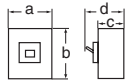


■ S series/2, 3-pole UL489 Listed

Frame		50A		100A			
Pole		2	3	2	3	2	3
Type	Page 06/44	SA52RCUL	SA53RCUL	SA102CUL	SA103CUL	SA102RCUL	SA103RCUL
Rated current (A)		3, 5, 10, 15, 20, 30, 40, 50		15, 20, 30, 40, 50, 60, 70, 75, 80, 90, 100		15, 20, 30, 40, 50, 60, 70, 75, 80, 90, 100	
Rated insulation voltage [IEC 60947-2] (V AC)		690		690		690	
Rated operating voltage [UL489] (V AC)		240		240		480Y/277	
Rated breaking capacity (kA)	UL489	480Y/277V AC	–	–	–	25	–
	CSA C22.2 No.5	240V AC	14	35	85	–	–
	IEC 60947-2	600V AC	–	–	–	–	–
	EN60947-2	500V AC	7.5/4	15/4	30/8	30/8	30/8
	JIS C8201-2-1	440V AC	10/5	25/7	50/13	50/13	50/13
	(Icu/Ics) *1	415V AC	10/5	30/8	50/13	50/13	50/13
		400V AC	10/5	30/8	50/13	50/13	50/13
		380V AC	10/5	30/8	50/13	50/13	50/13
	230V AC	25/13	50/25	100/50	100/50	100/50	
	250V DC	–	–	15/8	40/20	40/20	40/20
Dimensions (mm)							
		a	50	75	90	90	90
		b	120	120	155	155	155
		c	60	60	60	60	60
		d	84	84	82	82	82
Mass (kg) Front mounting type		0.4	0.5	1.1	1.2	1.1	1.2
Tripping device		Hydraulic-magnetic		Thermal-magnetic		Thermal-magnetic	
Connecting terminal	Screw	●	●	●	●	●	●
	Flat	●	●	●	●	●	●
	Block	–	–	●	●	●	●
Internal accessories		Page 06/88					
Alarm switch	K	BZ6KR10CU	BZ6K□10CU	BZ6KR30CU	BZ6K□30CU	BZ6K□30CU	BZ6K□30CU
Alarm switch with terminal block	KA	BZ6KR10CAU	BZ6K□10CAU	BZ6KR30CAU	BZ6K□30CAU	BZ6K□30CAU	BZ6K□30CAU
Auxiliary switch	W	BZ6WR10CU	BZ6W□10CU	BZ6WR30CU	BZ6W□30CU	BZ6W□30CU	BZ6W□30CU
Auxiliary switch with terminal block	WA	BZ6WR10CAU	BZ6W□10CAU	BZ6WR30CAU	BZ6W□30CAU	BZ6W□30CAU	BZ6W□30CAU
Undervoltage trip with terminal block	RA	BZ6R□10CAU	BZ6R□10CAU	▲	▲	▲	▲
Shunt trip	F	BZ6F□10CU	BZ6F□10CU	BZ6F□30CU	BZ6F□30CU	BZ6F□30CU	BZ6F□30CU
Shunt trip with terminal block	FA	BZ6F□10CAU	BZ6F□10CAU	BZ6F□30CAU	BZ6F□30CAU	BZ6F□30CAU	BZ6F□30CAU
External accessories							
Handle padlocking device	Cap type	Q1	–	–	–	–	–
Operating handle	N-type	N	BZ6N10CP	BZ6N10CP	BZ6N30CP	BZ6N30CP	BZ6N30CP
Operating handle	V-type	V	BZ6V10C	BZ6V10C	BZ6V30C	BZ6V30C	BZ6V30C
Terminal cover	Short	TS	Provided	Provided	BZ-TS30B-3	BZ-TS30B-3	BZ-TS30B-3
Terminal cover	Long	TB	BZ6TB10C2U	BZ6TB10C3U	BZ-TB30B-3	BZ-TB30B-3	BZ-TB30B-3
Terminal cover for flat terminal		TL	–	–	BZ-TL30B-3	BZ-TL30B-3	BZ-TL30B-3
Insulation barrier	Interphase *2	B	–	–	BZ6B30CU	BZ6B30CU	BZ6B30CU
Handle locking cover		L	BZ6L10C	BZ6L10C	BZ6L30C	BZ6L30C	BZ6L30C
Flat terminal		S	BZ-SU20B	BZ-SU20B	BZ6SU35B	BZ6SU35B	BZ6SU35B
Block terminal		TA	–	–	BZ6TA100	BZ6TA100	BZ6TA100

