (IΔm)	500A (In≤50A)
	10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	ETL3-63:6kA
	ETL3-63H:10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour
	1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	8,000 Cycles
Contact position indicator	green OFF / red ON
Ground fault indicator	White: Normal
	Blue: Leakage fault
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

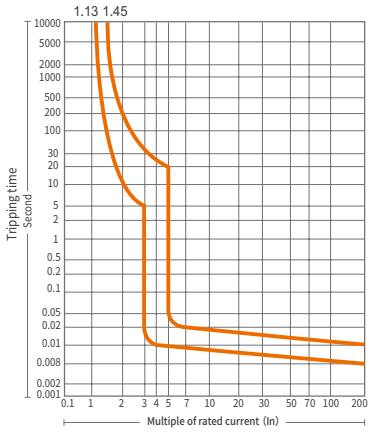
Tripping Sensitivity

10mA	Provides a higher level of protection for the human body and is used in certain situations with very high requirements for electric shock protection, such as children's facilities, swimming pools, bathrooms and other humid environments.
30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Characteristics

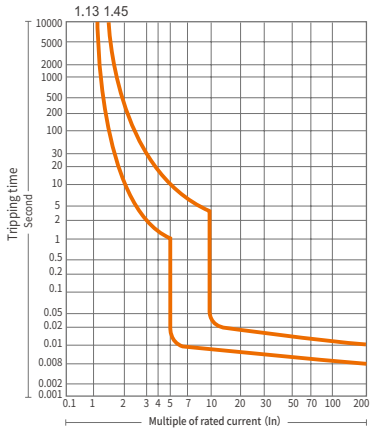
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-63A	1.13×In		≤1h		3×In		≥0.1
			1.45×In		<1h		5×In	<0.1
C	6-63A	1.13×In		≤1h		5×In		≥0.1
			1.45×In		<1h		10×In	<0.1

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

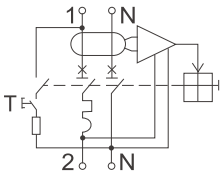
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
6,10,16,20,25,32,40,50,63	10,30, 100, 300	0.1s	0.08s	0.04s	0.04s

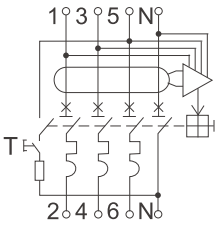
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram

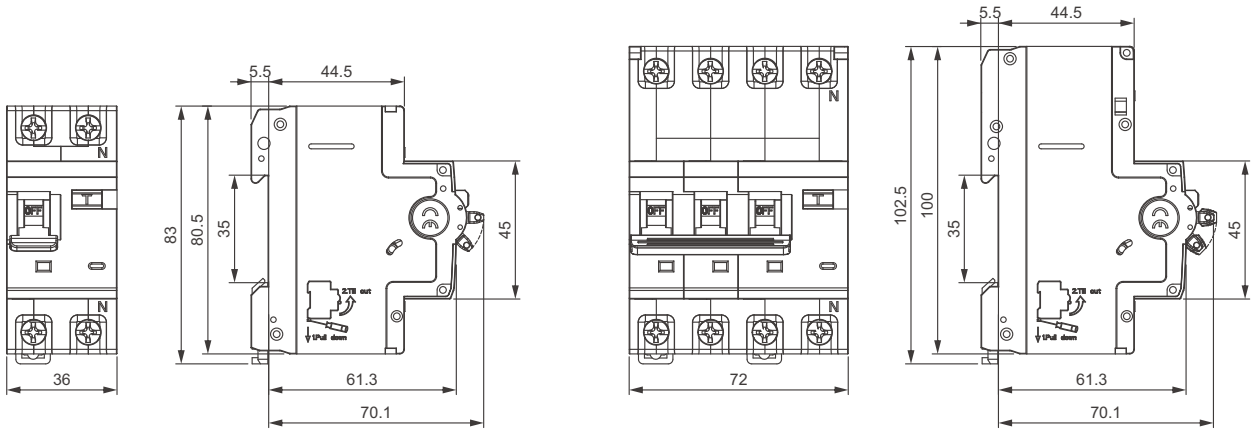


1P+N



3P+N

Dimension (mm)



B Type | Electronic Type | RCBO | 10kA

ETL3-63B

Residual Current Circuit Breaker with Overcurrent Protection

- Voltage: 230/240V AC systems (50/60Hz)
- Current range: 6A to 63A
- Rated residual current: 30mA
- Tripping curves: Type B/C available
- Breaking capacity: 10kA
- Protects against overload, short circuit, and leakage faults
- Electronic type
- B types
- Bidirectional wiring capability
- Visual leakage fault indication window
- Transparent trip status observation port
- RCBO according to IEC/EN 61009-1, IEC/EN 62423

Applications


EV Charging Stations


Photovoltaic (PV) Systems


UPS Systems

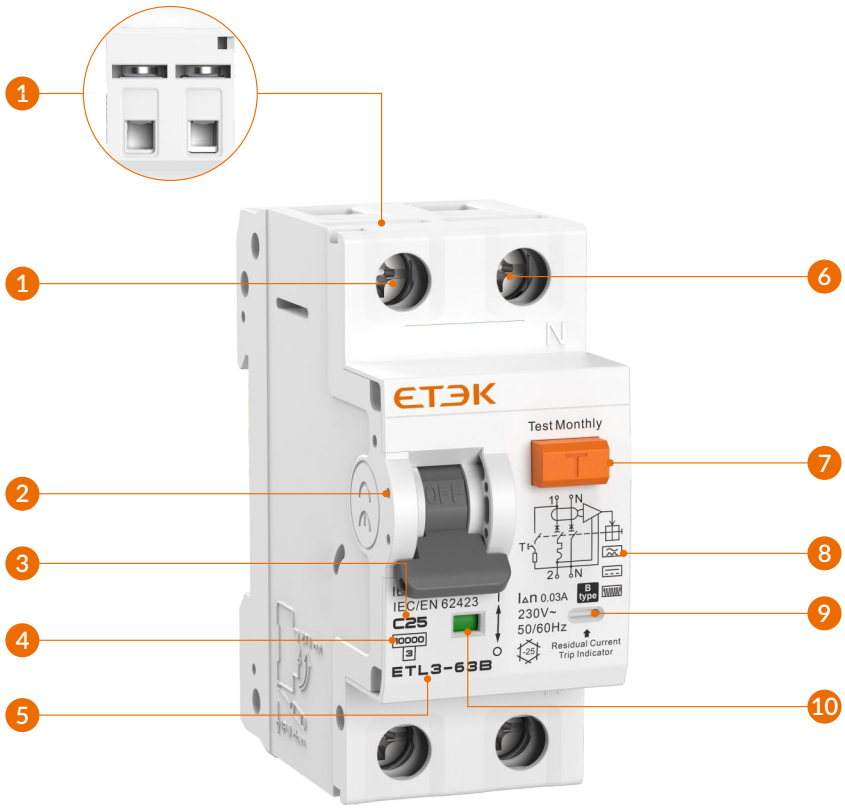

Industrial Welding Equipment

Overview

ETL3-63B is an IP+N Type B RCBO (Residual Current Circuit Breaker with Overcurrent protection) with up to 63A rated current, 230/240V rated voltage, 10kA breaking capacity, and 30mA residual current sensitivity. It features both B and C curve characteristics and provides comprehensive protection against overcurrent, short circuit, and earth leakage, with advanced detection of complex waveforms and smooth DC residual currents.

With its bidirectional power capability, ETL3-63B is especially suited for modern electrical installations and renewable energy applications, ensuring reliable protection for sensitive equipment such as EV chargers, solar panels, and heat pumps.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C
5. Rated short-circuit capacity 10kA
6. Neutral line interface
7. Test button
8. Sensitivity to residual current B
9. Residual current trip indicator
10. Contacts position indication window

Technical Data

Standard	IEC/EN 61009-1, IEC/EN 62423
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Ground fault: Electronic
	Overload and short circuit: Thermal-magnetic
Residual current type	B Type - residual AC, pulsating and smooth DC current, high frequency (≤1kHz)
No. of poles	1P+N
Neutral	Switched, N pole on the right
Insulation voltage (Ui)	500V
Rated voltage (Ue)	230/240V~
Rated currents (In)	6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (IΔn)	30mA
Residual current off-time under (IΔn)	≤0.1s
Rated residual making and breaking capacity (IΔm)	500A (In≤50A), 10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure), 650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour; 1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	green OFF/ red ON
Ground fault indicator	White: Normal; Blue: Leakage fault
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

Type AC RCDs detect slowly increasing sinusoidal AC residual currents.

Type A RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

Type B RCDs detect sinusoidal AC, pulsating DC, multi-frequency composite, and smooth DC residual currents. They are designed to trip at frequencies ranging from 50Hz to 1kHz.

Tripping Sensitivity

30mA This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.

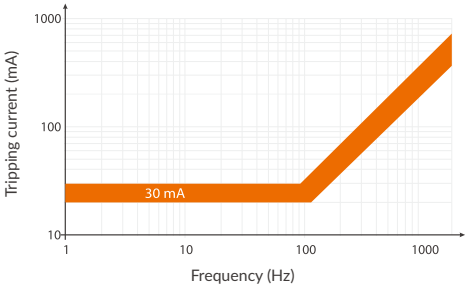
Tripping Characteristic

Type B RCDs - Standard values of break time and non-actuating time for residual direct currents which result from rectifying circuits and for residual smooth direct current.

Tripping times					
Type	Fault currents	Tripping time at			
	Alternating currents	1×IΔn	2×IΔn	5×IΔn	500A
	Pulsating DC currents	1.4×IΔn	2×1.4×IΔn	5×1.4×IΔn	500A
	Smooth DC currents	2×IΔn	2×2×IΔn	5×2×IΔn	500A
Standard		Max. 0.3s	Max. 0.15s	Max. 0.04s	Max. 0.04s

Type B RCDs - Residual non-operating and operating current according to frequencies which differ from the rated frequency 50/60 Hz

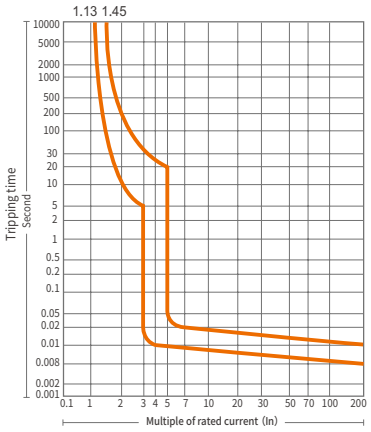
Frequency (Hz)	Residual non-operating current (IΔn)	Residual operating current (IΔn)
150	0.5 IΔn	2.4 IΔn
400	0.5 IΔn	6 IΔn
1000	IΔn	14 IΔn



Tripping Characteristic

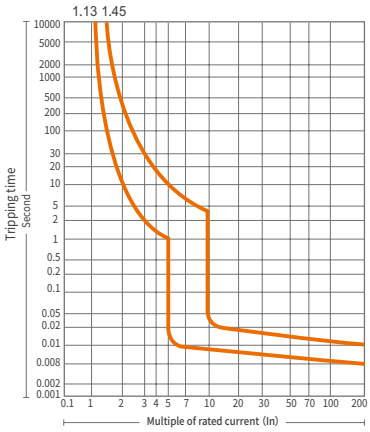
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	6-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	6-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	

B curve



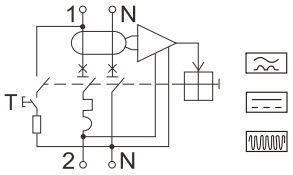
Universal use
- socket outlet, lighting device

C curve

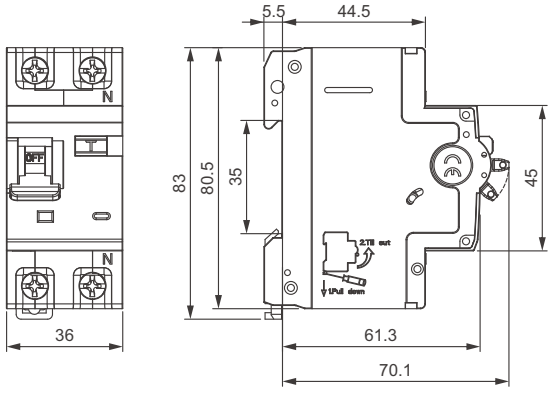


Resistive & inductive loads with low inruch current
- lamp, high starting current motor

Wiring Diagram



Dimension (mm)



Electronic Type | RCBO | 6/10kA

ETL5-63(H)

Residual Current Circuit Breaker with Overcurrent Protection

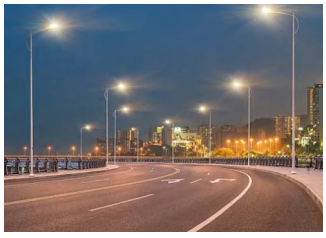
- Voltage: 240/415V AC systems (50/60Hz)
- Current range: 6A to 63A
- Rated residual current: 10, 30, 100, 300mA
- Tripping curves: Type B/C/D available
- Breaking capacity: 6kA/10kA options
- Protects against overload, short circuit, and leakage faults
- Electronic type
- AC and A types
- Top incoming wiring
- Test and reset button
- Transparent trip status observation port
- RCBO according to IEC/EN 61009-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

