



AC Miniature Circuit Breaker

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

Leading Manufacturer Protects Solar Power Safety

Rev1.0 2022/12/06



AC MINIATURE CIRCUIT BREAKER

ESM1-63(10kA)MCB

Standard: IEC60898-1 **RoHS** **EAC** **CCC** **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 (I _n)	1-63A
Pole	1P 2P 3P 4P
Rated voltage (U _e)	1P: 240/415V~ 2/3/4P:415~
Insulation voltage (U _i)	500V
Rated frequency	50/60Hz

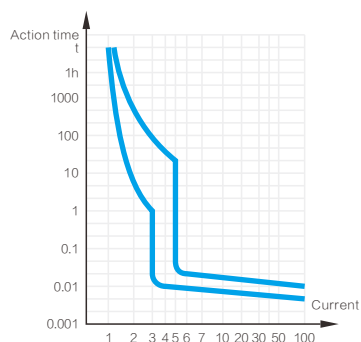
Combination with accessories

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

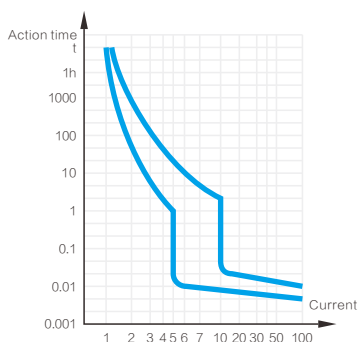
Rated breaking capacity (I _{cn})	10kA
Rated operating short circuit breaking capacity (I _{cs})	7.5kA
Energy limiting class	3
Tripping curve	B C D
Electrical and Mechanical life	20000

ESM1-63(10kA)MCB

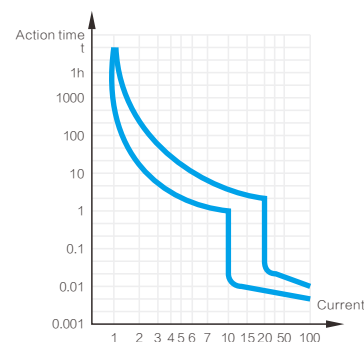
Standard: IEC60898-1



B curve



C curve



D curve

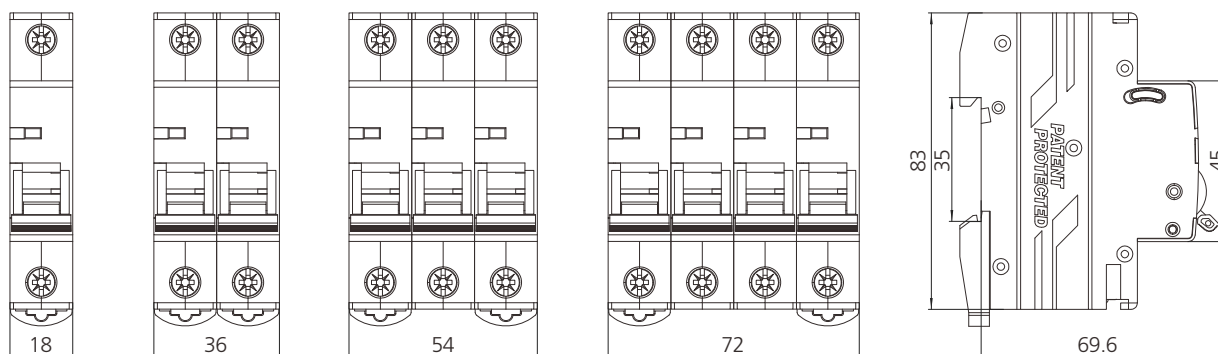
Overload Current Protection Characteristics

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** **EMC** **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

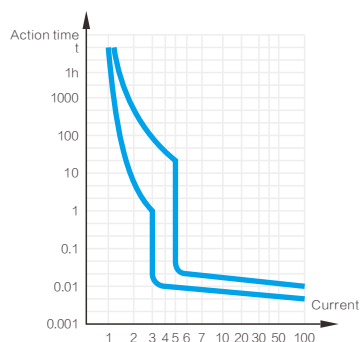
Code	Name	Description
1	ONCCY brand	E
2	AC	S
3	MCB	M
4	Series	2:Series2
5	Frame Current	63
6	Tripping curve	B / C / D
7	Rated current	1:1A 2:2A 3:3A 4:4A 6:6A 10:10A 16:16A 20:20A 25:25A 32:32A 40:40A 50:50A 63:63A
8	Poles	1:1P 2:2P 3:3P 4:4P

