

## C Frame - Series Circuit Breakers



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

### Approvals

The C Frame carries various approvals such as VDE , cURus, CSA and is CE certified. It is also recognised to UL 1077, UL 1500 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
- CSA and VDE approved, CE certified
- UL compliant (listed / recognised)
- Ratings 0.1 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

### Note:

Also known as C Frame MKII and CR Frame.

## C Frame - Series Circuit Breakers

### Technical Data

<b>Product Type</b>	<b>C Frame</b>
<b>Operating Temperature Range</b>	-40 °C to +85 °C
<b>Endurance</b>	10000 electrical operations at rated current and voltage (IEC 60934) 6000 electrical operations (UL 1077)
<b>Dielectric Strength</b>	1000 - 2000V, 50 Hz for one minute after testing (IEC 60934)
<b>Weight</b>	50 g per pole (unpacked)
<b>Humidity</b>	35 to 85% relative humidity
<b>Altitude</b>	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
<b>Shock</b>	100 G to MIL-STD-202G, test method 213B, test condition 1
<b>Vibration</b>	10 G to MIL-STD-202G test method 204D, test condition A
<b>Flammability</b>	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28
<b>Toxicity</b>	F1 - Smoke index of ≤ 20 which determines the fume class
<b>Pollution Degree</b>	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.
<b>Accessories</b>	Protective splash boot, mounting hardware 6 - 32, M3 Screws

Product Type	Circuit Breaker	Circuit Breaker	Circuit Breaker
<b>Approvals</b>	UL 1077 / CSA, UL 1500	IEC / EN 60934, VDE, CE	UL 489A
<b>Number of Poles</b>	1 - 3	1 - 3	1
<b>Maximum Voltages</b>	240V AC, 277V AC, 65V DC	240V AC, 65V DC	30V DC
<b>Current Ratings</b>	0.1 - 30 A	0.1 - 30 A	0.1 - 30 A
<b>Interrupting Capacity</b>	3 kA (AC), 1 kA (DC)	3 kA (AC), 1 kA (DC)	5 kA
<b>DC Polarity</b>	-	Polarity sensitive	Polarity sensitive



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### C Frame Series Circuit Breakers Ordering Information

Group 1: Frame	Code	Description	Comments					
	C	C-Frame						
Group 2: Type	Code	Description	Comments					
	A	C-Frame MKII	Known as C Frame, CR Frame					
Group 3: Mounting	Code	Description	Comments					
	2	Front mount round aperture, fleet	Warning: Maximum penetration depth into the mounting screw is 5.4 mm					
	3	Snap-in mount edges bevelled - without handle guards						
	B	Snap-in mount edges flush - without handle guards						
Group 4: Handle	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		
	42	Screw terminal 30° bent, bus connected (M5 or 10-32)	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	Comments					
	E	65V DC						
	J	240V 50 / 60 Hz						
	K	277V 50 / 60 Hz						
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	CS	Short delay 50 / 60 Hz	AC or DC	6 - 8
	BD	Medium delay 50 / 60 Hz BS & dual rated	AC and DC	8 - 10	AW	Long delay 50 / 60 Hz AD & inertia delay	AC and DC	16 - 20
	CD	Short delay 50 / 60 Hz CS & dual rated	AC and DC	6 - 8	BW	Medium delay 50 / 60 Hz BD & inertia delay	AC and DC	16 - 20
	AI	Long delay 50 / 60 Hz AS & inertia delay	AC or DC	16 - 20	CW	Short delay 50 / 60 Hz CD & inertia delay	AC and DC	12 - 15
	BI	Medium delay 50 / 60 Hz BS & inertia delay	AC or DC	16 - 20	OP	Instantaneous trip 50 / 60 Hz	AC and DC	None
	CI	Short delay 50 / 60 Hz CS & inertia delay	AC or DC	12 - 15	OX	Switch 50 / 60 Hz	AC and DC	-
	AS	Long delay 50 / 60 Hz	AC or DC	8 - 10	ZZ	Special - specify		
	BS	Medium delay 50 / 60 Hz	AC or DC	8 - 10				
Group 9: Rated Current (Main Circuit) - Examples Only - Specific A Ratings Possible	Code	Description	Comments					
	XXXX	Not applicable	Examples only - specific A ratings possible from 0.1 - 30 A					
	100M	100 mA						
	100	1 A						
	1000	10 A						
	3000	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						

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Group	Code	Description	Comments
<b>Group 11: Auxiliary and Alarm Switches</b>	X	Not applicable	No auxiliary switch - flat base plate
	A	Gold tips, equally spaced terminals	2.75 mm, 0.1 A max
	B	Silver tips, equally spaced terminals	2.75 mm, 10 A max
<b>Group 12 - 15</b>	Code	Description	Comments
	X	Not applicable	These groups are not applicable to the C Frame series circuit breakers
<b>Group 16: Handle Colour</b>	Code	Description	Comments
	B	Black handle, no marking	Toggle handle type only
	W	White handle, black marking	
<b>Group 17: Marking</b>	Code	Description	Comments
	A	Blank or no marking	
	D	1 - 0 and ON - OFF	
	H	1 - 0 and ON - OFF and A rating	
<b>Group 18: Mounting Orientation for Marking</b>	Code	Description	Comments
	V	Vertical (standard mounting, line @ top)	
<b>Group 19: Front Plate</b>	Code	Description	Comments
	B	No marking	
<b>Group 20:</b>	Code	Description	Comments
	-	Not applicable	This group is not applicable to the C Frame series of circuit breakers
<b>Group 21: Approvals (Product Normally Approved to)</b>	Code	Description	Comments
	1	CUR, UL recognised, UL 1077, CSA, IEC / EN 60934, VDE, CE	
	Z	No third party approvals	
<b>Group 22: Safety Marks</b>	Code	Description	Comments
	X	Not applicable	This group is not applicable to the C Frame series of circuit breakers

**For options not listed, please contact CBI**

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