



AC Miniature Circuit Breaker

ESM1-63(10kA)MCB ESM2-63(6kA)MCB

Leading Manufacturer Protects Solar Power Safety

Rev2.0 2023/03/16



AC MINIATURE CIRCUIT BREAKER

ESM1-63(10kA)MCB

Standard: IEC60898-1 **RoHS** **EAC** **CE** **CB** **SAA** **CE**

- IEC 60898 10kA
- MCB can 100% pass 10kA
- Over 20,000 cycles mechanical and electrical endurance operation



Detail features

Fit for various connection terminal



Choice to use Busbar or cable in the same terminal, provides reliable connection

Red/Green indication



Clear indication of the ON/OFF switch status.

Select Code

$\frac{E}{1}$ $\frac{S}{2}$ $\frac{M}{3}$ $\frac{1}{4}$ - $\frac{63}{5}$ / $\frac{\square}{6}$ $\frac{\square}{7}$ / $\frac{\square}{8}$

Electrical Features

Code	Name	Description
1	NCCY brand	E
2	AC	S
3	MCB	M
4	Series	1: Series1
5	Frame Current	63
6	Tripping curve	B / C / D
7	Rated current	1:1A 2:2A 3:3A 4:4A 6:6A 10:10A 16:16A 20:20A 25:25A 32:32A 40:40A 50:50A 63:63A
8	Poles	1:1P 2:2P 3:3P 4:4P

Technical Data

Electrical Features

Rated current (In)	1-63A
Pole	1P 2P 3P 4P
Rated voltage (Ue)	1P: 240/415V~ 2/3/4P:415~
Insulation voltage (Ui)	500V
Rated frequency	50/60Hz

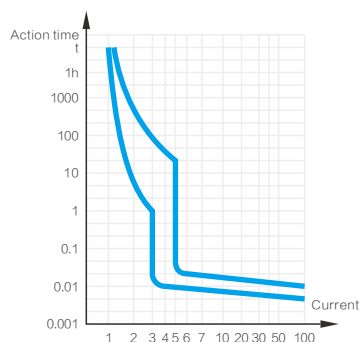
Combination with accessories

Auxiliary contact	YES
Alarm contact	YES
Shunt release	YES
Under voltage release	YES

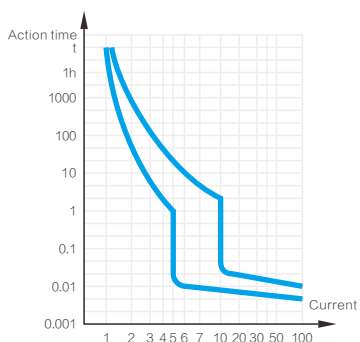
Rated breaking capacity (Icn)	10kA
Rated operating short circuit breaking capacity (Ics)	7.5kA
Energy limiting class	3
Tripping curve	B C D
Electrical and Mechanical life	20000

ESM1-63(10kA)MCB

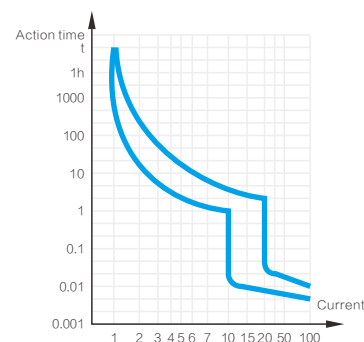
Standard: IEC60898-1



B curve



C curve



D curve

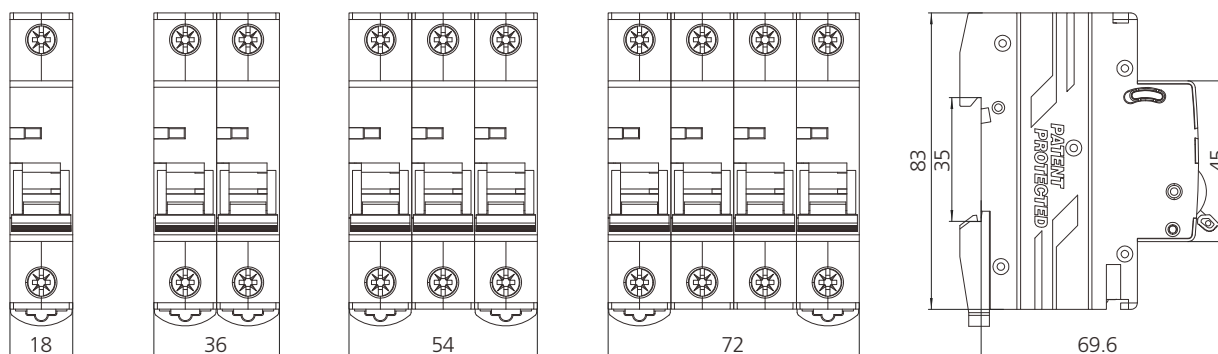
Overload Current Protection Characteristics

