



CAM1 Moulded Case Circuit Breaker

CAM1-225



CAM1-400



General

1. Electric ratings: AC 690V,50/60HZ, 10~1250A;
2. Mounting mode: Vertical and horizontal;
3. Standard: IEC/EN60947-2.

Operation conditions

1. Temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$; the average value within 24h shall not exceed $+35^{\circ}\text{C}$.(please contact with us if temperature at the mounted site beyond above values) for the circuit breaker with thermo-magnetic release, $+40^{\circ}\text{C}$ is set to be the standard temperature for ratings.
2. Altitude: not exceed 2000m (Please contact with us for reduction coefficient if altitude at the mounted site beyond 2000m)
3. Pollution grade: Grade 3;
4. Air conditions:
At mounting site, relative humidity not exceed 50% at the max temperature of $+40^{\circ}\text{C}$, higher relative humidity is allowable under lower temperature. For example, RH could be 90% at $+20^{\circ}\text{C}$, special measures should be taken to occurrence of dews.

Technical Data

Frame size current		63			100				
Rated current (A)		10 16 20 25 32 40 50 63			16 20 25 32 40 50 63 80 100				
Rated insulation voltage (V)		500			800				
Rated operational voltage (V)		380/400/415			380/400/415/690				
Arcing distance(mm)		≤ 50			≤ 50				
Number of poles		3			2				
Breaking capacity code		S	H	H	H	S	H	R	H
Frame size rated current (A)		63	63	63	100	100	100	100	100
Ultimate short-circuit breaking capacity Icu (kA, RMS)	AC 380V/400V/415V	15	35	35	50	25	50	65	50
	AC 690V	-	-	-	8	3	8	10	8
Service short-circuit breaking capacity Ics (kA, RMS)	AC 380V/400V/415V	7.5	17.5	17.5	25	12.5	25	32.5	25
	AC 690V	-	-	-	4	1.5	4	5	4
Fixed type		■			■				
Rear connection		■			■				
Plug in type		■			■				
Shunt release		■			■				
Under-voltage release		■			■				
Auxiliary contact		■			■				
Alarm contact		■			■				



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CAM1-400



Technical Data

Frame size current		225					400				
Rated current (A)		100,125,160,180,200,225					225,250,315,350,400				
Rated insulation voltage (V)		800					800				
Rated operational voltage (V)		380/400/415/690					380/400/415/690				
Arcing distance(mm)		≤50					≤100				
Number of poles		2		3		4	3		4		
Breaking capacity code		H	S	H	R	H	S	H	R	S	
Frame size rated current (A)		225	225	225	225	225	400	400	400	400	
Ultimate short-circuit breaking capacity I _{cu} (kA, RMS)	AC 380V/400V/415V	50	25	50	65	50	35	50	70	35	
	AC 690V	8	5	8	10	8	10	12	15	10	
Service short-circuit breaking capacity I _{cs} (kA, RMS)	AC 380V/400V/415V	25	12.5	25	32.5	25	17.5	25	35	17.5	
	AC 690V	4	2.5	4	5	4	5	6	7.5	5	
Fixed type		■					■				
Rear connection		■					■				
Plug in type		■					■				
Shunt release		■					■				
Under-voltage release		■					■				
Auxiliary contact		■					■				
Alarm contact		■					■				

Frame size current		630				800			1250		
Rated current (A)		400,500,630				630,700,800			700,800,1000,1250		
Rated insulation voltage (V)		800		800		500			500		
Rated operational voltage (V)		380/400/415/690		380/400/415/690		380/400/415			380/400/415		
Arcing distance(mm)		≤100				≤100			≤100		
Number of poles		3		4		3		4		3	
Breaking capacity code		S	H	R	S	H	R	H	H		
Frame size rated current (A)		630	630	630	630	800	800	800	1250		
Ultimate short-circuit breaking capacity Icu (kA, RMS)	AC 380V/400V/415V	35	50	70	50	60	70	60	65		
	AC 690V	12	13		12	-	-	-	-		
Service short-circuit breaking capacity Ics (kA, RMS)	AC 380V/400V/415V	17.5	26	35	26	30	35	30	32.5		
	AC 690V	6	6.5		6	-	-	-	-		
Fixed type		■				■			■		
Rear connection		■				■					
Plug in type		■				■					
Shunt release		■				■			■		
Under-voltage release		■				■			■		
Auxiliary contact		■				■			■		
Alarm contact		■				■					



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Release

Inverse time breaking action property of the over current releasing of the breaker (for power distribution) at the status that all poles are electrified simultaneously

No.	Test current	I/In	Conventional time	Initial status
1	Conventional non-trip current	1.05	2h(In>63A), 1h(In≤63A)	Cold status
2	Conventignal trip current	1.30	2h(In>63A), 1h(In≤63A)	Ringht after test no.1