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity

Ics: Rated service short-circuit breaking capacity

*2 Interphase insulation barriers are standard provided for the front mounting type breakers of 100AF and over.

● Available – Not available ▲ Factory-mounted accessory

Molded Case Circuit Breakers

Quick reference guide

UL Listed

■ S series/2, 3-pole UL489 Listed

Frame		225A					
Pole		2	3	2	3		
Type		Page 06/44		SA202CUL	SA203CUL	SA202RCUL	SA203RCUL
Rated current (A)		125, 150, 175, 200, 225		125, 150, 175, 200, 225			
Rated insulation voltage [IEC 60947-2] (V AC)		690		690			
Rated operating voltage [UL489] (V AC)		240		480Y/277			
Rated breaking capacity (kA)	UL489	480Y/277V AC	–			25	
	CSA C22.2 No.5	240V AC	35			85	
	IEC 60947-2	600V AC	–			–	
	EN60947-2	500V AC	15/4			30/8	
	JIS C8201-2-1	440V AC	25/7			50/13	
	(Icu/Ics) *1	415V AC	30/8			50/13	
		400V AC	30/8			50/13	
		380V AC	30/8			50/13	
230V AC		50/25			100/50		
250V DC		15/8			40/20		
Dimensions (mm)			a	105	105	105	105
Page 06/76			b	165	165	165	165
			c	60	60	60	60
			d	84	84	84	84
Mass (kg) Front mounting type		1.1	1.3	1.1	1.3		
Tripping device		Thermal-magnetic		Thermal-magnetic			
Connecting terminal	Screw	●	●	●	●		
	Flat	●	●	●	●		
	Block	●	●	●	●		
Internal accessories See page 06/88							
Alarm switch	K	BZ6K□40CU	BZ6K□40CU	BZ6K□40CU	BZ6K□40CU	BZ6K□40CU	
Alarm switch with terminal block	KA	BZ6K□40CAU	BZ6K□40CAU	BZ6K□40CAU	BZ6K□40CAU	BZ6K□40CAU	
Auxiliary switch	W	BZ6W□40CU	BZ6W□40CU	BZ6W□40CU	BZ6W□40CU	BZ6W□40CU	
Auxiliary switch with terminal block	WA	BZ6W□40CAU	BZ6W□40CAU	BZ6W□40CAU	BZ6W□40CAU	BZ6W□40CAU	
Undervoltage trip with terminal block	RA	▲	▲	▲	▲	▲	
Shunt trip	F	BZ6F□40CU	BZ6F□40CU	BZ6F□40CU	BZ6F□40CU	BZ6F□40CU	
Shunt trip with terminal block	FA	BZ6F□40CAU	BZ6F□40CAU	BZ6F□40CAU	BZ6F□40CAU	BZ6F□40CAU	
External accessories							
Handle padlocking device	Cap type	Q1	–	–	–	–	
Operating handle	N-type	N	BZ6N40CP	BZ6N40CP	BZ6N40CP	BZ6N40CP	
Operating handle	V-type	V	BZ6V40C	BZ6V40C	BZ6V40C	BZ6V40C	
Terminal cover	Short	TS	BZ-TS40B	BZ-TS40B	BZ-TS40B	BZ-TS40B	
Terminal cover	Long	TB	BZ-TB40B	BZ-TB40B	BZ-TB40B	BZ-TB40B	
Terminal cover for flat terminal		TL	BZ-TL40B	BZ-TL40B	BZ-TL40B	BZ-TL40B	
Insulation barrier	Interphase *2	B	BZ6B40CU	BZ6B40CU	BZ6B40CU	BZ6B40CU	
Handle locking cover		L	BZ6L40C	BZ6L40C	BZ6L40C	BZ6L40C	
Flat terminal		S	BZ6SU50B	BZ6SU50B	BZ6SU50B	BZ6SU50B	
Block terminal		TA	BZ6TA225	BZ6TA225	BZ6TA225	BZ6TA225	