Test Procedure	Type	Test Current	Initial State	Tripping or Non-tripping Time Limit	Expected Result	Remark
A	B.C.D	1.13In	Cold	$t \leq 1h$	no tripping	
B	B.C.D	1.45In	After test A	$t \leq 1h$	tripping	The current steadily rise to the specified value within 5s
C	B.C.D	2.55In	Cold	$1s < t < 60s (I_n \leq 32A)$ $1s < t < 120s (I_n > 32A)$	tripping	
D	B	3In	Cold	$t \leq 0.1s$	no tripping	Turn on the auxiliary switch to close the current
	C	5In				
	D	10In				
E	B	5In	Cold	$t \leq 0.1s$	tripping	Turn on the auxiliary switch to close the current
	C	10In				
	D	20In				

Installation

Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature	-5~+40°C and its average over a period of 24h does not exceed +35°C
Storage temperature	-25~+ 70°C
Terminal connection type	Cable/U-type busbar/Pin -type busbar
Terminal size top/bottom for cable	25mm ²
Tightening torque	2.5N·m
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	Top and bottom

Dimensions(mm)



AC MINIATURE CIRCUIT BREAKER

ESM2-63(6kA)MCB

Standard: IEC60898-1 **RoHS** **EHC** **CE** **CB** **SAA** **CE**

- All mass production products can pass 6kA
- Long mechanical and electrical endurance over 20000 cycles operation



Detail features

Din Rail Mounting



Two step snapping mechanism for easy & efficient mounition in 35mm DIN Rail steadily

Red/Green indication



Clear indication of the ON/OFF switch status.

Select Code

E
S
M
2
-
63
/
□
/
□

Electrical Features

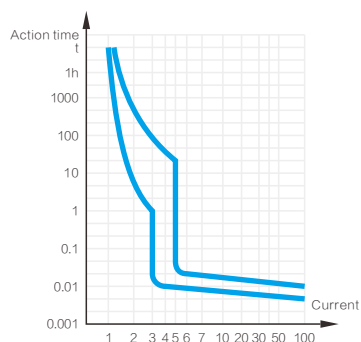
Code	Name	Description
1	ONCCY brand	E
2	AC	S
3	MCB	M
4	Series	2:Series2
5	Frame Current	63
6	Tripping curve	B / C / D
7	Rated current	1:1A 2:2A 3:3A 4:4A 6:6A 10:10A 16:16A 20:20A 25:25A 32:32A 40:40A 50:50A 63:63A
8	Poles	1:1P 2:2P 3:3P 4:4P

Technical Data

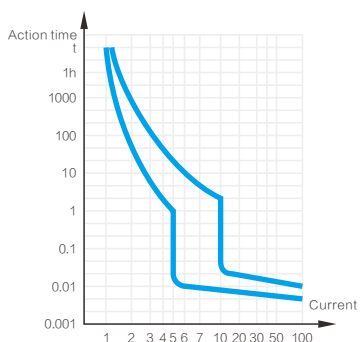
Electrical Features		Electrical Features	
Rated current (In)	1-63A	Rated breaking capacity (Icn)	6kA
Poles	1P 2P 3P 4P	Rated operating short circuit breaking capacity (Ics)	6kA
Rated voltage (Ue)	1P: 240/415V~ 2/3/4P:415~	Energy limiting class	3
Insulation voltage (Ui)	500V	Tripping curve	B C D
Rated frequency	50/60Hz	Electrical and Mechanical life	20000
Combination with accessories			
Auxillary contact	YES		
Alarm contact	YES		
Shunt release	YES		
Under voltage release	YES		

ESM2-63(6kA)MCB

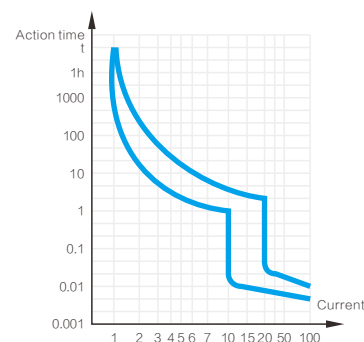
Standard: IEC60898-1



B curve



C curve



D curve

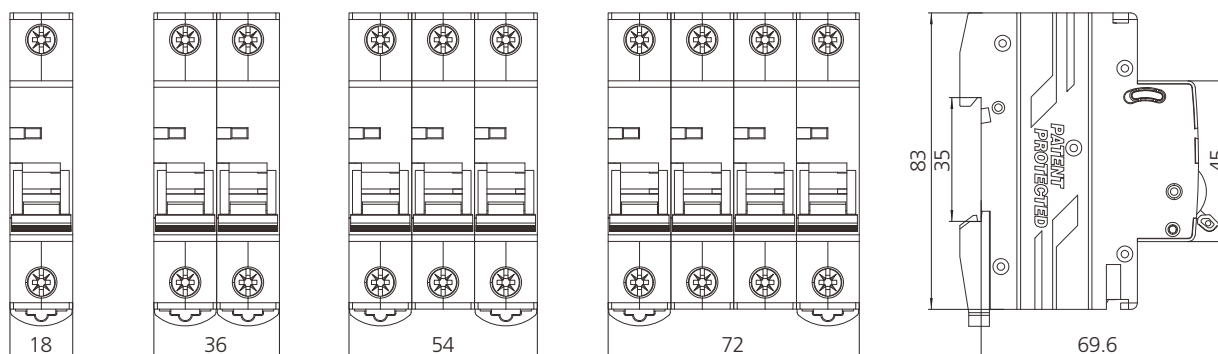
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D	B	3In	Cold	$t \leq 0.1s$	no tripping	Turn on the auxiliary switch to close the current
	C	5In				
	D	10In				
E	B	5In	Cold	$t \leq 0.1s$	tripping	Turn on the auxiliary switch to close the current
	C	10In				
	D	20In				

