

T Frame - Series Circuit Breakers



Approvals

The T Frame circuit breaker carries various approvals such as VDE , cURus, CSA and is CE certified. It is also recognised to UL 1077 and listed to UL 489.



Features

- AC and DC circuit breaker
- Hydraulic-magnetic technology
- 100% rating capability independent of ambient temperature
- Up to two poles
- VDE approved, CE certified
- UL compliant (listed / recognised)
- Ratings 0.1 to 30 A (specific certifications)
- Precision tripping characteristics
- Wide range of time delays
- Two colour handle indication (two tone flush rocker)

Applications

- AC and DC branch circuit installations
- Power conditioning
- Telecom power distribution
- Alternative energy equipment
- UPS equipment
- Lighting control
- Mobile power generation equipment

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Technical Data

Product Type	T Frame
Operating Temperature Range	-40 °C to +85 °C
Endurance	10000 operations - 1500 electrical at rated current and voltage (IEC 60934) 6000 electrical operations (UL 1077)
Dielectric Strength	1000 - 2000 V, 50 Hz for one minute after testing (IEC 60934)
Weight	90 g per pole (unpacked)
Humidity	35 to 85% relative
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	I2 - No ignition at 850 °C with an oxygen index of ≥ 32
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.

Product Type	Circuit Breaker	Circuit Breaker	Circuit Breaker	Circuit Breaker
Approvals	UL 489 / CSA	IEC / EN 60934, VDE, CE	UL 1077 / CSA	IEC / EN 60947-2, VDE, CE
Number of Poles	1, 2	1, 2	1, 2	1, 2
Maximum Voltages	120 / 240 V AC, 240 V AC, 80 V DC	240 V AC, 80 V DC	277 V AC, 80 V DC	240 V AC, 80 V DC
Current Ratings	0.1 - 30 A AC, 0.1 - 30 A DC	0.1 - 30 A AC, 0.1 - 30 A DC	0.1 - 30 A DC	0.1 - 30 A AC, 0.1 - 30 A DC
Interrupting Capacity	10 kA	3 kA (AC), 5 kA (DC)	2 kA (AC), 5 kA (DC)	5 kA

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Ordering Information

Group 1: Frame	Code	Description		Comments				
	T	T-Frame						
Group 2: Type	Code	Description		Comments				
	2	T-Frame, T-Type						
Group 3: Mounting	Code	Description		Comments				
	S	Front mount, rectangular aperture, flush rocker handle type		Warning; maximum penetration depth into the product by the mounting screw is 6 mm				
Group 4: Handle	Code	Description		Comments				
	H	Flush rocker handle for mounting version S, reduced handle version		Only 1 handle per unit				
	M	Flush rocker handle, two tone for mounting version S, reduced handle version		Only 1 handle per unit				
	W	No handle, blank front plate		For reduced handle version, on pole(s) without handle				
	Q	Flush rocker handle, push-to-reset handle, for mounting version S						
	R	Flush rocker handle, push-to-reset, two tone, for mounting version S						
Group 5: Termination	Code	Description		Comments				
	4X	Screw terminal, M5 or 10-32, top and bottom		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			
Group 7: Rated Voltages and Frequency - Main Circuit	Code	Description	Comments	Code	Description	Comments		
	J	240 V 50 / 60 Hz		R	277 / 480 V 50 / 60 Hz	3 phase multi-wire system		
	K	277 V 50 / 60 Hz		S	120 / 240 V 50 / 60 Hz	3 wire centre tap supply, 120 V per phase.		
	N	80V DC		Z	Special - specify			
	Q	240 / 415 V 50 / 60 Hz	3 phase multi-wire system					
Group 8: Time Delay Characteristics (Curves 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	CH	Short delay 50 / 60 Hz CS & high inrush	AC	12 - 15
	BD	Medium delay 50 / 60 Hz BS & dual rated	AC and DC	8 - 10	AS	Long delay 50 / 60 Hz	AC or DC	8 - 10
	CD	Short delay 50 / 60 Hz CS & dual rated	AC and DC	6 - 8	BS	Medium delay 50 / 60 Hz	AC or DC	8 - 10
	CS	Short delay 50 / 60 Hz	AC or DC	6 - 8	H3	Short delay	DC	6 - 8
	OP	Instantaneous trip 50 / 60 Hz	AC or DC	None	AH	Long delay 50 / 60 Hz AS & high inrush	AC	16 - 20
	ZZ	Special - specify			BH	Medium delay 50 / 60 Hz BS & high inrush	AC	16 - 20
Group 9: Rated Current (Main Circuit) Examples only - Specific A Rating Possible	Code	Description		Comments				
	XXXX	No current, for voltage trip poles		Specific A rating possible from 0.1 – 400 A				
	100M	100 mA						
	100	1 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)						
Group 11: Auxiliary and Alarm Switches	Code	Description		Comments				
	X	Not applicable		No auxiliary switch – flat base plate				
Group 12: Voltage and Current Ratings for Dual Control, Shunt and Relay Trip Construction	Code	Description		Comments				
	XX	Not applicable						
Group 13: Terminal Options for Dual Control, Shunt and Relay Coils	Code	Description		Comments				
	X	Not applicable						
Group 14: Voltage for Rocker Handle	Code	Description		Comments				
	X	Not applicable						
Group 15: Terminal for Illuminated Rocker	Code	Description		Comments				
	X	Not applicable						

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Code	Description	Comments
Group 16: Handle Colour		
X	No handle	
B	Black handle, white marking	
G	Green handle, white marking	
W	White handle, black marking	
R	Red handle, white marking	
Y	Yellow handle, black marking	
Group 17: Marking		
X	No handle (n/a)	
H	I – O and ON - OFF and ampere rating	
I	Push-to-reset and ampere rating	Group 2 option S only, Group 3 options Q or R only. Flush rocker or two tone rocker handle.
Group 18: Mounting Orientation for Marking		
X	No handle (n/a)	H Horizontal (line at the left)
2	Horizontal (line at the right)	V Vertical (standard mounting, line at the top)
Group 19: Front Plate Marking and Test Button		
2	No marking, with test button, rocker handle	Test button for mechanical trip
B	No marking, rocker handle	
Group 20: Inter-phase Barrier and Terminal Cover		
X	Not applicable	
Group 21: Approvals (Product Normally Approved to)		
1	CUR, UL recognised UL 1077, IEC / EN 60934, CSA, VDE, CE	UL 1077, normally IEC / EN 60934
2	CUL, UL listed UL 489, CSA, IEC / EN 60947-2, VDE, CE	UL 489, normally IEC / EN 60947-2
Z	No third party approvals	
Group 22: Safety Marks		
X	Not applicable	

For options not listed, please contact CBI

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