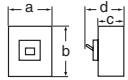
Notes: *1 Icu: Rated ultimate short-circuit breaking capacity

● Available – Not available ▲ Factory-mounted accessory

Ics: Rated service short-circuit breaking capacity

*2 Interphase insulation barriers are standard provided for the front mounting type breakers.

■ S series/2, 3-pole UL489 Listed

Frame		400A				
Pole		2	3	2	3	
Type	Page 06/44	SA402CUL	SA403CUL	SA402RCUL	SA403RCUL	
Rated current (A)		250, 300, 350, 400		250, 300, 350, 400		
Rated insulation voltage [IEC 60947-2] (V AC)		690		690		
Rated operating voltage [UL489] (V AC)		240		480		
Rated breaking capacity (kA)	UL489	480V	25	50		
	CSA C22.2 No.5	480Y/277V	25	50		
		240V	42	85		
		IEC 60947-2	600V AC	–	30/15	
	EN60947-2	500V AC	22/11	35/18		
	JIS C8201-2-1 (Icu/Ics) *1	440V AC	35/18	50/25		
		415V AC	35/18	50/25		
		400V AC	35/18	50/25		
380V AC		35/18	50/25			
230V AC		50/25	85/43			
250V DC	20/10	40/20				
Dimensions (mm)		a	140	140	140	140
		b	257	257	257	257
		c	103	103	103	103
		d	146	146	146	146
Page 06/76						
Mass (kg) Front mounting type		4.5	5	4.5	5	
Tripping device		Thermal-magnetic		Thermal-magnetic		
Connecting terminal	Screw	–	–	–	–	
	Flat	●	●	●	●	
	Block	●	●	●	●	
Internal accessories Page 06/88						
Alarm switch	K	▲	▲	▲	▲	
Alarm switch with terminal block	KA	▲	▲	▲	▲	
Auxiliary switch	W	▲	▲	▲	▲	
Auxiliary switch with terminal block	WA	▲	▲	▲	▲	
Undervoltage trip with terminal block	RA	▲	▲	▲	▲	
Shunt trip	F	▲	▲	▲	▲	
Shunt trip with terminal block	FA	▲	▲	▲	▲	
External accessories						
Handle padlocking device Cap type	Q1	▲	▲	▲	▲	
Operating handle N-type	N	BZ6N60CP	BZ6N60CP	BZ6N60CP	BZ6N60CP	
Operating handle V-type	V	BZ6V60C	BZ6V60C	BZ6V60C	BZ6V60C	
Terminal cover Short	TS	–	–	–	–	
Terminal cover Long	TB	BZ-TB60B	BZ-TB60B	BZ-TB60B	BZ-TB60B	
Terminal cover for flat terminal	TL	–	–	–	–	
Insulation barrier Interphase *2	B	B-43A	B-43A	B-43A	B-43A	
Handle locking cover	L	BZ-L70B	BZ-L70B	BZ-L70B	BZ-L70B	
Flat terminal	S	BZ-SU60B	BZ-SU60B	BZ-SU60B	BZ-SU60B	
Block terminal	TA	Up to 350A: BZ6TA350 400A: BZ6TA400	Up to 350A: BZ6TA350 400A: BZ6TA400	Up to 350A: BZ6TA350 400A: BZ6TA400	Up to 350A: BZ6TA350 400A: BZ6TA400	

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity
*2 Interphase insulation barriers are standard provided for the front mounting type breakers.