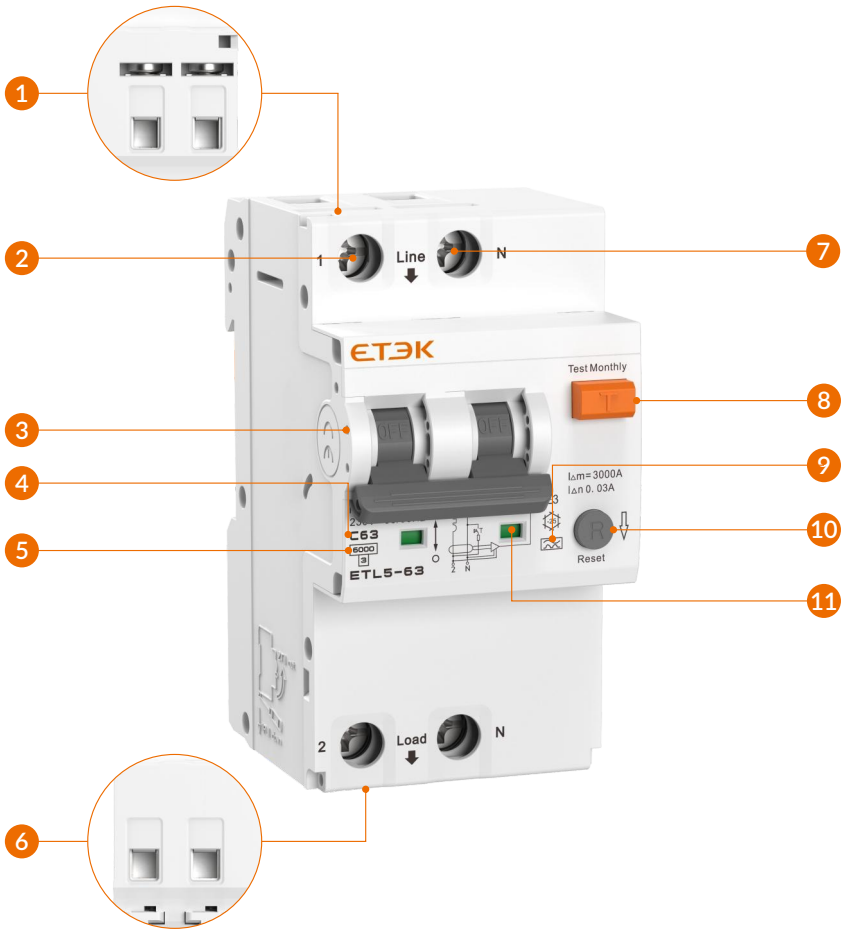


Electrical safety assurance in public facilities

Overview

ETL5-63 Electronic RCBO (Residual Current Circuit Breaker with Overcurrent Protection) integrates earth-leakage, overload, and short-circuit protection in one compact unit, with wide current ratings from 6 to 63 A. It features both AC and A types for reliable protection-even with non-linear loads-and comes in 1P+N and 3P+N versions. ETL5-63 offers both 6 kA and 10 kA breaking capacity options, meeting a broader range of safety and installation needs in residential and commercial terminal circuits.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C, D
5. Rated short circuit breaking capacity 6kA, 10kA
6. PIN busbar
7. Neutral line interface
8. Test button
9. Sensitivity to residual current AC, A
10. Reset button
11. Contacts position indication window

Technical Data

Standard		IEC/EN 61009-1
Protection		Ground fault, Overcurrent and short circuit
Type of trip		Ground fault: Electronic
		Overload and short circuit: Thermal-magnetic
Residual current type		AC, A
No. of poles		1P+N 3module, 3P+N 5module (with switched neutral)
Insulation voltage (Ui)		500V
Rated voltage (Ue)		1P+N: 230/240V~; 3P+N: 400/415V~
Rated currents (In)		6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (IΔn)		10, 30, 100, 300mA
Residual current off-time under (IΔn)		≤0.1s
Rated residual making and breaking capacity (IΔm)		500A (In≤50A)
		10In (In>50A)
Rated frequency		50/60Hz
Rated short-circuit capacity (Icn)		ETL5-63: 6kA
		ETL5-63H: 10kA
Energy limiting class		3
Rated impulse withstand voltage (Uimp) (1.2/50μs)		4kV
Dielectric test voltage		2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)		960±15°C (Enclosure)
		650±10°C (Handle)
Thermal tripping characteristics		1.13In No tripping within an hour
		1.45In Tripping within an hour
Instantaneous tripping characteristics		B: 3In-5In; C: 5In-10In; D: 10In-20In
Electrical life		4,000 Cycles
Mechanical life		10,000 Cycles
Contact position indicator		green OFF / red ON
Protection degree		IP20
Ambient temperature		-25°C ~ +55°C
Storage temperature		-30°C ~ +70°C
Terminal connection type	Line side terminals	Cable/ Pin-type/ Fork-type busbar
	Load side terminals	Cable/ Pin-type
Max. terminal size for cable		16mm² flexible/ 25mm² rigid
Max. tightening torque		2.5N.m
Installation		Mounting on 35mm DIN rail
Incoming method		From top

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

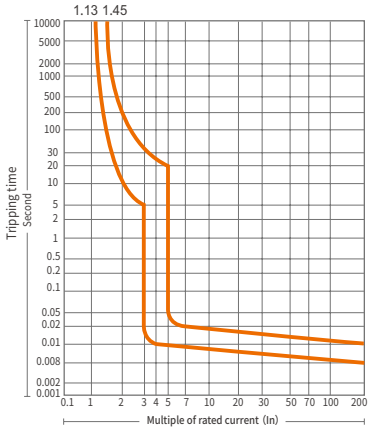
Tripping Sensitivity

10mA	Provides a higher level of protection for the human body and is used in certain situations with very high requirements for electric shock protection, such as children's facilities, swimming pools, bathrooms and other humid environments.
30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Characteristics

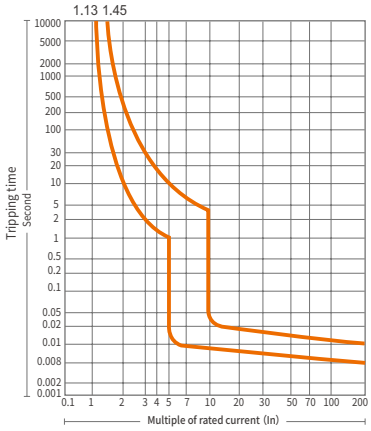
Curve	Rated current	Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-63A	1.13In		≤1h		3In		≥0.1
			1.45In		<1h		5In	<0.1
C	6-63A	1.13In		≤1h		5In		≥0.1
			1.45In		<1h		10In	<0.1
D	6-63A	1.13In		≤1h		10In		≥0.1
			1.45In		<1h		20In	<0.1

B curve



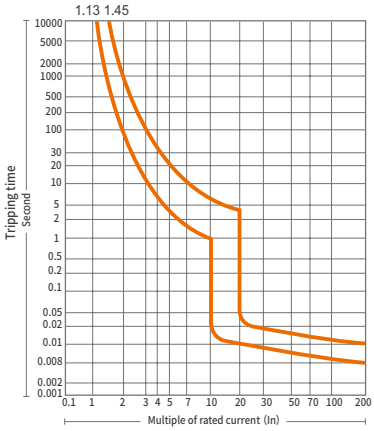
Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve



Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

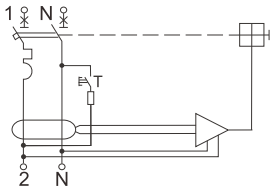
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
6,10,16,20,25,32,40,50,63	10,30, 100, 300	0.1s	0.08s	0.04s	0.04s

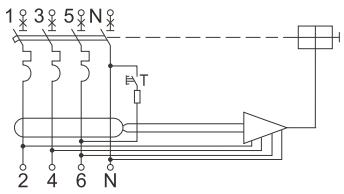
Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



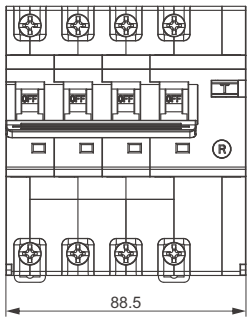
1P+N



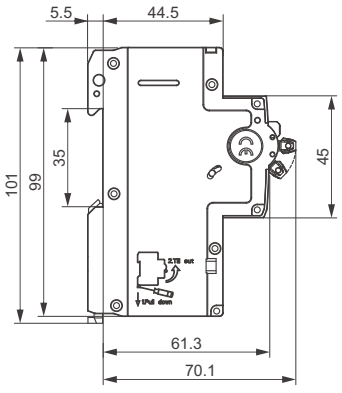
3P+N

Dimension (mm)

1P+N



3P+N



B Type | Electronic Type | RCBO | 10kA

ETL5-63B

Residual Current Circuit Breaker with Overcurrent Protection

- Voltage: 240/415V AC systems (50/60Hz)
- Electronic type
- Current range: 6A to 63A
- B types
- Rated residual current: 30, 100, 300mA
- Top incoming wiring
- Tripping curves: Type B/C/D available
- Transparent trip status observation port
- Breaking capacity: 10kA
- RCBO according to IEC/EN 61009-1, IEC/EN 62423
- Protects against overload, short circuit, and leakage faults

Applications

EV Charging Stations

Photovoltaic (PV) Systems

UPS Systems

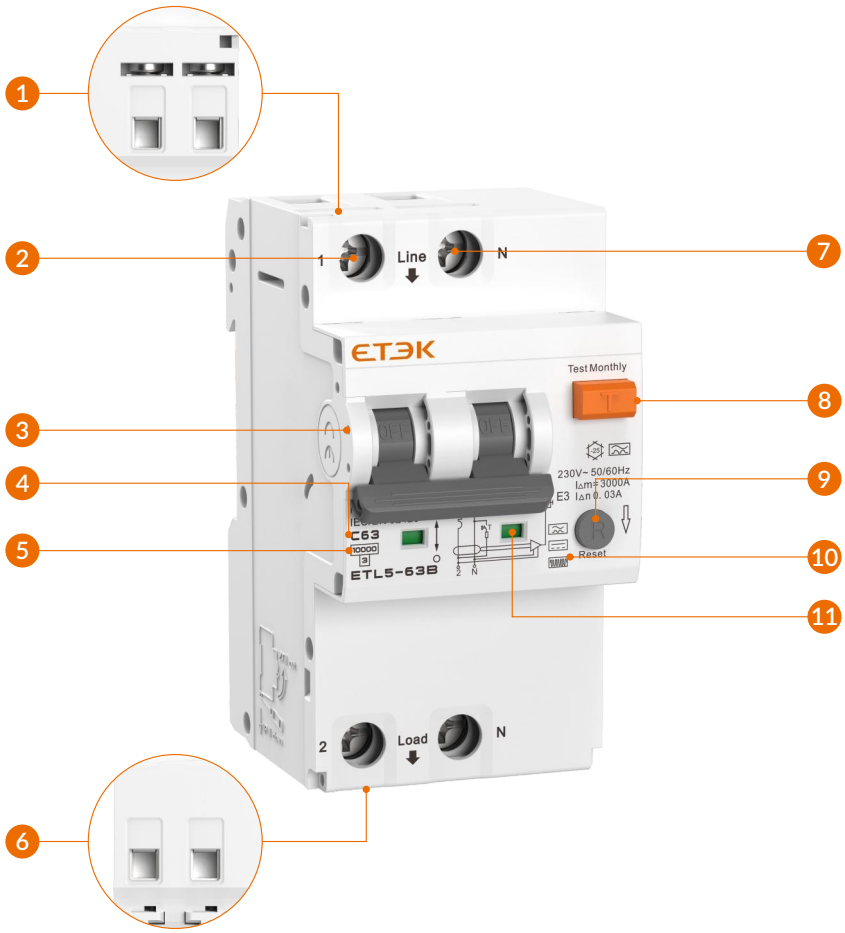
Industrial Welding Equipment

Overview

ETL5-63B Type B RCBO (Residual Current Circuit Breaker with Overcurrent protection) is a combined protective device that integrates residual current protection (RCD) and overcurrent protection (MCB), with a rated current up to 63A. It supports single-phase 230/240V and three-phase 400/415V systems, features a 10kA breaking capacity, and meets IEC61009-1 and IEC62423 standards.

Type B RCBOs are specifically designed to detect smooth DC residual currents, as well as AC and pulsating DC currents. This makes them ideal for applications such as industrial environments with variable speed drives, solar panel systems, EV charging stations, commercial distribution boards, and residential installations where enhanced earth leakage protection is required.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. The position of handle Lock
4. Tripping characteristics B, C, D
5. Rated short-circuit capacity 10kA
6. PIN busbar
7. Neutral line interface
8. Test button
9. Reset button
10. Sensitivity to residual current B
11. Contacts position indication window

Technical Data

Standard		IEC/EN 61009-1, IEC/EN 62423
Protection		Ground fault, Overcurrent and short circuit
Type of trip		Ground fault: Electronic
		Overload and short circuit: Thermo-magnetic
Residual current type		B Type - residual AC, pulsating and smooth DC current, high frequency (≤1kHz)
No. of poles		1P+N, 3P+N
Neutral		Switched, N pole on the right
Insulation voltage (Ui)		500V
Rated voltage (Ue)		1P+N: 230/240V~; 3P+N: 400/415V~
Rated currents (In)		6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated sensitivity currents (IΔn)		30, 100, 300mA
Residual current off-time under (IΔn)		≤0.1s
Rated residual making and breaking capacity (IΔm)		500A (In≤50A), 10In (In>50A)
Rated frequency		50/60Hz
Rated short-circuit capacity (Icn)		10kA
Energy limiting class		3
Rated impulse withstand voltage (Uimp) (1.2/50μs)		4kV
Dielectric test voltage		2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)		960±15°C (Enclosure); 650±10°C (Handle)
Thermal tripping characteristics		1.13In No tripping within an hour; 1.45In Tripping within an hour
Instantaneous tripping characteristics		B: 3In-5In; C: 5In-10In; D: 10In-20In
Electrical life		4,000 Cycles
Mechanical life		10,000 Cycles
Contact position indicator		green OFF/ red ON
Protection degree		IP20
Ambient temperature		-25°C ~ +55°C, Max.95% humidity
Terminal connection type	Line side terminals	Cable/ Pin-type/ Fork-type busbar
	Load side terminals	Cable/ Pin-type
Max. terminal size for cable		16mm² flexible/ 25mm² rigid
Max. tightening torque		2.5N.m
Installation		Mounting on 35mm DIN rail
Incoming method		From top

RCD Type

	Type AC RCDs detect slowly increasing sinusoidal AC residual currents.
	Type A RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.
	Type B RCDs detect sinusoidal AC, pulsating DC, multi-frequency composite, and smooth DC residual currents. They are designed to trip at frequencies ranging from 50Hz to 1kHz.