Inverse time-delay breaking action property of the over current releasing of the breaker(for motor protection) at the status that all poles are electrified simultaneously(conforms to IEC60947-3)

Serial No.	Setting current	Conventional time	Start-up status	Remark
1	1.0In	>2h	Cold status	
2	1.2In	≤6302h	Right after test number 1	
3	1.5In	≤4min	Cold status	10≤In≤225
		≤8min	Cold status	225≤In≤630
4	7.2In	4s≤t≤10s	Cold status	10≤In≤225
		6s≤t≤20s	Cold status	225≤In≤630

N-Pole of 4P circuit breaker is at the right side,See table below for rated current of C,D type N-Pole release

Frame size rated current (A)	Rated current (A)	Rated current at N-pole (A)
60	10	10
	16	16
	20	20
	25	25
	32	32
	40	40
	50	50
	63	63
100	10	10
	16	16
	20	20
	25	25
	32	32
	40	40
	50	50
	63	63
225	80	63
	100	63
	100	100
	125	100
	160	100
	180	100
	200	100
	225	125
400	225	225
	250	225
	315	225
	350	250
	400	250
630	400	250
	500	315
	630	350
800	630	350
	700	400
	800	500



CAM3(NS)Moulded Case Circuit Breaker

CAM3-100N-3P



CAM3-250N-4P



CAM3-630N-3P



Application

CAM3(NS) moulded case circuit breaker is one of the most advanced type breakers in the world, which adopt international advanced design and manufacture technology. It is suitable for short circuit and overload protection for circuit of AC 690V 50/60Hz, rated current from 12.5A to 630A. Its rated insulation voltage is 690V. It can make and break non-frequent circuit in the normal conditions. It takes protect effect when squirrel cage motors non-frequent start, breaking off working and protecting overload, short circuit and lacking voltage. It is in conformity with standards of IEC60947-2 and EN60947-2.

Specification

Type	Rated current (A)	Poles	Rated insulating voltage (V)	Rated operating voltage (V)	Arcing over distance (mm)	Ultimate short circuit breaker capacity(kA)	Servies short circuit breaker capacity(kA)	Operating performance (times)
CAM3-100D	12.5,16,	3	950	690	0	18	18	1500 8500
CAM3-100N	20,25,32,					25	25	
CAM3-100H	40,50,63,					70	70	
CAM3-100L	80,100					150	150	
CAM3-160D	16,20,25,	3,4	950	690	0	25	25	1000 7000
CAM3-160N	32,40,50,					36	36	
CAM3-160H	63,80,100,					70	70	
CAM3-160L	125,160					150	150	
CAM3-250D	160,180,	3,4	950	690	0	25	25	1000 7000
CAM3-250N	200,225,					36	36	
CAM3-250H	250,300,					70	70	
CAM3-250L	315,400					150	150	
CAM3-400D	200,225,	3,4	950	690	0	35	35	1000 4000
CAM3-400N	250,300,					45	45	
CAM3-400H	315,400					70	70	
CAM3-400L						150	150	
CAM3-630D	315,350,	3	950	690	0	35	35	1000 4000
CAM3-630N	400,500,					45	45	
CAM3-630H	600,630					70	70	
CAM3-630L						150	150	

Tripping characteristics

Rated current of release(A)	Thermodynamic release (ambient temp+40℃)				Operational current of magnetic release(A)
	1.05In (cold state) inoperative time (h)	1.20In (heat state) operative time (h)	1.30In (heat state) inoperative time (h)	7.21In (heat state) operative time (h)	
$I_n \leq 63$	≥ 1	< 2	< 1	< 2	$10I_n \pm 20\%$
$63 < I_n \leq 100$	≥ 2	< 2	< 2	< 2	$10I_n \pm 20\%$
$100 < I_n \leq 630$	≥ 2	< 2	< 2	< 2	$5-10I_n \pm 20\%$

Rated current of release(A)	Thermodynamic release (ambient temp+40℃)				Operational current of magnetic release(A)
	1.0In (cold state) operative time (h)	1.20In (heat state) operative time (h)	1.50In (heat state) operative time (h)	7.21In (heat state) operative time (h)	
$12.5 \leq I_n \leq 400$	≥ 2	< 2	$\leq 4 \text{ min}$	$2S < T_p \leq 10S$	$12I_n \pm 20\%$



CAM6-CS Moulded Case Circuit Breaker

CAM6-30CS



CAM6-60CS



Application

CAM6 series circuit breaker has features of reliable working out and steady performance, reasonable structure, beautiful appearance and small volume etc. It can be used in the circuit of 50Hz or 60Hz, rated voltage up to 600V. It is used to distribute electric energy in distribution network and be overload or short circuit protection power equipment, and also can be used in transformation of circuit unfrequency under the normal conditions.