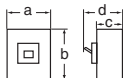
● Available – Not available ▲ Factory-mounted accessory

Molded Case Circuit Breakers

Quick reference guide

UL Listed

■ S series/3-pole UL489 Listed

Frame		600A	800A
Pole		3	3
Type	Page 06/44	SA603RCUL	SA803RCUL
Rated current (A)		500, 600	700, 800
Rated insulation voltage [IEC 60947-2] (V AC)		690	690
Rated operating voltage [UL489] (V AC)		480	480
Rated breaking capacity (kA)	UL489	480V	50
	CSA C22.2 No.5	480Y/277V	50
		240V	85
		IEC 60947-2	600V AC
	EN60947-2	500V AC	35/18
	JIS C8201-2-1	440V AC	50/25
	(Icu/Ics) *1	415V AC	50/25
		400V AC	50/25
		380V AC	50/25
230V AC		85/43	
250V DC		40/20	
Dimensions (mm)		a	210
		b	275
		c	103
		d	146
Page 06/77			
Mass (kg) Front mounting type		9	10
Tripping device		Thermal-magnetic	Thermal-magnetic
Connecting terminal	Screw	—	—
	Flat	●	●
	Block	●	●
Internal accessories	See page 06/88		
Alarm switch	K	▲	▲
Alarm switch with terminal block	KA	▲	▲
Auxiliary switch	W	▲	▲
Auxiliary switch with terminal block	WA	▲	▲
Undervoltage trip with terminal block	RA	▲	▲
Shunt trip	F	▲	▲
Shunt trip with terminal block	FA	▲	▲
External accessories			
Handle padlocking device Cap type	Q1	▲	▲
Operating handle N-type	N	BZ6N70CP	BZ6N70CP
Operating handle V-type	V	BZ6V70C	BZ6V70C
Terminal cover Short	TS	—	—
Terminal cover Long	TB	BZ-TB70B	BZ-TB70B
Terminal cover for flat terminal	TL	—	—
Insulation barrier Interphase *2	B	B-43A	B-43A
Handle locking cover	L	BZ-L70B	BZ-L70B
Flat terminal	S	BZ-SU70B-600	BZ-SU70B-800
Block terminal	TA	BZ-TA600	700A: BZ-TA700 800A: BZ-TA800

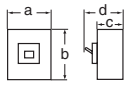
Notes: *1 Icu: Rated ultimate short-circuit breaking capacity

Ics: Rated service short-circuit breaking capacity

*2 Interphase insulation barriers are standard provided for the front mounting type breakers.

● Available – Not available ▲ Factory-mounted accessory

■ E series/2, 3-pole UL489 Listed

Frame	100A		
Pole	2	3	
Type	Page 06/44	EA102CUL EA103CUL	
Rated current (A)	60, 70, 75, 80, 90, 100		
Rated insulation voltage [IEC 60947-2] (V AC)	690		
Rated operation voltage [UL489] (V AC)	240		
Rated breaking capacity (kA)	UL489	480Y/277V	–
	CSA C22.2 No.5	240V	14
	IEC 60947-2	600V AC	–
	EN60947-2	500V AC	7.5/4
	JIS C8201-2-1	440V AC	10/5
	(Icu/Ics) *1	415V AC	10/5
		400V AC	10/5
		380V AC	10/5
	230V AC	25/13	
	250V DC	–	
Dimensions (mm)	a	50	75
	b	120	100
	c	60	60
	d	84	84
Page 06/78			
Mass (kg) Front mounting type	0.5	0.6	
Tripping device	Hydraulic-magnetic		
Connecting terminal	Screw	●	●
	Flat	●	●
	Block	–	–
Internal accessories	See page 06/88		
Alarm switch	K	BZ6KR10CU	BZ6K□10CU
Alarm switch with terminal block	KA	BZ6KR10CAU	BZ6K□10CAU
Auxiliary switch	W	BZ6WR10CU	BZ6W□10CU
Auxiliary switch with terminal block	WA	BZ6WR10CAU	BZ6W□10CAU
Undervoltage trip with terminal block	RA	BZ6R□10CAU	BZ6R□10CAU
Shunt trip	F	BZ6F□10CU	BZ6F□10CU
Shunt trip with terminal block	FA	BZ6F□10CAU	BZ6F□10CAU
External accessories			
Handle padlocking device Cap type	Q1	▲	▲
Operating handle N-type	N	BZ6N10CP	BZ6N10CP
Operating handle V-type	V	BZ6V10C	BZ6V10C
Terminal cover Short	TS	Provided	Provided
Terminal cover Long	TB	BZ6TB10CU2	BZ6TB10CU3
Terminal cover for flat terminal	TL	–	–
Insulation barrier Interphase	B	–	–
Handle locking cover	L	BZ6L10C	BZ6L10C
Flat terminal	S	BZ-SU20B	BZ-SU20B
Block terminal	TA	–	–

