

C-Frame MKII - Series Circuit Breakers



The C-Frame MKII is a traditional circuit breaker with a front mount profile.

Approvals

The C-Frame MKII carries various approvals such as VDE, cURus and is CE certified. It is also recognised to UL 1077 and listed to UL 489A.



Features

- AC and DC circuit breaker
- Hydraulic-magnetic technology
- 100% rating capability independent of ambient temperature
- Up to three poles
- VDE approved, CE certified
- UL compliant (Listed / recognised)
- Ratings 0.1 A to 30 A (Specific certifications)
- Precision tripping characteristics
- Wide range of circuits, mountings, terminations and time delays
- Optional auxiliary switch

Applications

- Telecom DC power distribution
- UPS equipment
- Mobile power generation equipment
- Power conditioning equipment
- Alternative energy equipment
- Lighting control

Hydraulic-Magnetic Circuit Breakers 100% rated, unaffected by ambient temperature

C-Frame MKII - Series Circuit Breakers

Technical Data

Product Type	C-Frame MKII
Ambient Operating Temperature	-40 °C to +85 °C
Endurance	10000 operations DC, 6000 operations AC (IEC 60934 Clause 9.11)* 6000 operations with current (UL1077 Clause 22)*
Dielectric Strength	1000 - 2000 Vac for one minute (IEC 60934 Clause 9.7)*
Weight	50 g per pole (unpacked)
Altitude	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
Shock	100 G to MIL-STD-202G, test method 213B, test condition 1
Vibration	10 G to MIL-STD-202G test method 204D, test condition A
Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28
Toxicity	F1 - Smoke index of ≤ 20 which determines the fume class
Pollution Degree	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.
Accessories	Protective splash boot, mounting hardware 6 - 32, M3 Screws

* Refer to the standard for details

Product Type	Circuit Breaker	Circuit Breaker	Circuit Breaker
Approvals	UL 489A	UL 1077	DIN / EN 60934, CE, UKCA
Number of Poles	1	1 - 3	1 - 3
Maximum Voltages	30 Vdc	240 Vac, 277 Vac, 65 Vdc	240 Vac, 65 Vdc
Current Ratings	0.1 - 30 A	0.1 - 30 A (AC & DC)	0.1 - 30 A (AC & DC)
Interrupting Capacity	5 kA	3 kA (AC), 1 kA (DC)	3 kA (AC), 1 kA (DC)

Verify approvals for specific ratings in accordance with the relevant test certificates.

Torque Table

Description	Size	Torque Value
Front Inserts	M3	0.5 - 0.8 Nm
	6 - 32	5 - 7 in/lbf
Rear Screws	M5	1.7 - 2.3 Nm
	10 - 32	15 - 20 in/lbf

C-Frame MKII - Series Circuit Breakers

Ordering Information

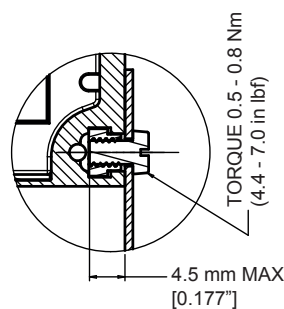
Group 1: Frame	Code	Description	Comments					
	C	C-Frame						
Group 2: Type	Code	Description	Comments					
	A	C-Frame MKII						
Group 3: Mounting	Code	Description	Comments					
	2	Front mount round aperture, fleet						
	3	Snap-in mount edges bevelled - without handle guards						
	B	Snap-in mount edges flush - without handle guards						
Group 4: Handle Type	Code	Description	Comments					
	A	Standard (toggle) handle						
	C	Cut-off handle	Single pole only					
Group 5: Termination	Code	Description	Comments	Code	Description	Comments		
	22	Screw terminal, bus connected (M5 or 10-32)	30 A max	52	Screw terminal 30° bent upturned ears, bus connected (M5 or 10-32)	30 A max		
	32	Screw terminal, upturned ears (M5 or 10-32)	30 A max	CX	Quick connect terminal (0.8 mm x 6.35 mm)	30 A max		
Group 6: Number of Poles	Code	Description	Code	Description				
	1	1 pole metric	A	1 pole imperial				
	2	2 pole metric	B	2 pole imperial				
	3	3 pole metric	C	3 pole imperial				
Group 7: Rated Voltage and Frequency - Main	Code	Description	Code	Description				
	E	65 Vdc	K	277 V 50 / 60 Hz				
	J	240 V 50 / 60 Hz	M	65 Vdc / 240 Vac				
Group 8: Time Delay Characteristics (Curve Details); Pulse Tolerance at 10 ms	Code	Description	System	Pulse Tolerance (X In)	Code	Description	System	Pulse Tolerance (X In)
	AD	Long delay 50 / 60 Hz AS & dual rated	AC and DC	8 - 10	BS	Medium delay 50 / 60 Hz	AC or DC	8 - 10
	BD	Medium delay 50 / 60 Hz BS & dual rated	AC and DC	8 - 10	CS	Short delay 50 / 60 Hz	AC or DC	6 - 8
	CD	Short delay 50 / 60 Hz CS & dual rated	AC and DC	6 - 8	AW	Long delay 50 / 60 Hz AD & inertia delay	AC and DC	16 - 20
	AI	Long delay 50 / 60 Hz AS & inertia delay	AC or DC	16 - 20	BW	Medium delay 50 / 60 Hz BD & inertia delay	AC and DC	16 - 20
	BI	Medium delay 50 / 60 Hz BS & inertia delay	AC or DC	16 - 20	CW	Short delay 50 / 60 Hz CD & inertia delay	AC and DC	12 - 15
	CI	Short delay 50 / 60 Hz CS & inertia delay	AC or DC	12 - 15	OP	Instantaneous trip 50 / 60 Hz	AC and DC	None
	AS	Long delay 50 / 60 Hz	AC or DC	8 - 10				
Group 9: Rated Current (Main Circuit) - Examples Only - Specific A Ratings Possible	Code	Description	Comments					
		0.1 A - 30 A	specific ampere ratings possible from 0.1 A - 30 A					
Group 10: Circuit Configuration (Circuit Breaker's Internal Construction)	Code	Description	Comments					
	BX	Series trip	Circuit breaker, current coil in series					
	KX	Series trip, with auxiliary switch						