Technical Data

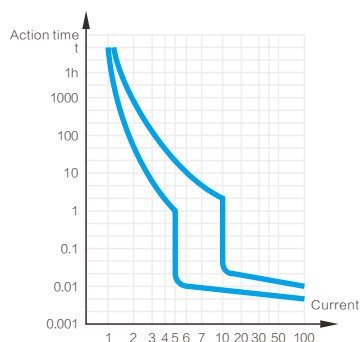
Electrical Features		Electrical Features	
Rated current (In)	1-63A	Rated breaking capacity (Icn)	6kA
Poles	1P 2P 3P 4P	Rated operating short circuit breaking capacity (Ics)	6kA
Rated voltage (Ue)	1P: 240/415V~ 2/3/4P:415~	Energy limiting class	3
Insulation voltage (Ui)	500V	Tripping curve	B C D
Rated 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

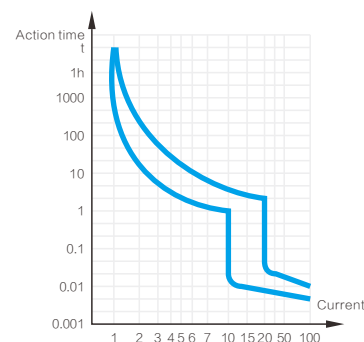
Standard: IEC60898-1



B curve



C curve



D curve

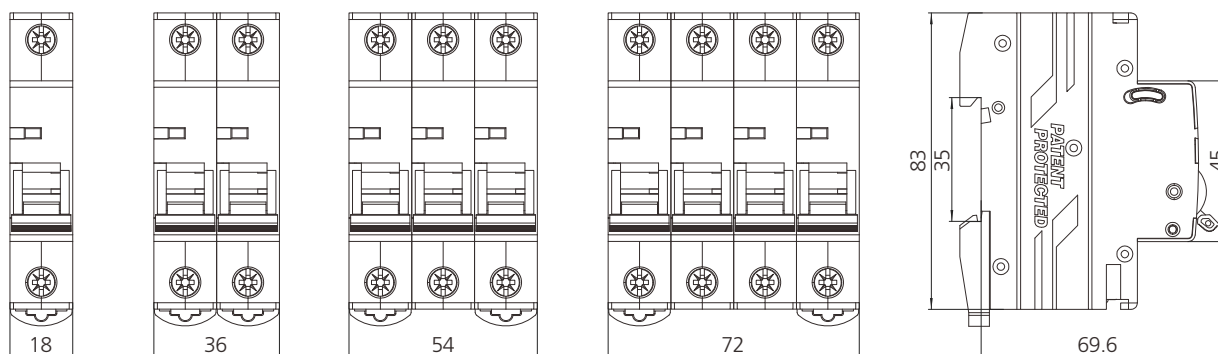
Overload Current Protection Characteristics

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 rises 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/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
/
□
/
□

Electrical Features

Code	Name	Description
1	ONCCY brand	E
2	AC	S
3	MCB	M
4	Series	1:Series1
5	Frame Current	32
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
8	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

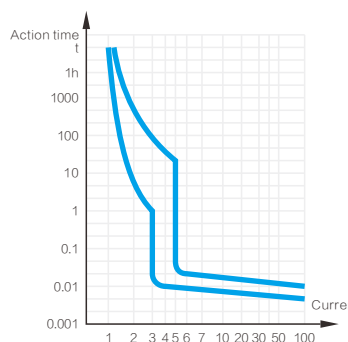
Rated breaking capacity (Icn)	4.5kA
Rated operating short circuit breaking capacity (Ics)	4.5kA
Tripping curve	B C D
Electrical and Mechanical life	20000

Combination with accessories

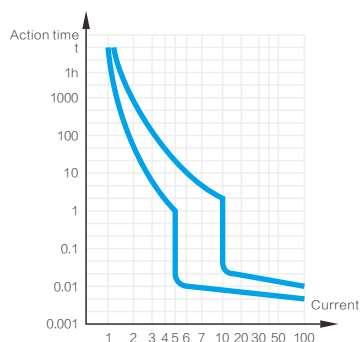
Auxiliary contact	YES
Alarm contact	YES
Shunt release	YES
Under voltage release	YES

ESM1-32(1P+N)MCB

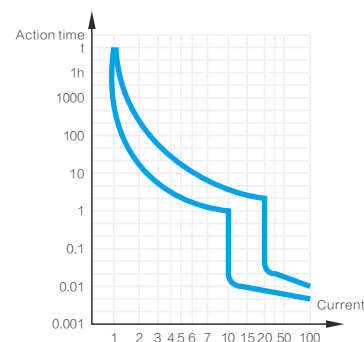
Standard: IEC60898-1



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
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 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)