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available ▲ Factory-mounted accessory

Molded Case Circuit Breakers

UL Listed MCCB selection

■ Circuit configuration and breaker application for control panels of industrial machinery in North America.

● UL508A (Industrial control panels) requirements

1. The requirements of NFPA70 (NEC), NFPA79, and applicable UL standards must be satisfied.
2. Positioning of protective equipment
 - Install branch circuit protection (BCP) for the main circuit at the point of electrical inlet.
 - Use equipment that is UL508 listed as applicable to each kind of loads, installed under appropriate load conditions, as protective equipment for load circuits used in branch circuits downstream from the BCP.

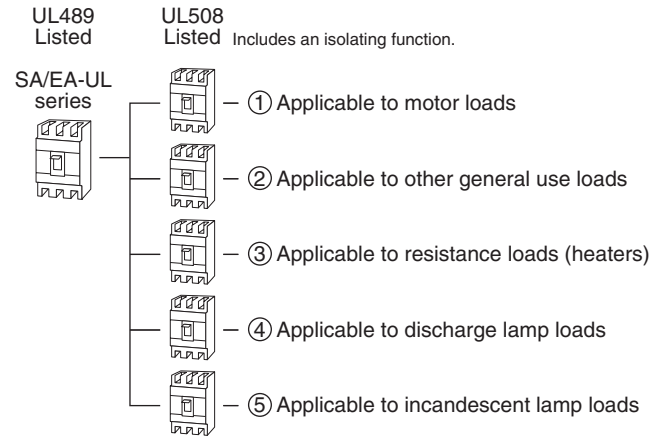


UL508/Group Installation, which combines UL489 Listed SA/EA-UL series and UL508 Listed Manual Motor Controllers (MMCs), complies with the UL508A requirements for North American industrial control panels.

● Application of UL489 Listed SA/EA-UL series and UL508 Listed MMCs (Group installation)

1. For group installations, if the UL489 Listed SA/EA-UL series is installed at the power inlet point (upstream) and any of the following conditions is satisfied in the circuit, a UL508 Listed MMC can be used as a downstream multi-circuit protective device. (In accordance with NEC430.53.)
 - a. No conductor to the motor shall have an ampacity less than that of the branch-circuit conductors.
 - b. No conductor to the motor shall have an ampacity less than one-third than of the branch-circuit conductors, the conductors to the motor overload device being not more than 7.5m(25ft) long and being protected from physical damage.
 - c. Conductors from the branch-circuit short-circuit and ground-fault protective device to a listed manual motor controller shall be permitted to have an ampacity not less than 1/10 the rating or setting of the branch-circuit short-circuit and ground-fault protective device. The conductors from the branch-circuit short-circuit and ground-fault protective device to the controller shall (1) be suitably protected from physical damage and enclosed either by an enclosed controller or by a raceway and shall be not more than 3m(10ft) long or (2) shall have an ampacity not less than that of the branch circuit conductors.
2. The UL508 Listed MMC also has UL508 Group Installation certification.
3. See NEC 430.53 for detail.
4. Refer to the table on the next page for breaking capacity of the UL508 Listed Group Installation when making your selection.