Tripping Sensitivity

30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

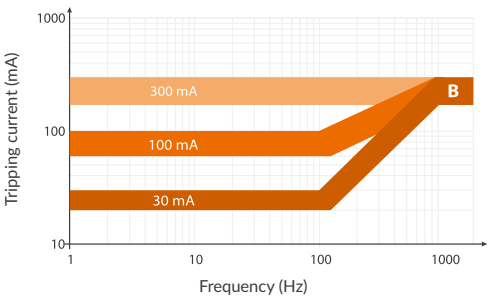
Tripping Characteristic

Type B RCDs - Standard values of break time and non-actuating time for residual direct currents which result from rectifying circuits and for residual smooth direct current.

Tripping times					
Type	Fault currents	Tripping time at			
	Alternating currents	1×IΔn	2×IΔn	5×IΔn	500A
	Pulsating DC currents	1.4×IΔn	2×1.4×IΔn	5×1.4×IΔn	500A
	Smooth DC currents	2×IΔn	2×2×IΔn	5×2×IΔn	500A
Standard		Max. 0.3s	Max. 0.15s	Max. 0.04s	Max. 0.04s

Type B RCDs - Residual non-operating and operating current according to frequencies which differ from the rated frequency 50/60 Hz

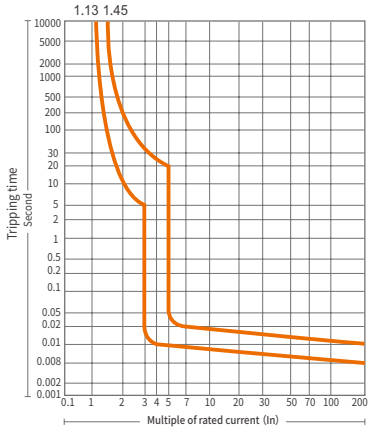
Frequency (Hz)	Residual non-operating current (IΔn)	Residual operating current (IΔn)
150	0.5 IΔn	2.4 IΔn
400	0.5 IΔn	6 IΔn
1000	IΔn	14 IΔn



Tripping Characteristic

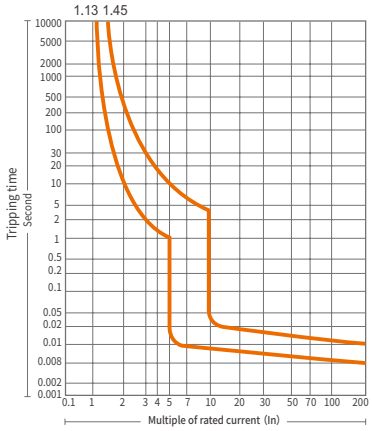
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	6-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	6-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	
D	6-63A	1.13In		≤1h			10In		≥0.1	
			1.45In		<1h			20In	<0.1	

B curve



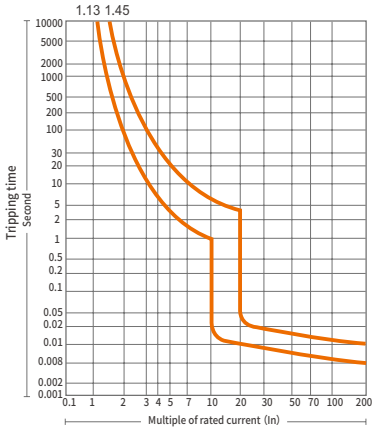
Universal use
- socket outlet, lighting device

C curve



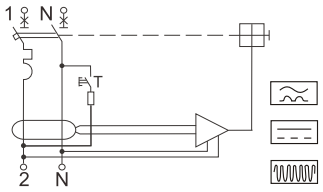
Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve

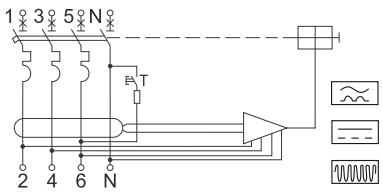


Loads with high inrush current
- transformer, solenoid valve, 2 pole motor

Wiring Diagram



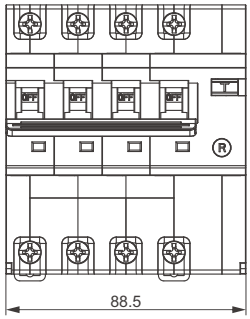
1P+N



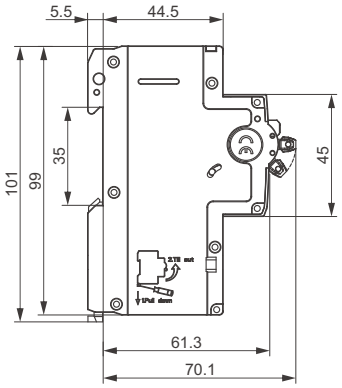
3P+N

Dimension (mm)

1P+N



3P+N



ETL1-63(H)

Residual Current Circuit Breaker

- Voltage: 240/415V AC systems (50/60Hz)
- Electro-magnetic type
- Current range: 16A to 63A
- AC, A, A-SI, A-S types
- Rated residual current: 10, 30, 100, 300mA
- Bidirectional wiring capability
- Breaking capacity: 6kA/10kA options
- Contact position indication
- Protects against leakage faults
- RCCB according to IEC/EN 61008-1

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

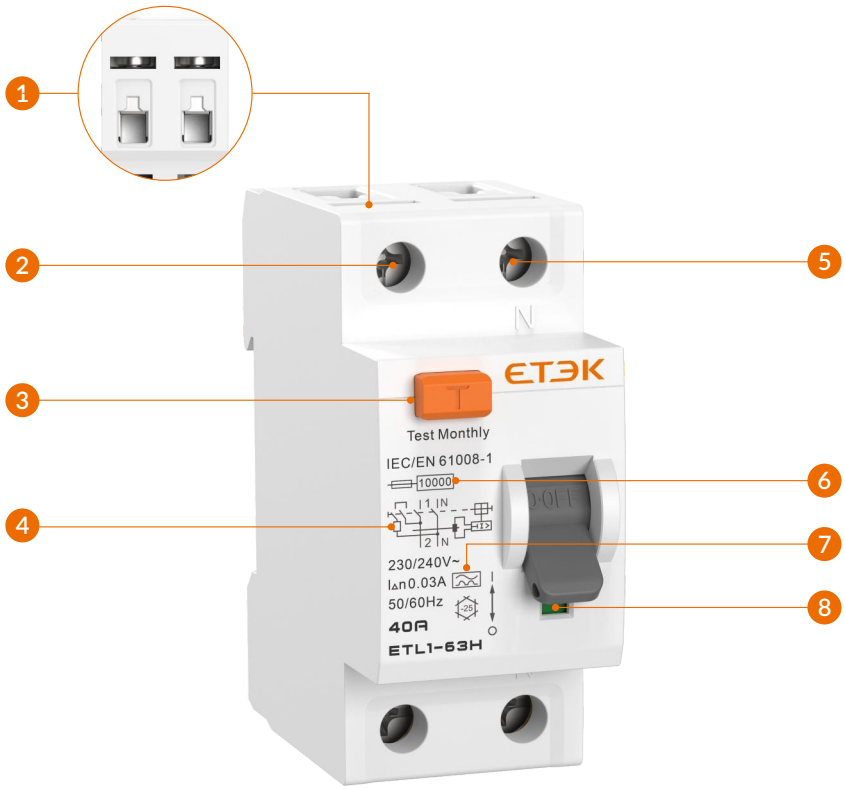
Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

Overview

ETL1-63 Residual Current Circuit Breaker (RCCB) offers reliable protection against electrical leakage currents, significantly reducing the risk of electric shock caused by indirect contact. Designed for versatility, it supports both single-phase (240V, 1P+N) and three-phase (415V, 3P+N) power systems, with a rated current capacity of up to 63A. This ensures dependable performance for a wide range of applications in residential, commercial, and industrial environments.

Product Tips



1. PIN/ Fork busbar
2. Live line interface
3. Test button
4. Wiring Diagram
5. Neutral line interface
6. Rated conditional short-circuit current 6kA, 10kA
7. Sensitivity to residual current AC, A, A-SI, A-S
8. Contacts position indication window

Technical Data

Standard	IEC/EN 61008-1
Protection	Ground fault
Type of trip	Electro-magnetic type
Residual current type	AC, A, A-SI, A-S
Break time at IΔn	AC, A undelayed type: ≤100ms
	A-SI delay: 10-300ms
	A-S delay: 130-500ms
No. of poles	1P+N, 3P+N, N Pole on the right
Insulation voltage (Ui)	500V
Rated voltage (Ue)	1P+N:230/240V~; 3P+N:400/415V~
Rated currents (In)	16, 25, 32, 40, 63A
Rated sensitivity currents (IΔn)	10mA (only for 1P+N 16A,25A)
	30, 100, 300mA
Rated residual making and breaking capacity (IΔm)	500A (In≤50A)
	10In (In>50A)
Rated frequency	50/60Hz
Rated conditional short-circuit current (Inc=IΔc)	ETL1-63: 6kA
	ETL1-63H: 10kA
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	green OFF / red ON
Protection degree	IP20
Ambient temperature	-25°C ~ +40°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

	**Type AC** RCDs detect slowly increasing sinusoidal AC residual currents.
	**Type A** RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.
S G	**Type S, G/S** RCDs not only can it ensure the tripping response to sinusoidal AC residual currents, but it can also effectively detect and trip pulsed DC residual currents, regardless of whether these leakage currents increase suddenly or slowly.

Tripping Sensitivity

10mA	Provides a higher level of protection for the human body and is used in certain situations with very high requirements for electric shock protection, such as children's facilities, swimming pools, bathrooms and other humid environments.
30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

Tripping Time

Instantaneous	Two types of leakage protectors, AC and A, are usually designed to quickly disconnect circuits (≤300ms) to protect people from electric shock.
Short time delay G/SI	Designed for use in situations where rapid power outage is required to protect equipment. They have shorter trip times (10-300ms) than Type AC and Type A RCDs to minimize damage to the equipment.
Selective S	Designed to allow downstream RCDs to trip before upstream RCDs, thereby achieving precise isolation of faulty sections. The S-type RCD is designed with a longer tripping time (130-500ms) to coordinate with other RCDs in the power distribution system to avoid unnecessary power outages.

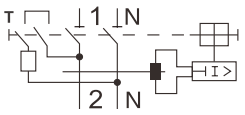
Breaking Time of Residual Current

In(A)	IΔn(mA)	Max. breaking time			
		IΔn	2IΔn	5IΔn	5,10,20,50,100,200,500A
16,25,32,40,63	10, 30, 100, 300	0.3s	0.15s	0.04s	0.04s

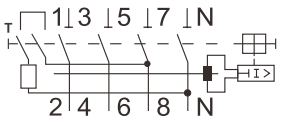
Wiring Capacity

Rated current In (A)	Cross section area s (mm²)	Tightening torque (N.m)
16	2.5	2.5
25	4	2.5
32	6	2.5
40	10	2.5
63	16	2.5

Wiring Diagram

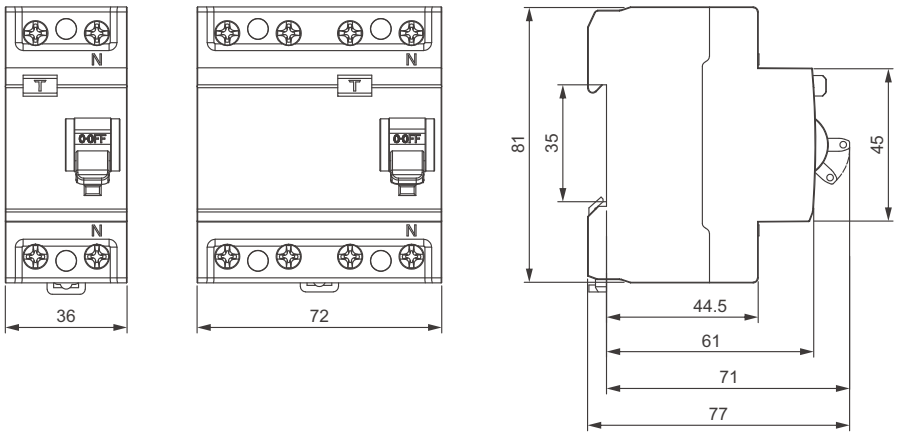


1P+N



3P+N

Dimension (mm)



ETL1-63B

Residual Current Circuit Breaker

- Voltage: 240/415V AC systems (50/60Hz)
- Electro-magnetic type
- Current range: 16A to 63A
- B type
- Rated residual current: 30, 100, 300mA
- Bidirectional wiring capability
- Breaking capacity: 10kA options
- Contact position indication
- Protects against leakage faults
- RCCB according to IEC/EN 61008-1, IEC/EN 62423

Applications

EV Charging Stations

Photovoltaic (PV) Systems

UPS Systems

Industrial Welding Equipment

Overview

ETL1-63B Type B Residual Current Circuit Breaker (RCCB) suitable for 230/240V (1P+N) or 400/415V (3P+N) power systems, with a rated current up to 63A. Designed to detect AC leakage currents, pulsating DC leakage currents, smooth DC leakage currents, composite waveform leakage currents, and high-frequency leakage currents up to 1kHz.

When human electric shock occurs or circuit leakage current exceeds specified values, the circuit breaker instantaneously disconnects the faulty power supply to protect personnel and electrical equipment. It can also serve for infrequent circuit switching operations under normal conditions.