Specifications

Model	Rated insulation voltage(V)	Rated current of trip(A)	Mode of connection	Breaking capacity	No.of pole
CAM6-30-CS	660V	3,5,10,15,20,30	Mode after board Insertion mode	AC380V/1.5kA 415V/1.5kA	2, 3
CAM6-50-CS		10,15,20,30,40,50		AC380V/5kA 500V/2.5kA	2, 3
CAM6-60-CS		10,15,20,30,40,50,60,		AC380V/5kA 500V/2.5kA	2, 3
CAM6-100-CS		60,75,100		AC380V/18kA 500V/7.5kA	2, 3
CAM6-250-CS		125,150,175,200,225,250		AC380V/18kA 500V/10kA	2, 3
CAM6-400-CS		250,300,350,400		AC380V/25kA 500V/15kA	2, 3
CAM6-630-CS		500,600,630		AC380V/30kA 500V/22kA	2, 3
CAM6-800-CS		600,700,800		AC380V/50kA	2, 3
CAM6-1250-CS		630,700,800,1000,1250		AC380V/50kA	3



CAM6-CP Moulded Case Circuit Breaker

CAM6-60CP



CAM6-100CP



CAM6-250CP



Specifications

CAM6-CP	Pole number	Rated current(A)	Testing voltage(V)	(P1/P2)Ica/Ics Breaking capacity(kA)			
				230	400	440	500
CAM6-50CP	3	5,10,15,20,30,40,50	600	5 / 2	5 / 2	2.5 / 1	2.5 / 1
CAM6-60CP	3	60	600	5 / 2	5 / 2	2.5 / 1	2.5 / 1
CAM6-100CP	3	60,75,100	600	25 / 13	10 / 5	10 / 5	7 / 4
CAM6-250CP	3	125,150,175,200,225,250	600	30 / 15	18 / 9	15 / 8	10 / 5
CAM6-400CP	3	250,300,350,400	600	50 / 25	36 / 18	25 / 13	15 / 8



CAM6-SS Moulded Case Circuit Breaker

CAM6-250SS



Specifications

Type	Pole number	Rated current(A)	Testing voltage(V)	Circuit breaking capacity(kA)						
			AC	240	380	415	500	600	660	
CAM6-30SS	2	3,5,10,15,20,30	600	5/5	5/2.5	2.5/1.5	2.5/1.0	-	-	
	3		600							
CAM6-50SS	3	10,20,30,40,50	600	5/10	10/7.5	7.5/5	7.5/5	2.5/1.5	-	
CAM6-60SS	3	10,20,30,40,50,60	600	5/10	10/7.5	7.5/5	7.5/5	2.5/1.5	-	
CAM6-100SS	3	60,75,100	660	50/42	30/20	25/15	15/10	10/5	5/2.5	
	4		660							
CAM6-250SS	3	125,150,175,200,225,250	660	50/42	30/22	25/20	18/15	15/10	5/2.5	
	4		660							
CAM6-400SS	3	250,300,350,400	660	85/60	50/35	50/30	35/25	25/18	15/10	
	4		660							
CAM6-630SS	3	500,600,630	660	85/60	50/35	50/30	35/25	25/18	15/10	
	4		660							
CAM6-800SS	3	600,700,800	660	85/60	50/35	50/30	35/25	25/18	15/10	
	4		660							



CAWB8 Intelligent Air Circuit Breaker

CAWB8-2000



CAWB8-3200



CAWB8-4000



CAWB8-6300



Protection for

- ◆ Distribution systems supplied by transformers
- ◆ Distribution systems supplied by engine generator sets
- ◆ Long cables in IT and TN systems.

All circuit breakers in the CAWB8 range are suitable for isolation in compliance with standards IEC 60947-2

Installation

- ◆ In power switchboards
- ◆ Fixed type and drawer type

Main technical parameters

Type		CAWB8-2000	CAWB8-3200	CAWB8-4000	CAWB8-6300
Rated ultimate short circuit breaking capacity Icu(kA)	400V	80	100		120
	690V	50	65		80
Rated operation short circuit breaking capacity Ics(kA)	400V	50	80		100
	690V	40	50		70
Rated short time withstand current Icw(kA)Is		50	65		100
Rated current In(A)		400,630,800,1000,1250,1600,2000	2000,2500,2900,3200	3200,3900,4000	4000,5000,6000,6300
Number of poles	3-pole	●			
	4-pole	●			
Rated voltage Ue(V)		400, 690			
Rated insulation voltage Ui(V)		1000V			
Rated current of N-Pole IN(A)		50%IN, 100% IN			
Fix-disconnection time		23~32MS			
Intelligent controller	Standard type(M)	●			
	Communication type(H)	●			
Operation performance	Electric life time	500			
	Mechanical life time	Non-maintenance	2500		2000
		Maintenance	10000		8000
Installation type	Horizontal	●			
	Vertical	●			
	Fixed	0			
	Drawer				