Item NEC430.53 Group Installation



MAN. MTR. CNTR.
Suitable as motor disconnect

Max. CB300A
Short Circuit Rating
RMS SYM 5kA 600V
For Group Installation see catalogue

UL US LISTED MAN. MTR. CNTR. 2770

<Suitable for the following loads>
Across the line motor

Vac	220-240	440-480	550-600
HP 3ph	15	30	40
Hp ph	7.5	20	25

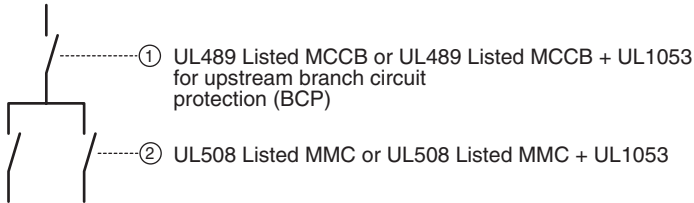
AC General Use Rating 100A
AC Resistance (heating) 100A
AC Discharge Lamps 50A
AC Incandescent Lamps 100A

Use 75°C Cu-wire only
Torque 5.5~7.5 N·m
90~95 lbf·in

WARNING
TO MAINTAIN OVERCURRENT SHORT CIRCUIT AND GROUND FAULT PROTECTION, THE MANUFACTURER'S INSTRUCTIONS FOR SELECTION OF OVERLOAD AND SHORT CIRCUIT PROTECTION MUST BE FOLLOWED. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK.

- ①
- ②
- ③
- ④
- ⑤

■ Group Installation



● 240V AC for UL508 Listed MMC (② in figure) combined with UL489 Listed MCCB (+ UL1053) (① in figure)

② UL508 Listed MMCs	① UL489 Listed MCCBs (+ UL1053)					
	SA53RCUL SG53RCUL	SA103CUL SA103RCUL SG103CUL EA103CUL EG103CUL	SA203CUL SA203RCUL SG203CUL	SA403CUL SA403RCUL	SA603RCUL	SA803RCUL
SA30C	5kA	5kA	5kA	5kA	—	—
SA50C	10kA	10kA	10kA	10kA	—	—
SA50RC	25kA	25kA	25kA	25kA	—	—
SA60C	10kA	10kA	10kA	10kA	10kA	10kA
SA60RC	25kA	25kA	25kA	25kA	25kA	25kA
EA30AC	5kA	5kA	5kA	5kA	—	—
EA50AC	5kA	5kA	5kA	5kA	—	—
EA50C	5kA	5kA	5kA	5kA	—	—
EA60C	5kA	5kA	5kA	5kA	5kA	5kA
EA100AC	5kA	5kA	5kA	5kA	5kA	5kA
EA100C	25kA	25kA	25kA	25kA	25kA	25kA

● 480V AC for UL508 Listed MMC (② in figure) combined with UL489 Listed MCCB (+ UL1053) (① in figure)

② UL508 Listed MMCs	① UL489 Listed MCCBs (+ UL1053)				
	SA103RCUL	SA203RCUL	SA403RCUL	SA603RCUL	SA803RCUL
SA30C	5kA	5kA	5kA	—	—
SA50C	10kA	10kA	10kA	—	—
SA50RC	10kA	10kA	10kA	—	—
SA60C	10kA	10kA	10kA	10kA	10kA
SA60RC	10kA	10kA	10kA	10kA	10kA
EA50C	5kA	5kA	5kA	—	—
EA60C	5kA	5kA	5kA	5kA	5kA
EA100C	10kA	10kA	10kA	10kA	10kA

● 240V AC for UL508 Listed MMC + UL1053 (② in figure) combined with UL489 Listed MCCB (+ UL1053) (① in figure)