Product Tips

1. Live line interface
2. Test button
3. Wiring Diagram
4. Sensitivity to residual current B
5. PIN/ Fork busbar
6. Neutral line interface
7. Rated short circuit breaking capacity 10kA
8. Contacts position indication window

Technical Data

Standard	IEC/EN 61008-1, IEC/EN 62423
Protection	Ground fault
Type of trip	Electro-magnetic type
Residual current type	B Type - residual AC, pulsating and smooth DC current, high frequency (≤1kHz)
Time characteristic	Insensitivity
No. of poles	1P+N, 3P+N, N Pole on the right
Insulation voltage (Ui)	500V
Rated voltage (Ue)	1P+N:230/240V~; 3P+N:400/415V~
Rated currents (In)	16, 25, 32, 40, 63A
Rated sensitivity currents (IΔn)	30, 100, 300mA
Residual current off-time under (IΔn)	≤0.1s
Rated residual making and breaking capacity (IΔm)	500A (In≤50A)
	10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	10kA
Rated conditional residual short-circuit current (IΔc)	10kA
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	green OFF / red ON
Protection degree	IP20
Ambient temperature	-25°C ~ +40°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	16mm² flexible/ 25mm² rigid
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

RCD Type

Type AC RCDs detect slowly increasing sinusoidal AC residual currents.

Type A RCDs detect AC leakage currents and pulsed DC leakage currents below 6mA.

Type B RCDs detect sinusoidal AC, pulsating DC, multi-frequency composite, and smooth DC residual currents. They are designed to trip at frequencies ranging from 50Hz to 1kHz.

Tripping Sensitivity

30mA	This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
100mA	Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
300mA	Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

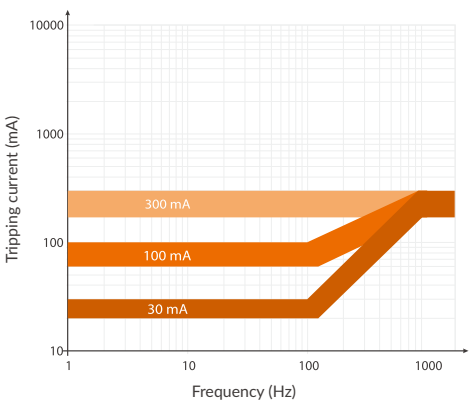
Tripping Characteristic

Type B RCDs - Standard values of break time and non-actuating time for residual direct currents which result from rectifying circuits and for residual smooth direct current.

Tripping times					
Type	Fault currents	Tripping time at			
	Alternating currents	1×IΔn	2×IΔn	5×IΔn	500A
	Pulsating DC currents	1.4×IΔn	2×1.4×IΔn	5×1.4×IΔn	500A
	Smooth DC currents	2×IΔn	2×2×IΔn	5×2×IΔn	500A
Standard		Max. 0.3s	Max. 0.15s	Max. 0.04s	Max. 0.04s

Type B RCDs - Residual non-operating and operating current according to frequencies which differ from the rated frequency 50/60 Hz

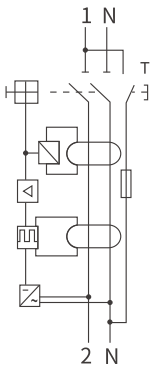
Frequency (Hz)	Residual non-operating current (IΔn)	Residual operating current (IΔn)
150	0.5 IΔn	2.4 IΔn
400	0.5 IΔn	6 IΔn
1000	IΔn	14 IΔn



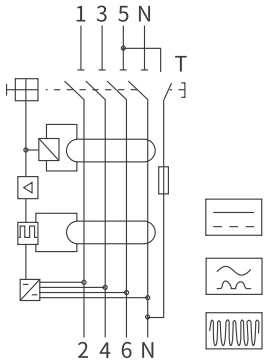
Wiring Capacity

Rated current In (A)	Cross section area s (mm²)	Tightening torque (N.m)
16	2.5	2.5
25	4	2.5
32	6	2.5
40	10	2.5
63	16	2.5

Wiring Diagram

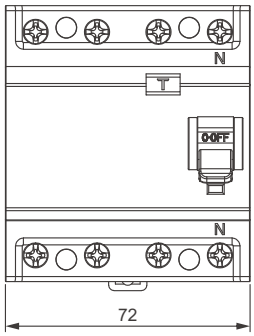


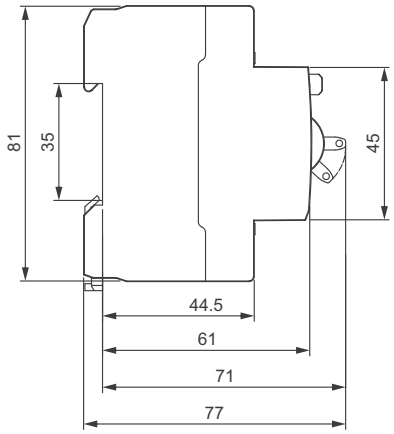
1P+N



3P+N

Dimension (mm)





Thermal-magnetic Type | AFDD | 6/10kA

ETM1-63(H)AFD

Arc Fault Detection Device

Normal

Fault

- Voltage: 230/240V AC systems (50/60Hz)
- Thermal-magnetic type
- Current range: 6A to 63A
- From bottom wiring capability
- Tripping curves: Type B/C available
- Arc test button with built-in indicator light
- Breaking capacity: 6kA/10kA options
- Transparent trip status observation port
- Protects against overload, short circuit and arc fault
- AFDD according to IEC/EN 60898-1, IEC/EN 62026

Applications

High-risk residential buildings

Houses in multiple occupation

Purpose-built student accommodation

Care homes

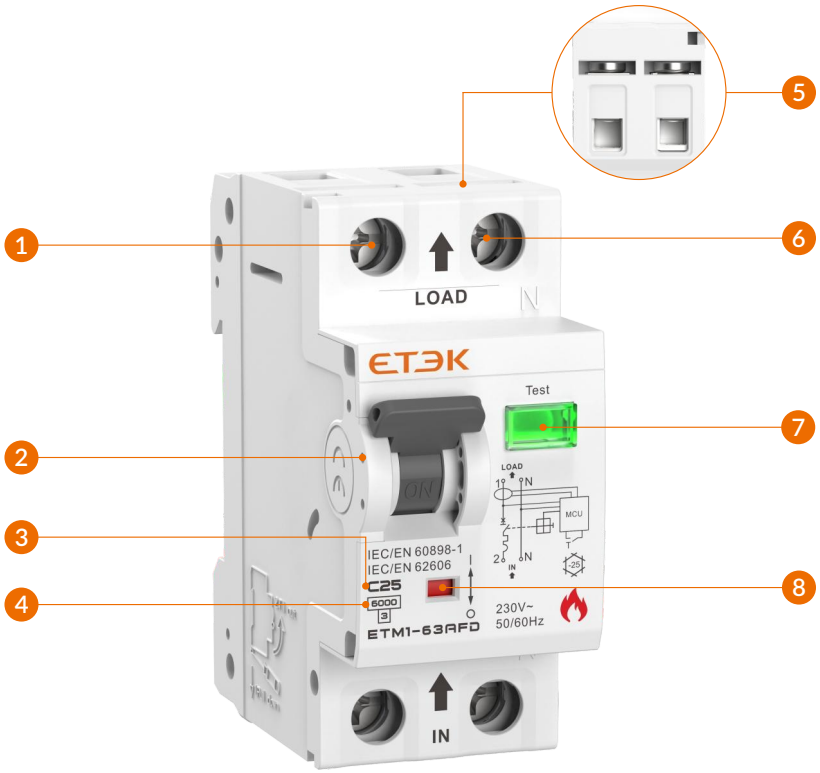
Other locations requiring high-security socket circuits

Overview

ETM1-63AFD is an Arc Fault Detection Device (AFDD) with an integrated miniature circuit breaker (MCB), engineered to mitigate electrical fire risks by detecting hazardous series and parallel arc faults. It offers a 10 kA short-circuit breaking capacity and supports rated currents up to 63 A, making it suitable for residential, commercial, and light industrial installations.

ETM1-63AFD features an LED arc-fault indicator for clear status feedback. Its compact 36 mm width saves distribution board space while maintaining comprehensive protection against arc faults, overloads, and short circuits.

Product Tips



1. Live line interface
2. The position of handle lock
3. Tripping characteristics B, C
4. Rated short circuit breaking capacity 6kA, 10kA
5. PIN/ Fork busbar
6. Neutral line interface
7. Arc test button with built-in indicator light
8. Contacts position indication window

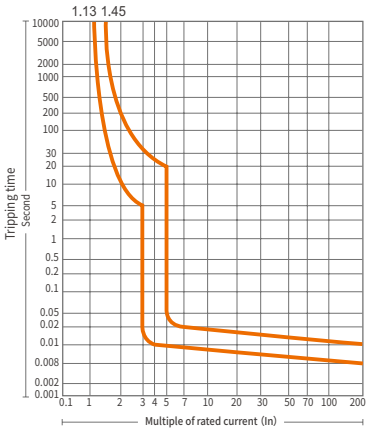
Technical Data

Standard		IEC/EN 60898-1, IEC/EN 62026
Protection		Arc fault protection
		Overload protection, Short-circuit protection
Type of trip	Overload and short circuit	Thermal-magnetic
	Arc fault	Serial arcing fault
		Parallel aring fault
		Grounding arc fault
No. of poles		1P+N (Neutral unswitched)
Rated insulation voltage (Ui)		500V
Rated voltage (Ue)		230/240V
Rated currents (In)		6, 10, 16, 20, 25, 32, 40, 50, 63A
Rated frequency		50/60Hz
Rated short-circuit capacity (Icn)		ETM1-63AFD: 6kA
		ETM1-63HAFD: 10kA
Energy limiting class		3
Rated impulse withstand voltage (Uimp) (1.2/50μs)		4kV
Dielectric test voltage		2kV (50/60Hz,1 min.)
Thermal tripping characteristics		1.13In No tripping within an hour; 1.45In Tripping within an hour
Instantaneous tripping characteristics		B: 3In-5In; C: 5In-10In
Electrical life		4,000 Cycles
Mechanical life		10,000 Cycles
Contact position indication		green OFF / red ON
Arc detection button		Yes
Arc fault indicator		Green: Normal
		Red: Fault
Protection degree		IP20
Ambient temperature		-25°C ~ +55°C
Storage temperature		-30°C ~ +70°C
Terminal connection type		Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable		16mm² flexible/ 25mm² rigid
Max. tightening torque		2.5N.m
Installation		Mounting on 35mm DIN rail
Incoming method		From bottom

Tripping Characteristic

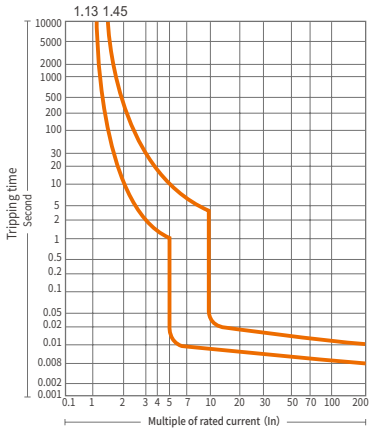
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	6-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C	6-63A	1.13In		≤1h			5In		≥0.1	
			1.45In		<1h			10In	<0.1	

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inruch current
- lamp, high starting current motor

Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Limit values of operating criteria for AFDD at low arc currents up to 63A (IEC62026)

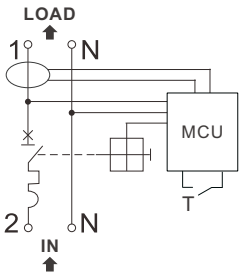
Limit values of break time for Ue 230V AFDD	
Test arc current (r.m.s.values)	Max breaking time
2.5A	1S
5A	0.5S
10A	0.25S
16A	0.15S
32A	0.12S
63A	0.12S

Note:
1. The test arc current is the expected current before ignitionoccurs in the test circuit.
2. Low arc currents can occur due to insulation faults phase to earth or series arcing.

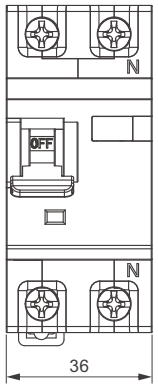
Led Indicator Instruction

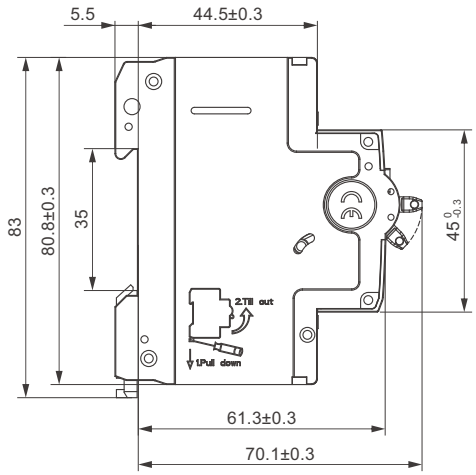
No.	Led display state	color	Description
1	Green light steady on	●●●●●●●●●●	After closing, it indicates the system status and working mode. Green light steady on means the product is operating normally.
2	Red light steady on	●●●●●●●●●●	After the product trips, when reclosed, the red light flashes first and then remains steady on, indicating arc self-test failure (hardware or software malfunction).
3	Red light flashing	●○●○●○●○●○ ●●●●●●●●●●	When the product trips due to arc detection and is reclosed, the red light flashes 5 times, then switches to green light steady on. This indicates the previous trip was caused by an arc fault, and green light steady on means the product has resumed normal operation.
4	Green light steady on	●●●●●●●●●●	With the green light steady on, pressing the test button will trip the device. When reclosed, green light steady on indicates normal functionality.

