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



Power supply line protection for industrial equipment



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

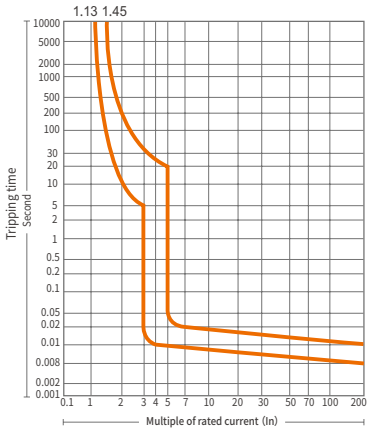
Technical Data

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

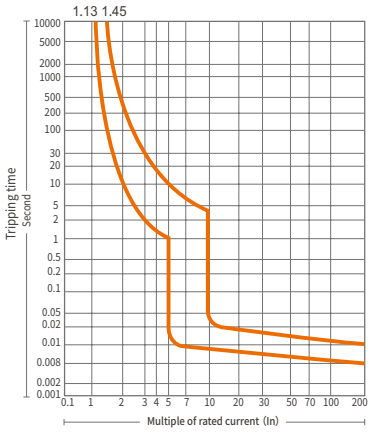
Data acc. to IEC/EN 60898-1										
Curve	Rated current	Thermal release					Magnetic release			
		Non-trip	Trip	Non-trip time	Trip time	Ambient temperature	Hold current	Trip current	Trip time	Ambient temperature
B	1-63A	1.13In		≤1h		30°C+5°C	3In		≥0.1	Normal temperature
			1.45In		<1h			5In	<0.1	
C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



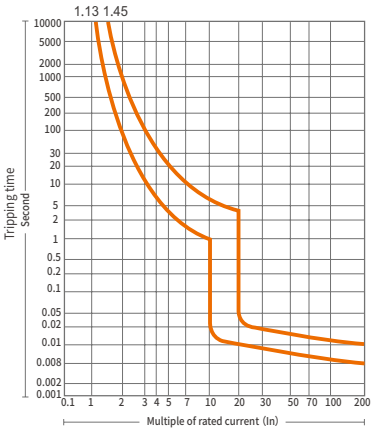
Universal use
- socket outlet, lighting device

C curve



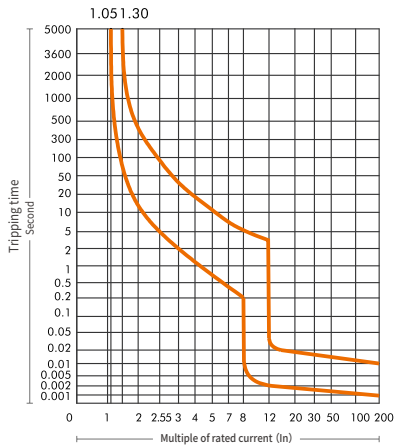
Resistive & inductive loads with low inruch current
- lamp, high starting current motor

D curve



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

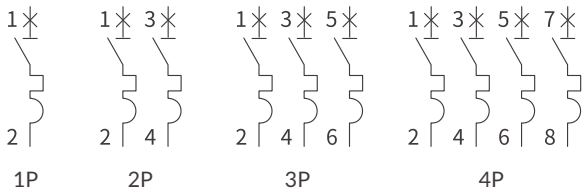
Data acc. to IEC/EN 60947-2						
Rated current (In)	Tripping Characteristic	Initial state	Test current (A)	Trip time (t)	Result to be obtained	Ambient temperature
≤63A	Thermal release	Cold state	1.05In	≥1h	No trip	30±2°C
		Hot state (Follow the above test)	1.30In	<1h	Trip	
	Magnetic release	Cold state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