② UL508 Listed MMCs + UL1053	① UL489 Listed MCCBs (+ UL1053)					
	SA53RCUL SG53RCUL	SA103CUL SA103RCUL SG103CUL EA103CUL EG103CUL	SA203CUL SA203RCUL SG203CUL	SA403CUL SA403RCUL	SA603RCUL	SA803RCUL
SG33C	5kA	5kA	5kA	5kA	—	—
SG53C	10kA	10kA	10kA	10kA	—	—
SG53RC	25kA	25kA	25kA	25kA	—	—
SG63C	10kA	10kA	10kA	10kA	10kA	10kA
SG63RC	25kA	25kA	25kA	25kA	25kA	25kA
EG32AC, EG33AC	5kA	5kA	5kA	5kA	—	—
EG33C	5kA	5kA	5kA	5kA	—	—
EG52AC, EG53AC	5kA	5kA	5kA	5kA	—	—
EG53C	5kA	5kA	5kA	5kA	—	—
EG63C	5kA	5kA	5kA	5kA	5kA	5kA
EG102AC, EG103AC	5kA	5kA	5kA	5kA	5kA	5kA
EG103C	25kA	25kA	25kA	25kA	25kA	25kA

Molded Case Circuit Breakers

MCCB selection

UL Listed

■ S series UL/cUL508 Listed (File No.E216772)

Frame		30A						50A													
Pole		2			3			2			3										
Type		SA32C□-CE			SA33C□-CE			SA52C□-CE			SA53C□-CE			SA52RC□-CE			SA53RC□-CE				
Rated operating voltage (V AC)		550						600						600							
Max. motor ratings (HP) UL508 [cUL] ^{*1}	Rated current (A)	3	5	10	15	20	30	5	10	15	20	30	40	50	10	15	20	30	40	50	
		3-phase	550 (-600) V AC ^{*2}	3/4	1	3	5	7.5	10	1	3	5	7.5	10	15	20	3	5	7.5	10	15
		440-480V AC	0.5	1	2	3	5	10	1	2	3	5	10	10	15	2	3	5	10	10	15
		220-240V AC	–	0.5	1	2	2	3	0.5	1	2	2	3	5	7.5	1	2	2	3	5	7.5
		110-120V AC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Single-phase	550 (-600) V AC ^{*2}	–	0.5	1.5	3	3	5	0.5	1.5	3	3	5	7.5	10	1.5	3	3	5	7.5	10
		440-480V AC	–	–	1	2	3	5	–	1	2	3	5	5	7.5	1	2	3	5	5	7.5
		220-240V AC	–	1/6	1/3	3/4	1	2	1/6	1/3	3/4	1	2	3	3	1/3	3/4	1	2	3	3
		110-120V AC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Load (A) UL508 [cUL]	Resistance ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50						10, 15, 20, 30, 40, 50							
	Discharge lamp ^{*4}	1.5, 2.5, 5, 7.5, 10, 15						2.5, 5, 7.5, 10, 15, 20, 25						5, 7.5, 10, 15, 20, 25							
	Incandescent lamp ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50						10, 15, 20, 30, 40, 50							
	Others ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50						10, 15, 20, 30, 40, 50							

Frame		60A												
Pole		2			3									
Type		SA62C□-CE			SA63C□-CE			SA62RC□-CE			SA63RC□-CE			
Rated operating voltage (V AC)		600												
Max. motor ratings (HP) UL508 [cUL] ^{*1}	Rated current (A)	60												
		3-phase	550 (-600) V AC ^{*2}	25						25				
		440-480V AC	20						20					
		220-240V AC	10						10					
		110-120V AC	–						–					
	Single-phase	550 (-600) V AC ^{*2}	15						15					
		440-480V AC	10						10					
		220-240V AC	5						5					
		110-120V AC	–						–					
Load (A) UL508 [cUL]	Resistance ^{*3}	60						60						
	Discharge lamp ^{*4}	30						30						
	Incandescent lamp ^{*3}	60						60						
	Others ^{*3}	60						60						

Notes: ^{*1} The performance of UL508 approved models is indicated as applicable motor rating (HP).