Wiring Diagram



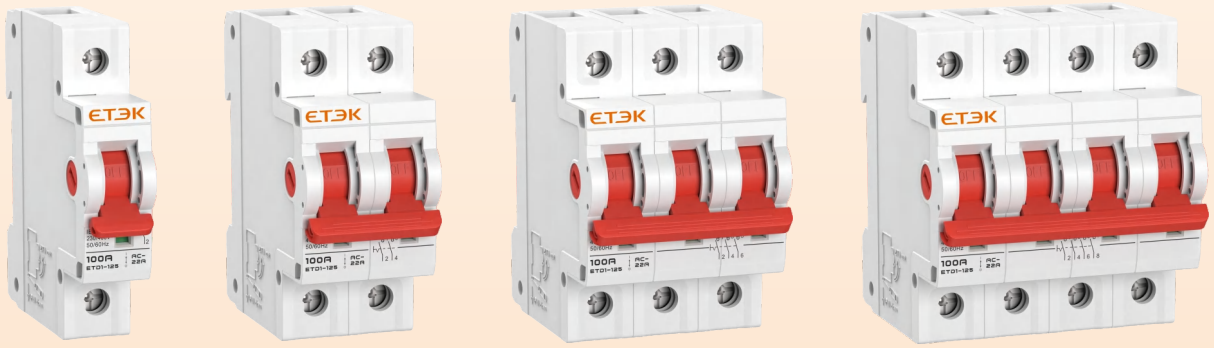
Dimension (mm)





ETD1-125

Isolator Switch



IP20 protection

Finger protected connection terminals.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

Standard

IEC 60947-3: Low-voltage switchgear and controlgear -Part 3.

RoHS compliant

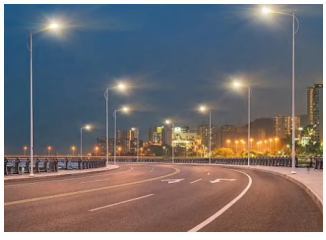
ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for isolator switch, it is now possible to recycle the isolator switch completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment



Electrical safety assurance in public facilities

Overview

ETD1-125 Isolators, designed for circuits up to 125A, are manually operated switch disconnectors capable of making, carrying, and breaking current under normal circuit conditions. while maintaining short-circuit current withstand capacity for specified durations.

These devices ensure safe circuit de-energization for maintenance/service operations and serve as reliable Main Switch for enclosures, distribution boards, or consumer units.

Product Tips

1. Reversible line and load connection
2. The position of handle lock
3. Rated current up to 125A
4. Contacts position indication window

Technical Data

Standard	IEC/EN 60947-3
Method of operation	Dependent manual operation
No. of poles	1P, 2P, 3P, 4P
Insulation voltage (Ui)	500V
Rated voltage (Ue)	220/230/240V and 380/400/415V for 1P
	380/400/415V for 2P/3P/4P
Rated frequency	50/60Hz
Rated currents (In)	25,32,40,50,63,80,100,125A
Utilization category	AC-22A
Short-time withstand current (Icw)	2500A/1s
Rated short-circuit making capacity (Icm)	3000A (declared)
Rated impulse withstand voltage (Uimp) (1.2/50μs)	6kV
Dielectric test voltage	2kV (50/60Hz, 1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Electrical life	2000 cycles
Mechanical life	1,0000 cycles
Contact position indicator	green OFF / red ON
Protection degree	IP20 for front cover
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Terminal connection type	Cable / Pin-type busbar
Max. terminal size for cable	35mm² flexible/ 50mm² rigid
Max. tightening torque	3.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

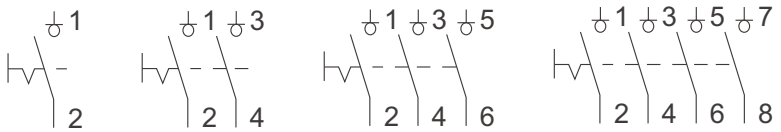
Utilization Categories for Low Voltage Switchgear According to IEC60947-3

Current	Utilization categories		Typical application
	Category A	Category B	
AC	AC-20A	AC-20B	Connecting and disconnecting under no-load conditions
	AC-21A	AC-21B	Switching of resistive loads including moderate overloads
	AC-22A	AC-22B	Switching of mixed resistive and inductive loads,including moderate overloads
	AC-23A	AC-23B	Switching of motor loads or other highly inductive loads
	AC-23Ae	AC-23Be	Switching of motor loads with higher locked rotor currents
DC	DC-20A	DC-20B	Connecting and disconnecting under no-load conditions
	DC-21A	DC-21B	Switching of resistive loads including moderate overloads
	DC-22A	DC-22B	Switching of mixed resistive and inductive loads, including moderate overloads (e.g. shunt motors)
	DC-23A	DC-23B	Switching of highly inductive loads (e.g. series motors)

Wiring Capacity

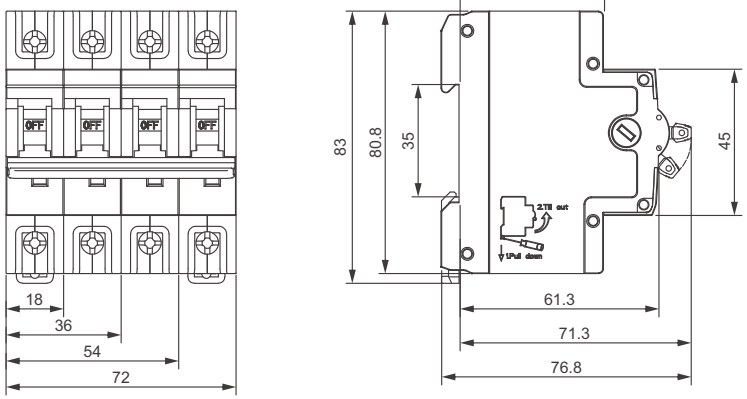
Rated current In (A)	Cross section area s (mm²)	Tightening torque (N.m)
25	4	3.5
32	6	3.5
40	10	3.5
50	10	3.5
63	16	3.5
80	35	3.5
100	35	3.5
125	50	3.5

Wiring Diagram



1P 2P 3P 4P

Dimension (mm)



ETD1-125M/L

Dual Screw Mains Isolator Switches

ETD1-125M

ETD1-125L

IP20 protection

Finger protected connection terminals.

Dual screw terminals

Dual screw terminals ensure maximum conductor clamping reliability.

Standard

IEC 60947-3: Low-voltage switchgear and controlgear -Part 3.

Contact position indication

Reliable recognition of the switching status through red/green position indicating device.

RoHS compliant

ETEK uses environmentally friendly state-of-the-art housing material. With the latest generation of halogen free thermoplastics for isolator switch, it is now possible to recycle the isolator switch completely which reduces environmental pollution. T Series entire range of circuit protection devices conform to RoHS Standards.

Applications

Main circuit protection in residential distribution systems

Lighting circuit control in commercial buildings

Power supply line protection for industrial equipment

Electrical safety assurance in public facilities

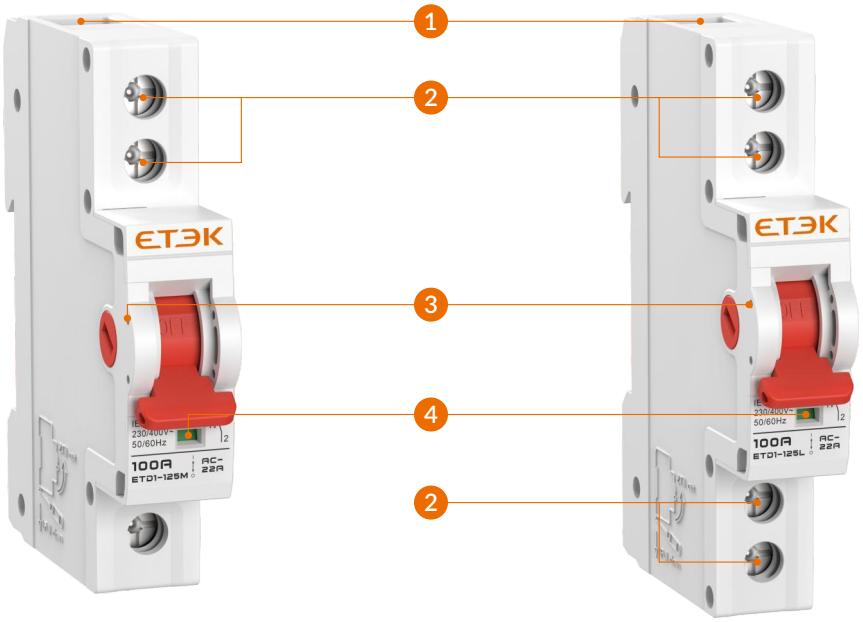
Overview

ETD1-125 Dual Screw Mains Isolator Switches are designed to provide secure, reliable conductor clamping and safe circuit isolation in both domestic consumer units and three-phase distribution boards. With a compact footprint, they integrate easily into electrical enclosures and consumer units, delivering dependable performance in single-phase and three-phase applications wherever complete circuit isolation is required.

Two versions are available to suit different wiring requirements:
ETD1-125M – Dual screw terminals on the load side for enhanced security of outgoing connections.
ETD1-125L - Dual screw terminals on both line and load sides for maximum clamping reliability on both incoming and outgoing conductors.

Compliant with IEC 60947-3, the series offers rated currents up to 125 A and is available in 1P, 2P, 3P, and 4P configurations, making it a versatile solution for a wide range of low-voltage distribution systems.

Product Tips



1. Reversible line and load connection
2. Dual screw terminals
3. The position of handle lock
4. Contacts position indication window

Technical Data

Model		ETD1-125M	ETD1-125L
Terminal configuration	Line side terminals	Single-screw	Dual-screw
	Load side terminals	Dual-screw	Dual-screw
Standard		IEC/EN 60947-3	
Method of operation		Dependent manual operation	
No. of poles		1P, 2P, 3P, 4P	
Insulation voltage (Ui)		500V	
Rated voltage (Ue)		220/230/240V and 380/400/415V for 1P	
		380/400/415V for 2P/3P/4P	
Rated frequency		50/60Hz	
Rated currents (In)		25,32,40,50,63,80,100,125A	
Utilization category		AC-22A	
Short-time withstand current (Icw)		2500A/1s	
Rated short-circuit making capacity (Icm)		3000A (declared)	
Rated impulse withstand voltage (Uimp) (1.2/50μs)		6kV	
Dielectric test voltage		2kV (50/60Hz, 1 min.)	
Fire resistance (glow-wire test)		960±15°C (Enclosure)	
		650±10°C (Handle)	
Electrical life		2000 cycles	
Mechanical life		1,0000 cycles	
Contact position indicator		green OFF / red ON	
Protection degree		IP20 for front cover	
Ambient temperature		-5°C ~ +40°C	
Storage temperature		-25°C ~ +70°C	
Terminal connection type		Cable / Pin-type busbar	
Max. terminal size for cable		35mm² flexible/ 50mm² rigid	
Max. tightening torque		3.5N.m	
Installation		Mounting on 35mm DIN rail	
Incoming method		Bi-directional	

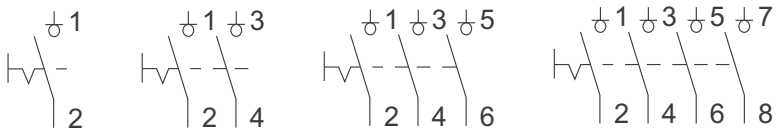
Utilization Categories for Low Voltage Switchgear According to IEC60947-3

Current	Utilization categories		Typical application
	Category A	Category B	
AC	AC-20A	AC-20B	Connecting and disconnecting under no-load conditions
	AC-21A	AC-21B	Switching of resistive loads including moderate overloads
	AC-22A	AC-22B	Switching of mixed resistive and inductive loads,including moderate overloads
	AC-23A	AC-23B	Switching of motor loads or other highly inductive loads
	AC-23Ae	AC-23Be	Switching of motor loads with higher locked rotor currents
DC	DC-20A	DC-20B	Connecting and disconnecting under no-load conditions
	DC-21A	DC-21B	Switching of resistive loads including moderate overloads
	DC-22A	DC-22B	Switching of mixed resistive and inductive loads, including moderate overloads (e.g. shunt motors)
	DC-23A	DC-23B	Switching of highly inductive loads (e.g. series motors)

Wiring Capacity

Rated current In (A)	Cross section area s (mm^2)	Tightening torque (N.m)
25	4	3.5
32	6	3.5
40	10	3.5
50	10	3.5
63	16	3.5
80	35	3.5
100	35	3.5
125	50	3.5

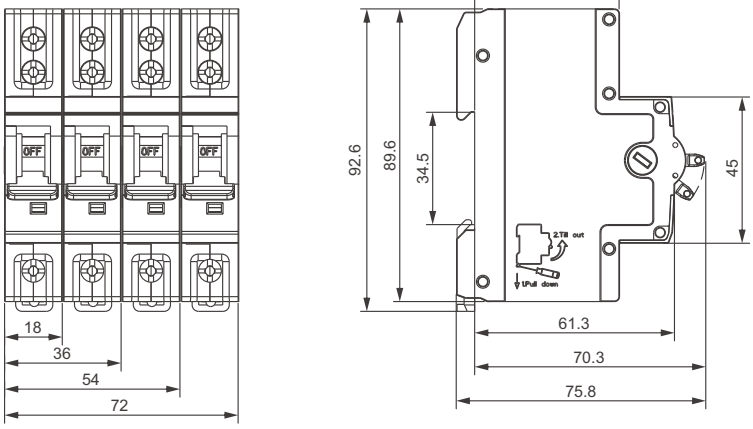
Wiring Diagram



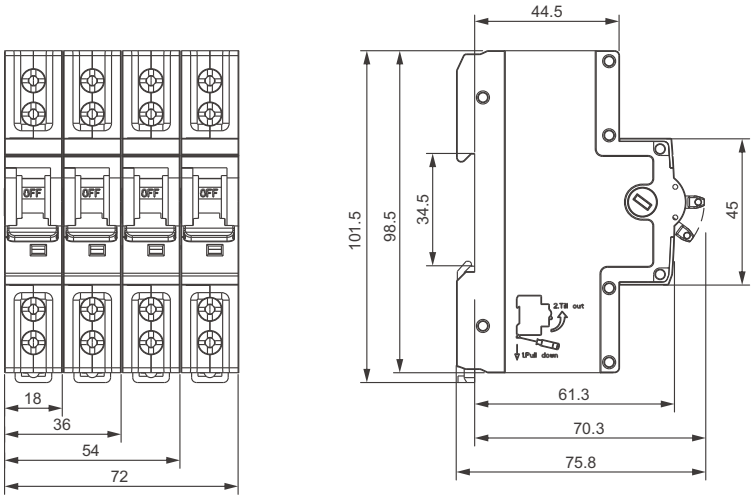
1P 2P 3P 4P

Dimension (mm)