Installation

Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature	-5~+40°C and its average over a period of 24h does not exceed +35°C
Storage temperature	-25~+ 70°C
Terminal connection type	Cable/Pin -type busbar
Terminal size top/bottom for cable	25mm ²
Tightening torque	2.5N·m
Mounting	On DIN rail 60715 (35mm) by means of fast clip device
Connection	Top and bottom

Dimensions(mm)



AC MINIATURE CIRCUIT BREAKER

ESM1-32(1P+N)MCB

Standard: IEC60898-1 **RoHS** **EHC** **CE** **CB** **SAA** **CE**

- All mass production products can pass 4.5kA
- Passed NF test
- Long mechanical and electrical endurance over 20000 cycles operation



Detail features

Air circulation



When two poles are placed adjacent to each other, these channels form a tunnel resulting in effective air circulation around individual poles

Red/Green indication



Clear indication of the ON/OFF operational status of device

Select Code

E S M 1 - 32 □ / □ □ / □
 1 2 3 4 5 6 7 8 9

Electrical Features

Code	Name	Description
1	ONCCY brand	E
2	AC	S
3	MCB	M
4	Series	1: Series1
5	Frame Current	32
6	Breaking Capacity	Nil:4.5kA N:6kA H:10kA
7	Tripping curve	B / C / D
8	Rated current	1:1A 2:2A 3:3A 4:4A 6:6A 10:10A 16:16A 20:20A 25:25A 32:32A
9	Poles	1P+N

Technical Data

Electrical Features

Rated current (In)	1-32A
Poles	1P+N
Rated voltage (Ue)	240~
Insulation voltage (Ui)	500V
Rated frequency	50/60Hz

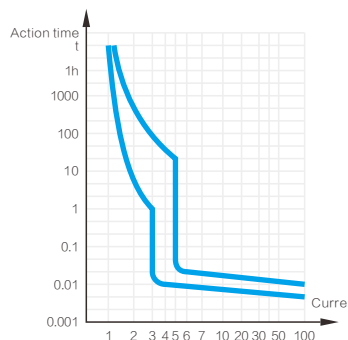
Rated breaking capacity (Icn)	4.5kA / 6kA / 10kA
Rated operating short circuit breaking capacity (Ics)	4.5kA / 6kA / 10kA
Tripping curve	B C D
Electrical and Mechanical life	20000

Combination with accessories

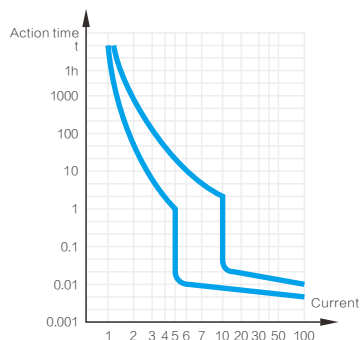
Auxiliary contact	YES
Alarm contact	YES
Shunt release	YES
Under voltage release	YES

ESM1-32(1P+N)MCB

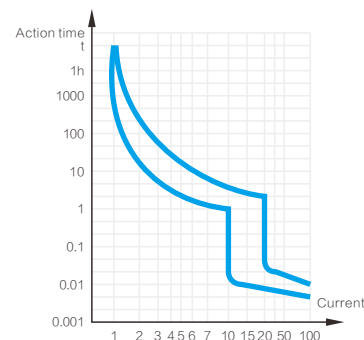
Standard: IEC60898-1



B curve



C curve



D curve

Overload Current Protection Characteristics

Test Procedure	Type	Test Current	Initial State	Tripping or Non-tripping Time Limit	Expected Result	Remark
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B	B.C.D	1.45In	After test A	$t \leq 1h$	tripping	The current steadily rises to the specified value within 5s
C	B.C.D	2.55In	Cold	$1s < t < 60s (In \leq 32A)$	tripping	
D	B	3In	Cold	$t \leq 0.1s$	no tripping	Turn on the auxiliary switch to close the current
	C	5In				
	D	10In				
E	B	5In	Cold	$t \leq 0.1s$	tripping	Turn on the auxiliary switch to close the current
	C	10In				
	D	20In				

Installation

Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature	-5~+40°C and its average over a period of 24h does not exceed +35°C
Storage temperature	-25~+70°C
Terminal connection type	Cable/Pin -type busbar
Terminal size top/bottom for cable	10mm ²
Tightening torque	1.2N·m
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	Top and bottom

Dimensions(mm)