C-Frame MKII - Series Circuit Breakers

Technical Data

Code	Description	Comments
Group 11: Auxiliary and Alarm Switches		
X	Not applicable	
A	DB3-Gold Tips, Equally spaced terminals, 2.75 mm (EN61058 0.1 A @ 250 Vac & 0.1 A @ 80 Vdc and UL1054 0.1 A @ 125/250 Vac & 0.1 A @ 30 Vdc & 0.3 A @ 60 Vdc)	
B	DB2-Silver Tips, Equally spaced terminals, 2.75 mm (EN61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL1054 10 A @ 125/250 Vac)	
Group 12 - 15:		
X	Not applicable	
Group 16: Handle Colour		
B	Black handle, white marking	
W	White handle, black marking	
Group 17: Marking Handle		
D	I - 0 and ON - OFF	
Group 18: Mounting Orientation for Marking		
V	Vertical (standard mounting, line @ top)	
Group 19: Front Plate		
B	No marking	
Group 20:		
-	Not applicable	
Group 21: Approvals (Product Normally Approved to)		
1	UL 1077, UL 489A, CSA - (C22.2 No. 235), DIN / EN 60934, CE, UKCA	
Group 22: Safety Marks		
X	Not applicable	

For options not listed, please contact CBI



MOUNTING SCREW DETAIL



Please review our Customer Terms and Conditions on www.cbi-lowvoltage.co.za

All rights reserved. Unless otherwise indicated, all materials on these pages are copyrighted by CBI (Pty) Ltd. No part of these pages, either text or image may be used for any purpose other than personal use. Therefore, reproduction, modification, storage in a retrieval system or retransmission, in any form or by any means, electronic, mechanical or otherwise, for reasons other than personal use, is strictly prohibited without prior written permission. CBI (Pty) Ltd reserves the right to alter any details of this document without notice and while every effort is made to ensure the accuracy of the content, no warranty is given as to the accuracy of this document and no responsibility will be accepted for error or misinterpretation and any resulting loss.

© CBI (Pty) Ltd. All Rights Reserved.

AUSTRALIA

CBI-electric: Australia
27 Wedgewood Rd, Hallam
Victoria 3803 Australia
Tel: +61 3 8752 9300
Fax: +61 3 9796 5407
Email: sales@cbi-electric.com.au
Website: www.cbi-electric.com.au

INDIA

CBI-electric: Asia
A1, Pushpagiri Residency, 1st Cross
2nd Main, Jyothi Nagar, B.G Road
Bengaluru 560083, India
Tel: +91-9880553153
Email: salesasia@cbi-electric.com
Website: www.cbibreakers.com
Website: www.cbi-lowvoltage.com

SOUTH AFRICA

CBI-electric: low voltage
Tripswitch Drive Elandsfontein
Gauteng South Africa
Tel: +27 11 928 2000
Fax: +27 11 392 2354
Email: cbi@cbi-electric.com
internationalsales@cbi-electric.com
Website: www.cbi-lowvoltage.co.za

USA

CBI-electric: North America
35 E. Uwchlan Ave Suite 328
Exton PA 19341 USA
Tel: +1 610 524 9949
Fax: +1 610 524 9945
E-mail: info@cbibreakers.com
Website: www.cbibreakers.com