ETD1-125M



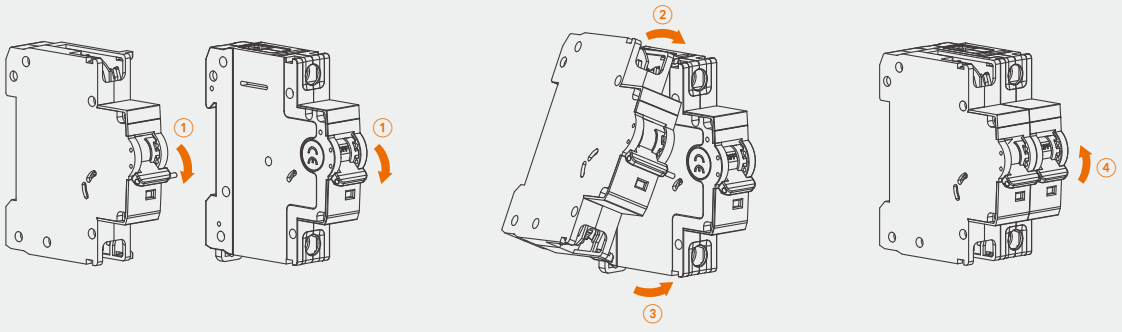
ETD1-125L

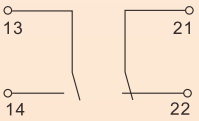


1. Circuit breaker body
3. ETM-MV+MN over-undervoltage release
   ETM-MN undervoltage release
   ETM-MV overvoltage release
   ETM-MNs voltage loss release
2. ETM-TZ mechanical interlock
4. ETM-MX+OF shunt release and auxiliary contact
   ETM-MX shunt release
5. ETM-OF auxiliary contact
   ETM-FB auxiliary and alarm contact

Abbreviation	Accessory	Description	Typical Applications
OF	Auxiliary contact	Provides status feedback of the circuit breaker (ON/OFF) to monitoring or control systems.	Automation and monitoring systems requiring real-time feedback on circuit breaker status.
FB	Auxiliary contact + Alarm contact	Combines the functionality of auxiliary contact (OF) and alarm contact (SD) in a single unit	Used in systems that require both real-time status feedback and fault alarming.
MX	Shunt release	Allows remote circuit breaker tripping via an external electrical signal (e.g., emergency stop).	Emergency stop systems, electrical fire safety systems, and remote disconnection.
MX+OF	Shunt release + Auxiliary contact	Combines shunt trip functionality with status feedback for remote control and status indication.	Complex automation systems requiring control and feedback mechanisms.
MN	Undervoltage release	Automatically trips the circuit breaker when the supply voltage drops below a preset threshold (undervoltage condition).	Protects equipment and circuits from operating under insufficient voltage conditions.
MV	Overvoltage release	Automatically trips the circuit breaker when the voltage exceeds a preset upper limit (overvoltage threshold).	Protection of equipment and circuits from damage caused by excessive voltage levels.
MV+MN	Over-undervoltage release	Protects the circuit by tripping the breaker when the voltage either exceeds a set upper limit (overvoltage) or falls below a preset lower limit (undervoltage).	Ensures the safety of voltage-sensitive equipment in unstable power supply conditions.
MNs	Voltage loss release	Automatically trips the circuit breaker when the supply voltage drops below a certain threshold or is lost entirely.	Protection of voltage-sensitive equipment, prevention of low-voltage operation, and avoiding unintended startups.
TZ	Mechanical interlock	Composed of two-stage (multi - stage) circuit breaker and interlock conversion accessories.	It is mainly used two main circuits cannot work at the same time.

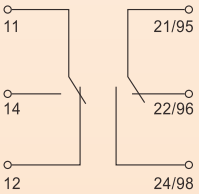
Installation





ETM-OF Auxiliary Contact

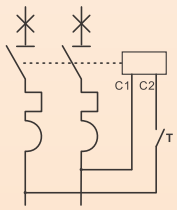
Model		ETM-OF
Standard		IEC/EN 60947-5-1
Number of contacts		1NO+1NC
Rated voltage (Ue)	AC-13	230~400 VAC
	AC-15	230~400 VAC
	DC-12	24~110 VDC
Operating current (Ie)	AC-13	3A@230V, 2A@400V
	AC-15	2A@230V, 1A@400V
	DC-12	0.5A≤110 VDC
Operating frequency		50/60Hz
Rated insulation voltage (Ui)		400V
Rated impulse withstand voltage (Uimp)		2.5kV
Pollution degree		2
Terminal type		Lug type
Terminal capacity		Up to 2.5mm²
Tightening torque		0.8 N.m
Ambient temperature		-5°C ~ +40°C
Storage temperature		-25°C ~ +70°C
Product width		9mm
Compatible product		T Series MCB, RCBO



ETM-FB Auxiliary and Alarm Contact

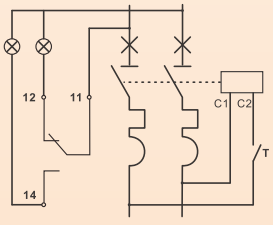
Model		ETM-FB
Standard		IEC/EN 60947-5-1
Number of contacts		2NO+2NC
Rated voltage (Ue)	AC-13	230~400 VAC
	AC-15	230~400 VAC
	DC-12	24~110 VDC
Operating current (Ie)	AC-13	3A@230V, 2A@400V
	AC-15	2A@230V, 1A@400V
	DC-12	0.5A≤110 VDC
Operating frequency		50/60Hz
Rated insulation voltage (Ui)		400V
Rated impulse withstand voltage (Uimp)		2.5kV
Pollution degree		2
Terminal type		Lug type
Terminal capacity		Up to 2.5mm²
Tightening torque		0.8 N.m
Ambient temperature		-5°C ~ +40°C
Storage temperature		-25°C ~ +70°C
Product width		9mm
Compatible product		T Series MCB, RCBO

ETM-MX Shunt Release



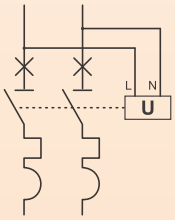
Model		ETM-MX-48	ETM-MX-400
Standard		IEC/EN 60947-5-1	
Rated voltage (Ue)	AC/DC	24~48V	110~400V
Operating frequency		50/60Hz	
Rated insulation voltage (Ui)		400V	
Rated impulse withstand voltage (Uimp)		2.5kV	
Pollution degree		2	
Mechanical state indicator		Yes	
Terminal type		Lug type	
Terminal capacity		Up to 2.5mm²	
Tightening torque		0.8 N.m	
Ambient temperature		-5°C ~ +40°C	
Storage temperature		-25°C ~ +70°C	
Product width		18mm	
Compatible product		T Series MCB, RCBO	

ETM-MX+OF Shunt Release and Auxiliary Contact



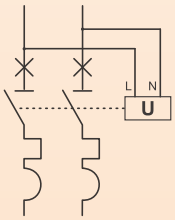
Model		ETM-MX+OF-48	ETM-MX+OF-400
Standard		IEC/EN 60947-5-1	
Number of contacts		1NO+1NC	
Rated voltage (Ue)	AC/DC	24~48V	110~400V
Operating frequency		50/60Hz	
Rated insulation voltage (Ui)		400V	
Rated impulse withstand voltage (Uimp)		2.5kV	
Pollution degree		2	
Mechanical state indicator		Yes	
Terminal type		Lug type	
Terminal capacity		Up to 2.5mm²	
Tightening torque		0.8 N.m	
Ambient temperature		-5°C ~ +40°C	
Storage temperature		-25°C ~ +70°C	
Product width		18mm	
Compatible product		T Series MCB, RCBO	

ETM-MNs Voltage Loss Release

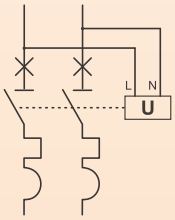


Model	ETM-MNs
Standard	IEC/EN 60947-5-1
Rated voltage (Ue)	230 VAC
Operating frequency	50/60Hz
Undervoltage protection interval	(35%~70%)Ue
Normal recovery voltage	≥85%Ue
Rated insulation voltage (Ui)	400V
Rated impulse withstand voltage (Uimp)	2.5kV
Pollution degree	2
Reset function	Yes
Mechanical state indicator	Yes
Terminal type	Lug type
Terminal capacity	Up to 2.5mm²
Tightening torque	0.8 N.m
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Product width	18mm
Compatible product	T Series MCB, RCBO

ETM-MV Over-voltage Release

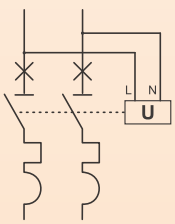


Model	ETM-MV
Standard	IEC/EN 60947-5-1
Rated voltage (Ue)	230 VAC
Operating frequency	50/60Hz
Rated working trip undervoltage	280V±5%
Rated insulation voltage (Ui)	400V
Rated impulse withstand voltage (Uimp)	2.5kV
Pollution degree	2
Mechanical state indicator	Yes
Terminal type	Lug type
Terminal capacity	Up to 2.5mm²
Tightening torque	0.8 N.m
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Product width	18mm
Compatible product	T Series MCB, RCBO



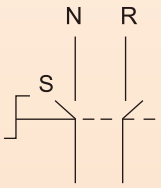
ETM-MN Undervoltage Release

Model	ETM-MN
Standard	IEC/EN 60947-5-1
Rated voltage (Ue)	230 VAC
Operating frequency	50/60Hz
Rated working trip undervoltage	170V±5%
Rated insulation voltage (Ui)	400V
Rated impulse withstand voltage (Uimp)	2.5kV
Pollution degree	2
Mechanical state indicator	Yes
Terminal type	Lug type
Terminal capacity	Up to 2.5mm²
Tightening torque	0.8 N.m
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Product width	18mm
Compatible product	T Series MCB, RCBO



ETM-MV+MN Over-undervoltage Release

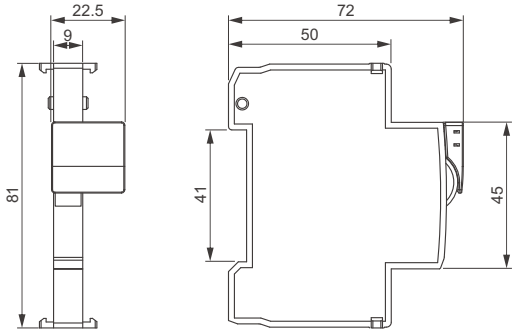
Model	ETM-MV+MN
Standard	IEC/EN 60947-5-1
Rated voltage (Ue)	230 VAC
Operating frequency	50/60Hz
Rated working trip overvoltage	280V±5%
Rated working trip undervoltage	170V±5%
Rated insulation voltage (Ui)	400V
Rated impulse withstand voltage (Uimp)	2.5kV
Pollution degree	2
Mechanical state indicator	Yes
Terminal type	Lug type
Terminal capacity	Up to 2.5mm²
Tightening torque	0.8 N.m
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Product width	18mm
Compatible product	T Series MCB, RCBO



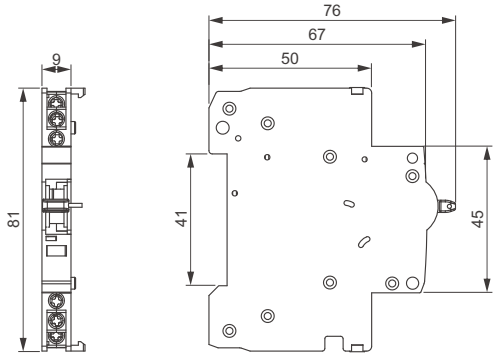
ETM-TZ Mechanical Interlock

Model	ETM-TZ
Standard	IEC/EN 60947-5-1
Poles	1P
Mechanical interlock	Manual switching of dual power supply
Assembly method	Between two or more stage circuit breakers
Pollution degree	2
Installation category	Class II and III
Ambient temperature	-5°C ~ +40°C
Storage temperature	-25°C ~ +70°C
Product width	22.5mm
Compatible product	T Series MCB

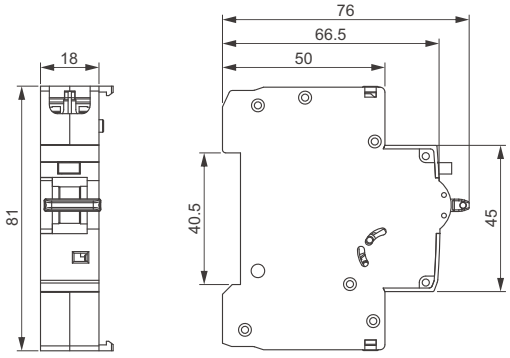
Dimension (mm)