^{*2} Rated operating voltage 550-600V AC: For SA50C, 50RC, 60C and 60RC.

^{*3} Rated current x 1

^{*4} Rated current x 1/2

Molded Case Circuit Breakers
MCCB selection
UL Listed

■ E series UL/cUL508 Listed (File No.E216772)

Frame		30A						50A																			
Pole		2			3			2					3														
Type		EA32AC□-CE			EA33AC□-CE			EA52AC□-CE					EA53AC□-CE														
Rated operating voltage (V AC)		240						240										550									
Max. motor ratings (HP) UL508 [cUL] ^{*1}	Rated current (A)	3	5	10	15	20	30	5	10	15	20	30	40	50	5	10	15	20	30	40	50						
		3-phase	550 (-600) V AC ⁺²	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	5	7.5	10	15	20				
	440-480V AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	5	10	10	15					
	220-240V AC	-	0.5	1	2	2	3	0.5	1	2	2	3	5	7.5	0.5	1	2	2	3	5	7.5						
	110-120V AC	-	-	0.5	3/4	1	2	-	0.5	3/4	1	2	2	3	-	-	-	-	-	-	-	-					
Single-phase	550 (-600) V AC ⁺²	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	1.5	3	3	5	7.5	10						
440-480V AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	5	5	7.5						
220-240V AC	0.1	1/6	1/3	3/4	1	2	1/6	1/3	3/4	1	2	3	3	1/6	1/3	3/4	1	2	3	3							
110-120V AC	-	-	1/6	1/4	1/3	3/4	-	1/6	1/4	1/3	3/4	1	1.5	-	-	-	-	-	-	-	-						
Load (A) UL508 [cUL]	Resistance ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50																			
	Discharge lamp ^{*4}	1.5, 2.5, 5, 7.5, 10, 15						2.5, 5, 7.5, 10, 15, 20, 25																			
	Incandescent lamp ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50																			
	Others ^{*3}	3, 5, 10, 15, 20, 30						5, 10, 15, 20, 30, 40, 50																			

Frame		60A						100A																			
Pole		2			3			3					2					3									
Type		EA62C□-CE			EA63C□-CE			EA103AC□-CE					EA102C□-CE					EA103C□-CE									
Rated operating voltage (V AC)		550						240										600									
Max. motor ratings (HP) UL508 [cUL] ^{*1}	Rated current (A)	60	75	100	150	200	300	60	75	100	150	200	300	50	60	75	100	50	60	75	100						
		3-phase	550 (-600) V AC ⁺²	25					-	-	-	-	-	-	20	25	30	40	20	25	30	40					
	440-480V AC	20						-	-	-	-	-	-	15	20	25	30	15	20	25	30						
	220-240V AC	10						10	10	15				7.5	10	10	15	7.5	10	10	15						
	110-120V AC	-						3	5	7.5				-	-	-	-	-	-	-	-						
Single-phase	550 (-600) V AC ⁺²	15					-	-	-	-	-	-	10	15	20	25	10	15	20	25							
440-480V AC	10						-	-	-	-	-	-	7.5	10	15	20	7.5	10	15	20							
220-240V AC	5						5	5	7.5				3	5	5	7.5	3	5	5	7.5							
110-120V AC	-						2	3	3				-	-	-	-	-	-	-	-							
Load (A) UL508 [cUL]	Resistance ^{*3}	60						60, 75, 100																			
	Discharge lamp ^{*4}	30						30, 37.5, 50																			
	Incandescent lamp ^{*3}	60						60, 75, 100																			
	Others ^{*3}	60						60, 75, 100																			

Notes: ^{*1} The performance of UL508 approved models is indicated as applicable motor rating (HP).

^{*2} Rated operating voltage 550-600V AC: For SA50C, 50RC, 60C and 60RC.

^{*3} Rated current x 1

^{*4} Rated current x 1/2

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