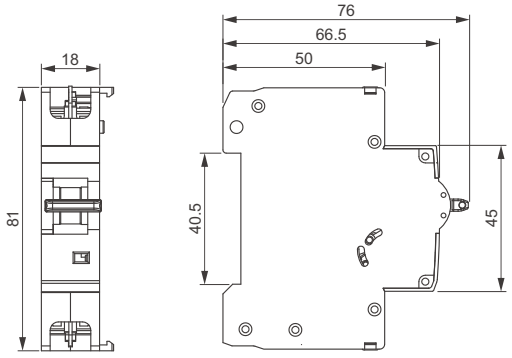
ETM-TZ



ETM-OF/FB



ETM-MX/MX+OF/MV/MN/MV+MN



ETM-MNs

ETMC

Modular Contactor

Automatic type

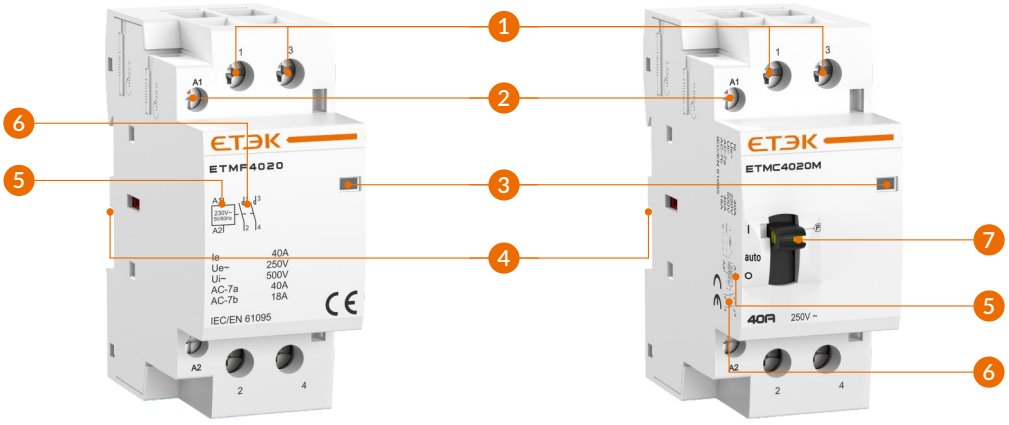
Manual type

Overview

ETMC modular contactors operate on AC 50/60 Hz up to 400 V and 63 A. They switch low-inductive or household motor loads (with derating) and meet IEC/EN 61095 and IEC 60947-4-1 standards. Commonly used for lighting, heating, ventilation, and pumps, they easily mount on DIN rails in panels and boards.

To meet diverse application needs, ETMC contactors are available in both automatic-control and manual-control versions. Their exterior design and dimensions are aligned with the T Series circuit protection products, ensuring a unified appearance and seamless side-by-side installation for consistent panel aesthetics and layout.

Product Tips



Automatic type　　Manual type

1 **Main pole terminals**　2 **Coil control terminals**　3 **Easy status indication**

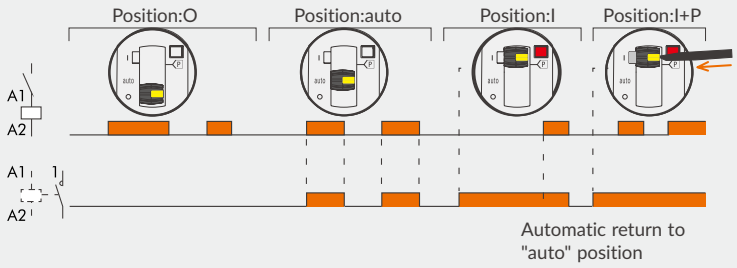
4 **DIN mounting**　5 **Coil input**　6 **Main contacts output**

7 **Selector**

The three-position manual selector has the following functions:

- "O" position, the control power on/off, contactor does not act;
- "auto" position, the contactor switch on/off is control by control power on/off just like the normal contactor;
- "I" position, the contactor switch on immediately, and the handle automatically returns to the "auto"position after the control power from off to on;
- "I+P" position, use a screwdriver to push out the white pin key a "P"position, the contactor is switch on and not acted by the control power on/off.

Manual Operation Diagram



Product Selection Guide

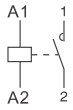
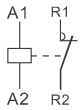
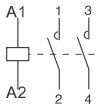
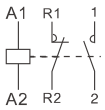
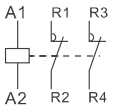
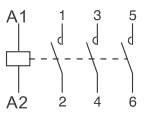
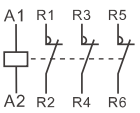
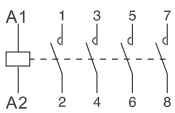
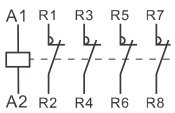
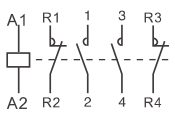
E	T	MC	-	25	11	M	-	230
①	②	③		④	⑤	⑥		⑦

①	ETEK
②	T series
③	Modular contactor
④	Rated current 16: 16A 20: 20A 25: 25A, 32: 32A 40: 40A 63: 63A
⑤	Contact type 10: 1NO 01: 1NC 20: 2NO 02: 2NC 11: 1NO+1NC 30: 3NO 03: 3NC 40: 4NO 04: 4NC 22: 2NO+2NC, 31: 3NO+1NC
⑥	Operation type None: Automatic type M: Manual type
⑦	Coil voltage 24: 24VAC 110: 110VAC, 230: 230VAC 380: 380VAC

Technical Data

Standard			IEC/EN 61095, IEC/EN 60947-4-1					
Model			ETMC-16	ETMC-20	ETMC-25	ETMC-32	ETMC-40	ETMC-63
Rated current In (A)	AC-7a		16	20	25	32	40	63
	AC-7b		6	7	9	12	18	25
Conventional thermal current Ith (A)			25	25	25	63	63	63
Control modes			Automatic / Manual					
Rated insulation voltage Ui (V)			500					
Rated operation voltage Ue (V)			250 (1P/2P), 400 (3P/4P)					
Number of main contacts	1P		1NO, 1NC					
	2P		1NO+1NC, 2NO, 2NC					
	3P		3NO, 3NC					
	4P		4NO, 4NC, 2NO+2NC, 3NO+1NC					
Product power (230V)	1P	Release	2.8VA	2.8VA	2.8VA	/	/	/
		Operating	11.5VA	11.5VA	11.5VA	/	/	/
	2P	Release	2.8VA	2.8VA	2.8VA	4.1VA	4.1VA	4.1VA
		Operating	11.5VA	11.5VA	11.5VA	31VA	31VA	31VA
	3P	Release	4.1VA	4.1VA	4.1VA	7VA	7VA	7VA
		Operating	31VA	31VA	31VA	48VA	48VA	48VA
	4P	Release	4.1VA	4.1VA	4.1VA	7VA	7VA	7VA
		Operating	31VA	31VA	31VA	48VA	48VA	48VA
Control power(kW)	AC-7a	250V	3.5	4.5	5.5	8	9	14
		400V	6	7.5	9.5	12	15	24
	AC-7b	250V	1.4	1.6	2	3	4	5.5
		400V	2.2	2.5	3.2	4.5	6	8
Heat loss (W)			1.2	1.2	1.2	1.6	2.1	2.1
Rated control power voltage (Us)			24/110/230VAC (1P/2P), 24/110/230/380VAC (3P/4P)					
Electrical life (times)			10×10^4					
Mechanical life (times)			10×10^5					
Rated impulse withstand voltage (Uimp)			4kV					
Pollution degree			2					
Protection level			IP20					
Ambient temperature			-5°C ~ +50°C					
Storage temperature			-40°C ~ +70°C					
Installation			Mounting on 35mm DIN rail					
Wiring capacity	Control circuit	Hard wire	1.5~2.5mm²					
		Flexible wire	1.5~6mm²					
	Power circuit	Hard wire	1.5~4mm²			6~16mm²		
		Flexible wire	1.5~6mm²			6~25mm²		
Torque (N.m)	Control circuit		0.8					
	Power circuit		0.8			3.5		

Automatic Type Product Selection Form

Width	Coil voltage VAC	Poles	Contacts NO+NC	Contactor model	Circuit diagram
 1 Modules	24 110 230	1P	1NO	ETMC-1610	
				ETMC-2010	
				ETMC-2510	
			1NC	ETMC-1601	
				ETMC-2001	
				ETMC-2501	
		2P	2NO	ETMC-1620	
				ETMC-2020	
				ETMC-2520	
			1NO+1NC	ETMC-1611	
				ETMC-2011	
				ETMC-2511	
			2NC	ETMC-1602	
				ETMC-2002	
				ETMC-2502	
 2 Modules	24 110 230 380	3P	3NO	ETMC-1630	
				ETMC-2030	
				ETMC-2530	
			3NC	ETMC-1603	
				ETMC-2003	
				ETMC-2503	
		4P	4NO	ETMC-1640	
				ETMC-2040	
				ETMC-2540	
			4NC	ETMC-1604	
				ETMC-2004	
				ETMC-2504	
			2NO+2NC	ETMC-1622	
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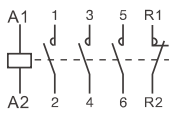
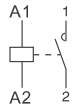
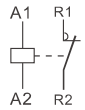
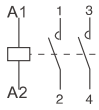
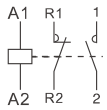
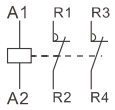
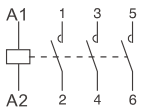
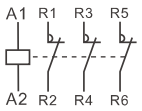
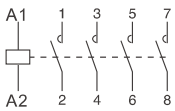
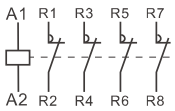
				ETMC-2522	
			3NO+1NC	ETMC-1631	
				ETMC-2031	
				ETMC-2531	

Width	Coil voltage VAC	Poles	Contacts NO+NC	Contactor model	Circuit diagram
 2 Modules	24 110 230	1P	1NO	ETMC-3210	
				ETMC-4010	
				ETMC-6310	
			1NC	ETMC-3201	
				ETMC-4001	
				ETMC-6301	
		2P	2NO	ETMC-3220	
				ETMC-4020	
				ETMC-6320	
			1NO+1NC	ETMC-3211	
				ETMC-4011	
				ETMC-6311	
			2NC	ETMC-3202	
				ETMC-4002	
				ETMC-6302	
 3 Modules	24 110 230 380	3P	3NO	ETMC-3230	
				ETMC-4030	
				ETMC-6330	
			3NC	ETMC-3203	
				ETMC-4003	
				ETMC-6303	
		4P	4NO	ETMC-3240	
				ETMC-4040	
				ETMC-6340	
			4NC	ETMC-3204	
				ETMC-4004	
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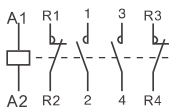
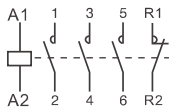
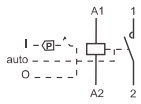
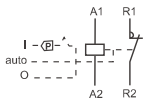
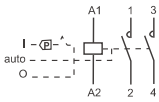
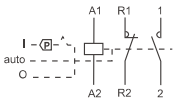
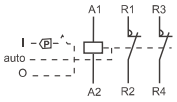
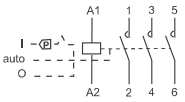
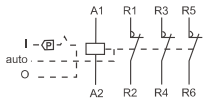
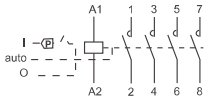
			2NO+2NC	ETMC-3222	
				ETMC-4022	
				ETMC-6322	
			3NO+1NC	ETMC-3231	
				ETMC-4031	
				ETMC-6331	

Manual Type Product Selection Form

Width	Coil voltage VAC	Poles	Contacts NO+NC	Contactor model	Circuit diagram
 1 Modules	24 110 230	1P	1NO	ETMC-1610M	
				ETMC-2010M	
				ETMC-2510M	
			1NC	ETMC-1601M	
				ETMC-2001M	
				ETMC-2501M	
		2P	2NO	ETMC-1620M	
				ETMC-2020M	
				ETMC-2520M	
			1NO+1NC	ETMC-1611M	
				ETMC-2011M	
				ETMC-2511M	
			2NC	ETMC-1602M	
				ETMC-2002M	
				ETMC-2502M	
 2 Modules	24 110 230 380	3P	3NO	ETMC-1630M	
				ETMC-2030M	
				ETMC-2530M	
			3NC	ETMC-1603M	
				ETMC-2003M	
				ETMC-2503M	
		4P	4NO	ETMC-1640M	
				ETMC-2040M	
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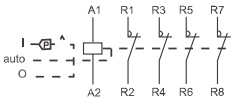
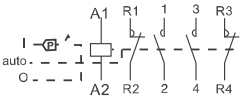
			4NC	ETMC-1604M	
				ETMC-2004M	
				ETMC-2504M	
			2NO+2NC	ETMC-1622M	
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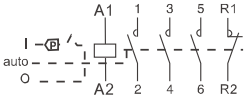
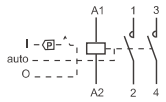
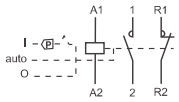
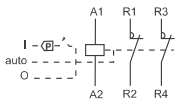
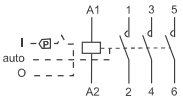
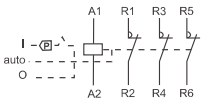
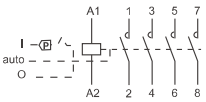
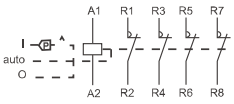
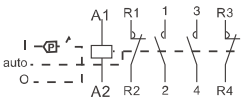
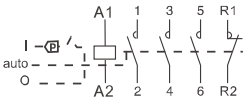
				ETMC-2522M	
			3NO+1NC	ETMC-1631M	
				ETMC-2031M	
				ETMC-2531M	

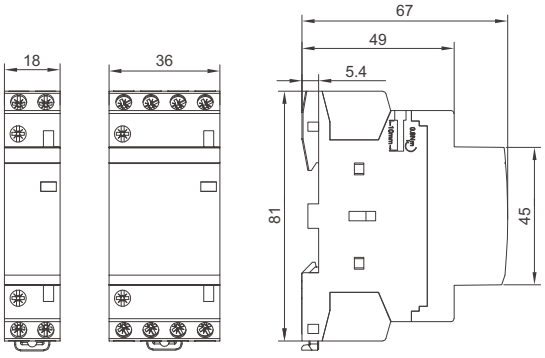
Width	Coil voltage VAC	Poles	Contacts NO+NC	Contactor model	Circuit diagram
 2 Modules	24 110 230	2P	2NO	ETMC-3220M	
				ETMC-4020M	
				ETMC-6320M	
			1NO+1NC	ETMC-3211M	
				ETMC-4011M	
				ETMC-6311M	
			2NC	ETMC-3202M	
				ETMC-4002M	
				ETMC-6302M	
 3 Modules	24 110 230 380	3P	3NO	ETMC-3230M	
				ETMC-4030M	
				ETMC-6330M	
			3NC	ETMC-3203M	
				ETMC-4003M	
				ETMC-6303M	
		4P	4NO	ETMC-3240M	
				ETMC-4040M	
				ETMC-6340M	
			4NC	ETMC-3204M	
				ETMC-4004M	
				ETMC-6304M	
			2NO+2NC	ETMC-3222M	
				ETMC-4022M	
				ETMC-6322M	
			3NO+1NC	ETMC-3231M	
				ETMC-4031M	
				ETMC-6331M	

Auxiliary Contact

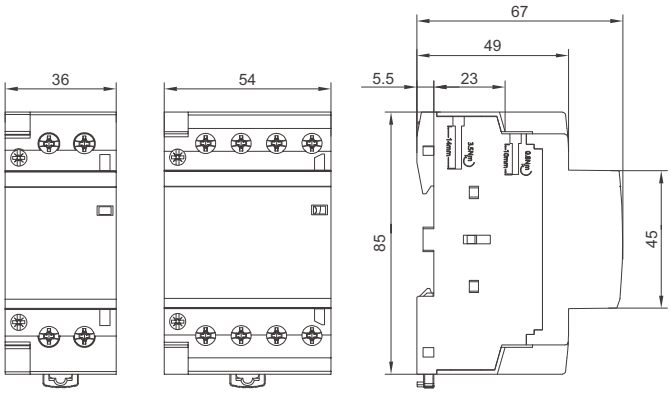
Model		OF-11	OF-20
Number of contacts		1NO+1NC	2NO
Rated insulation voltage Ui (V)		500	
Rated impulse voltage (Uimp)		4kV	
Usage category	AC-12	240V/5A	
	AC-15	230V/2A	
	DC-13	130V/1A	
Wiring capacity	Flexible wire	1.5~6mm²	
	Hard wire	1.5~6mm²	
Circuit diagram			

Dimension (mm)

Automatic type

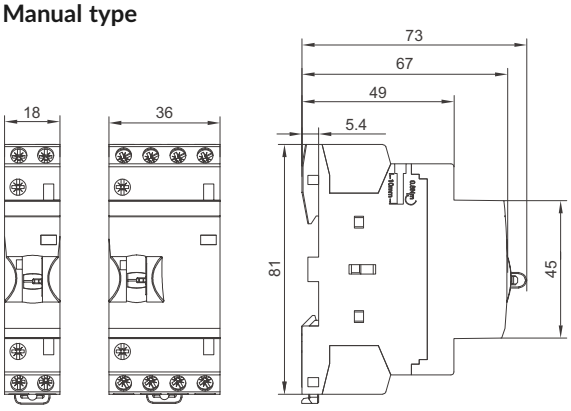


ETMC-16/20/25

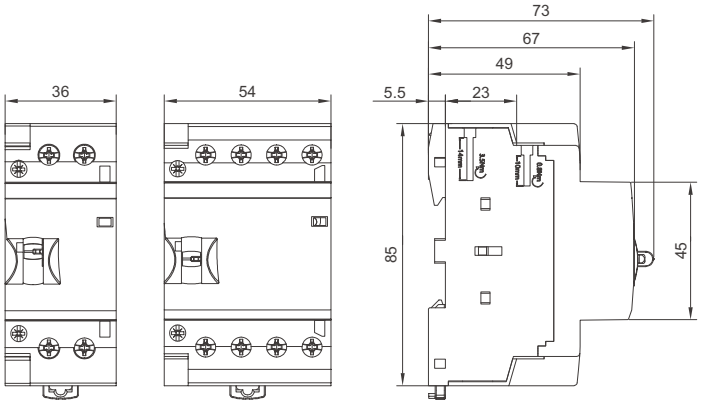


ETMC-32/40/63

Manual type

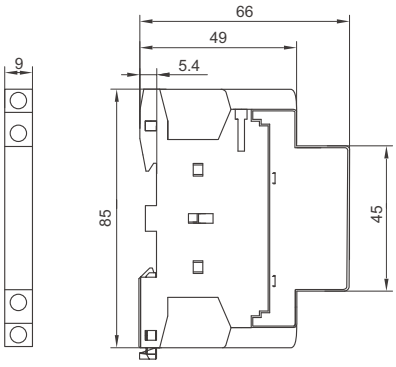


ETMC-16M/20M/25M



ETMC-32M/40M/63M

Auxiliary Contact



OF

ETLR-16

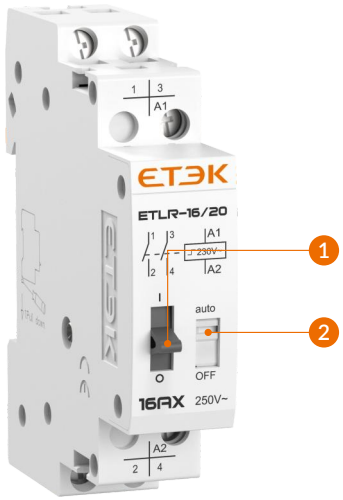
Modular Impulse Relay

Overview

ETLR-16 Modular Impulse Relays are bistable, latching devices engineered for dependable load control, especially in lighting applications. Each momentary pulse cleanly toggles the contact state, enabling centralized or distributed control from any number of push buttons. With zero holding power, ETLR relays minimize standby consumption and preserve the selected state through power interruptions for efficient, reliable operation.

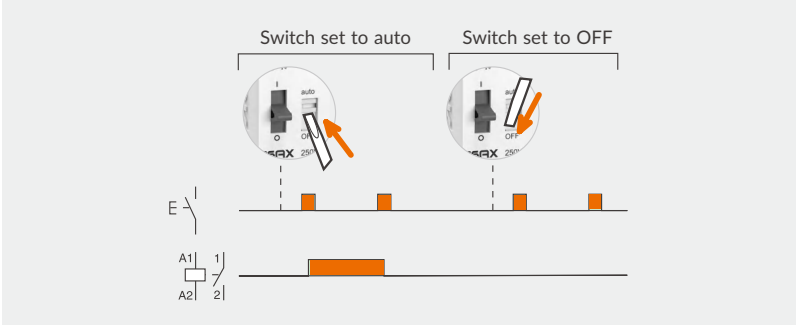
Rated at 16 A and available in a complete range of AC and DC variants, ETLR relays integrate easily into both new installations and retrofit projects. Their exterior design and dimensions align with T Series circuit protection products, enabling seamless side-by-side installation and delivering a unified, consistent panel aesthetic and layout.

Product Tips



1. • Manual controls on front face: direct and priority manual control by O-I toggle
   • Mechanical contact position indicator

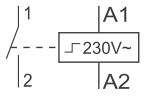
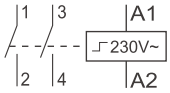
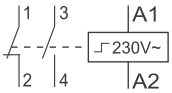
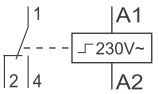
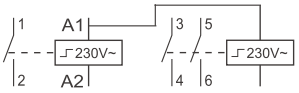
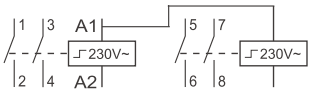
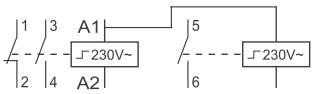
2. • Disconnection of remote control by selector switch (except for 4P single-piece ETLR) for maintenance operation

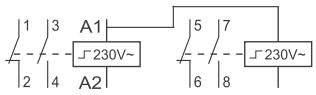
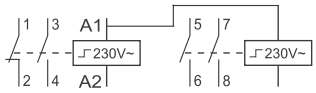
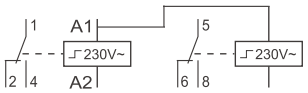


Technical Data

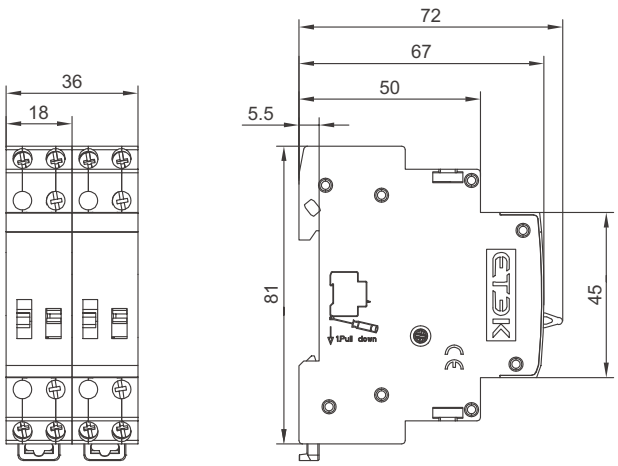
Standard			IEC/EN 61095, IEC/EN 60947-4-1				
Control type			Remote and manual control coil deconnection				
Control signal type			Impulse				
Rated current (In)			16A				
Dissipated power (during the impulse)			19VA				
Rated operation voltage (Ue)			24~250VAC				
Control voltage (Us)	VAC		12	24	48	130	230/240
	VDC		6	12	24	48	110
Control voltage operating range			(85%~110%) Us				
Contact configuration	Standard	1Modules	1NO, 2NO, 1NO+1NC				
		2Modules	3NO, 4NO, 2NO+1NC, 2NO+2NC, 3NO+1NC				
	Changeover	1Modules	1C				
		2Modules	2C				
Rated frequency			50/60Hz				
Rated insulation voltage (Ui)			500V				
Rated impulse withstand voltage (Uimp)			4kV				
Frequency of action			≤5 times/min				
Impulse duration			50ms...1s				
Local signaling			ON/OFF indication				
Electrical life (times)			1×10^5				
Mechanical life (times)			2×10^5				
Pollution degree			2				
Protection level			IP20				
Ambient temperature			-5°C ~ +50°C				
Storage temperature			-40°C ~ +70°C				
Installation			Mounting on 35mm DIN rail				
Wiring capacity	Control circuit	Hard wire	0.5~4mm²				
		Flexible wire	1~4mm²				
	Power circuit	Hard wire	1.5~4mm²				
		Flexible wire	1.5~4mm²				
Torque (N.m)	Control circuit		1N.m				
	Power circuit		1N.m				

Product Selection Form

Model	Contact	Control voltage		Ref. No	Width (In 18 mm modules)	Circuit diagram
		VAC	VDC			
ETLR-16/10	1NO	230	110	ETLR-1610-230/110	1	
		130	48	ETLR-1610-130/48		
		48	24	ETLR-1610-48/24		
		24	12	ETLR-1610-24/12		
		12	6	ETLR-1610-12/6		
ETLR-16/20	2NO	230	110	ETLR-1620-230/110	1	
		130	48	ETLR-1620-130/48		
		48	24	ETLR-1620-48/24		
		24	12	ETLR-1620-24/12		
		12	6	ETLR-1620-12/6		
ETLR-16/11	1NO+1NC	230	110	ETLR-1611-230/110	1	
		130	48	ETLR-1611-130/48		
		48	24	ETLR-1611-48/24		
		24	12	ETLR-1611-24/12		
		12	6	ETLR-1611-12/6		
ETLR-16/1C	1 Changeover	230	110	ETLR-161C-230/110	1	
		130	48	ETLR-161C-130/48		
		48	24	ETLR-161C-48/24		
		24	12	ETLR-161C-24/12		
		12	6	ETLR-161C-12/6		
ETLR-16/30	3NO	230	110	ETLR-1630-230/110	2	
		130	48	ETLR-1630-130/48		
		48	24	ETLR-1630-48/24		
		24	12	ETLR-1630-24/12		
		12	6	ETLR-1630-12/6		
ETLR-16/40	4NO	230	110	ETLR-1640-230/110	2	
		130	48	ETLR-1640-130/48		
		48	24	ETLR-1640-48/24		
		24	12	ETLR-1640-24/12		
		12	6	ETLR-1640-12/6		
ETLR-16/21	2NO+1NC	230	110	ETLR-1621-230/110	2	
		130	48	ETLR-1621-130/48		
		48	24	ETLR-1621-48/24		
		24	12	ETLR-1621-24/12		
		12	6	ETLR-1621-12/6		

Model	Contact	Control voltage		Ref. No	Width (In 18 mm modules)	Circuit diagram
		VAC	VDC			
ETLR-16/22	2NO+2NC	230	110	ETLR-1622-230/110	2	
		130	48	ETLR-1622-130/48		
		48	24	ETLR-1622-48/24		
		24	12	ETLR-1622-24/12		
		12	6	ETLR-1622-12/6		
ETLR-16/31	3NO+1NC	230	110	ETLR-1631-230/110	2	
		130	48	ETLR-1631-130/48		
		48	24	ETLR-1631-48/24		
		24	12	ETLR-1631-24/12		
		12	6	ETLR-1631-12/6		
ETLR-16/2C	2 Changeover	230	110	ETLR-162C-230/110	2	
		130	48	ETLR-162C-130/48		
		48	24	ETLR-162C-48/24		
		24	12	ETLR-162C-24/12		
		12	6	ETLR-162C-12/6		

Dimension (mm)



Notes

Notes

Notes

The product data referred to in the company shall be subject to material object. Subject to change without notice. The company has the final right to interpret.

Green paper printing.

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