T-Frame - Series Circuit Breakers

The T-Frame is a compact, low profile circuit breaker. It is available in single and double pole configurations and its low profile design makes it ideal for power distribution applications. The T-Frame has the rocker handle configuration and is available in both AC and DC.

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 Listed
- Ratings 0.1 A 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

Approvals

The T-Frame circuit breaker carries various approvals such as DIN/EN 60947-2, GB14048.2, VDE, cURus and is CE certified. It is also recognised and listed to UL489.

(UL489) (DIN / EN 60947-2) (GB 14048.2) (IEC 60947-2)

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

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Technical Data

Product Type	T-Frame
Ambient Operating Temperature	-40°C to +85°C
Mounting Options	Front mounting, rectangular aperture and flush rocker handle type
Endurance	10000 operations; 1500 with current, 8500 without current (IEC60947-2 Clause 7.2.4.2)* 10000 operations; 6000 with current, 4000 without current (UL489 Clause 7.1.5)*
Dielectric Strength	1000 - 2000 Vac for one minute (IEC60947-2 Clause 8.3.3.3)* 1000 Vac plus twice the rated voltage for one minute (UL489 Clause 7.1.9)*
Rated Impulse Withstand Voltage	4 kV (IEC60947-2 Clause 8.3.3.2)*
Weight	90 g per pole (unpacked)
Altitude	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
Flammability	I3 - Ignition does not persist at 850°C after glow wire is withdrawn with an oxygen index of ≥ 28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.

Product Type	Circuit Breaker	Circuit Breaker
Approvals	UL489	
Number of Poles	1	2
Maximum Voltages	240 Vac, 80 Vdc	
Current Ratings	0.1 - 30 A	0.1 - 30 A
AIC	10 kA	

Product Type	Circuit Breaker	Circuit Breaker
Approvals	IEC 60947-2, GB/T14048.2, CE, UKCA	
Number of Poles	1	2
Maximum Voltages	240 Vac, 80 Vdc	
Current Ratings	0.1 - 30 A	0.1 - 30 A
Icu	5 kA	

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

Torque Table

Description	Size	Torque Value
Front Inserts	M3	0.5 - 0.8 N.m
	6 - 32	5 - 7 lbf.in
Rear Screw	M5	1.7 - 2.3 N.m
	10 - 32	15 - 20 lbf.in
Quick Connect	M3	0.8 - 1.0 N.m

Ordering Information

	Code	Description	Comments
Group 1: Frame	T	T-Frame	
Group 2: Type	Code	Description	Comments
	2	Standard	
Group 3: Mounting	Code	Description	Comments
	M	Front mount, rectangular aperture, 44 mm space between fron inserts	Maximum penetration depth into the mounting screw is 5.4 mm, 0.21 inch
	S	Front mount, rectangular aperture, 42.2 mm space between fron inserts	Maximum penetration depth into the mounting screw is 5.4mm, 0.21 inch Similar to DD Frame
Group 4: Handle Type or Blank for Multipoles	Code	Description	Comments
	H	Flush Rocker Handle, One Colour	
	M	Flush Rocker Handle - Two Tone	
	Q	Flush rocker handle, Push to Reset; Use Test button to switch OFF. One Colour	PTR HANDLE - Select Test button in Group 19 Code 2
	R	Flush rocker handle, Push to Reset- Two Tone; Use Test button to switch OFF.	PTR HDL TT - Select Test button in Group 19 Code 2
	W	Blank Front Plate (no handle)	
Group 5: Termination	Code	Description	Comments
	4X	M5 or 10 - 32 screw terminals	30 A Max
	5X	Double Quick Connect Terminal (0.8 mm x 6.35 mm)	20 A Maximum @ Vac, 2 poles

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Ordering Information Continues

Group 6: Number of Poles	**Code**	**Description**			**Comments**
	1	Single pole - METRIC			
	2	Double pole - METRIC			
	A	Single pole - IMPERIAL			
	B	Double pole - IMPERIAL			
Group 7: Rated Voltages and Frequency - Main Circuit	**Code**	**Description**			**Comments**
	J	240 Vac (applicable to listed single pole products)			Single pole products
	N	80V DC			Single and double pole products
	S	240 Vac (applicable to double pole products)			Double pole products
Group 8: Time Delay Characteristics (Curves Details); Pulse Tolerance at 10 ms	**Code**	**Description**	**System**	**Pulse Tolerance (X In)**	**Comments**
	AD	Long delay 50 / 60 Hz AS & dual rated	AC and DC	8 - 10	
	BD	Medium delay 50 / 60 Hz BS & dual rated	AC and DC	8 - 10	
	CD	Short delay 50 / 60 Hz CS & dual rated	AC and DC	6 - 8	
	AH	Long delay 50 / 60 Hz AS & high inrush	AC	16 - 20	
	BH	Medium delay 50 / 60 Hz BS & high inrush	AC	16 - 20	
	CH	Short delay 50 / 60 Hz CS & high inrush	AC	12 - 15	
	AS	Long delay 50 / 60 Hz	AC or DC	8 - 10	
	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	
Group 9: Rated Current (Main Circuit) Examples only - Specific A Rating Possible	**Code**	**Description**			**Comments**
	100M	100 mA			Specific A rating possible from 0.1 A – 30 A
	0100	1 A			
	3000	30 A			
Group 10: Circuit Configuration (Circuit Breaker's Internal Construction)	**Code**	**Description**			**Comments**
	BX	Circuit breaker (series trip, 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: Future use	**Code**	**Description**			**Comments**
	X	Not applicable			
Group 15: Customer Specific	**Code**	**Description**			**Comments**
	=	Customer identification (A-Z)			To be allocated.
	X	Not applicable			
Group 16: Handle Colour	**Code**	**Description**			**Comments**
	B	BLACK HANDLE, WHITE MARKING.			Black Colour Not available on the Two Tone Flush Rocker
	G	GREEN HANDLE, WHITE MARKING (Used with Code H or Q on group 4) OR BLACK HANDLE, GREEN INDICATOR AND MARKING (Used with Code M or R ON group 4 - Two Tone)			Refer to Group 4
	R	RED HANDLE, WHITE MARKING (Used with Code H or Q on group 4) OR BLACK HANDLE, RED INDICATOR AND MARKING (Used with Code M or R ON group 4 - Two Tone)			Refer to Group 4
	W	WHITE HANDLE, BLACK MARKING (Used with Code H or Q on group 4) OR BLACK HANDLE, WHITE INDICATOR AND MARKING (Used with Code M or R ON group 4 - Two Tone)			Refer to Group 4
	X	Not applicable			
	Y	YELLOW HANDLE, WHITE MARKING (Used with Code H or Q on group 4) OR BLACK HANDLE, YELLOW INDICATOR AND MARKING (Used with Code M or R ON group 4 - Two Tone)			Refer to Group 4
Group 17: Handle Markings	**Code**	**Description**			**Comments**
	H	I - O / ON - OFF and AMP RATING			
	I	ON - I marked on Functional handle ,PUSH TO RESET and AMP RATING marked on non-functional handle			
	J	ON - I marked on functional handle,OFF - O and AMP RATING marked on non-functional handle. Special agreement between manufacture and customer.			
	X	Not applicable			

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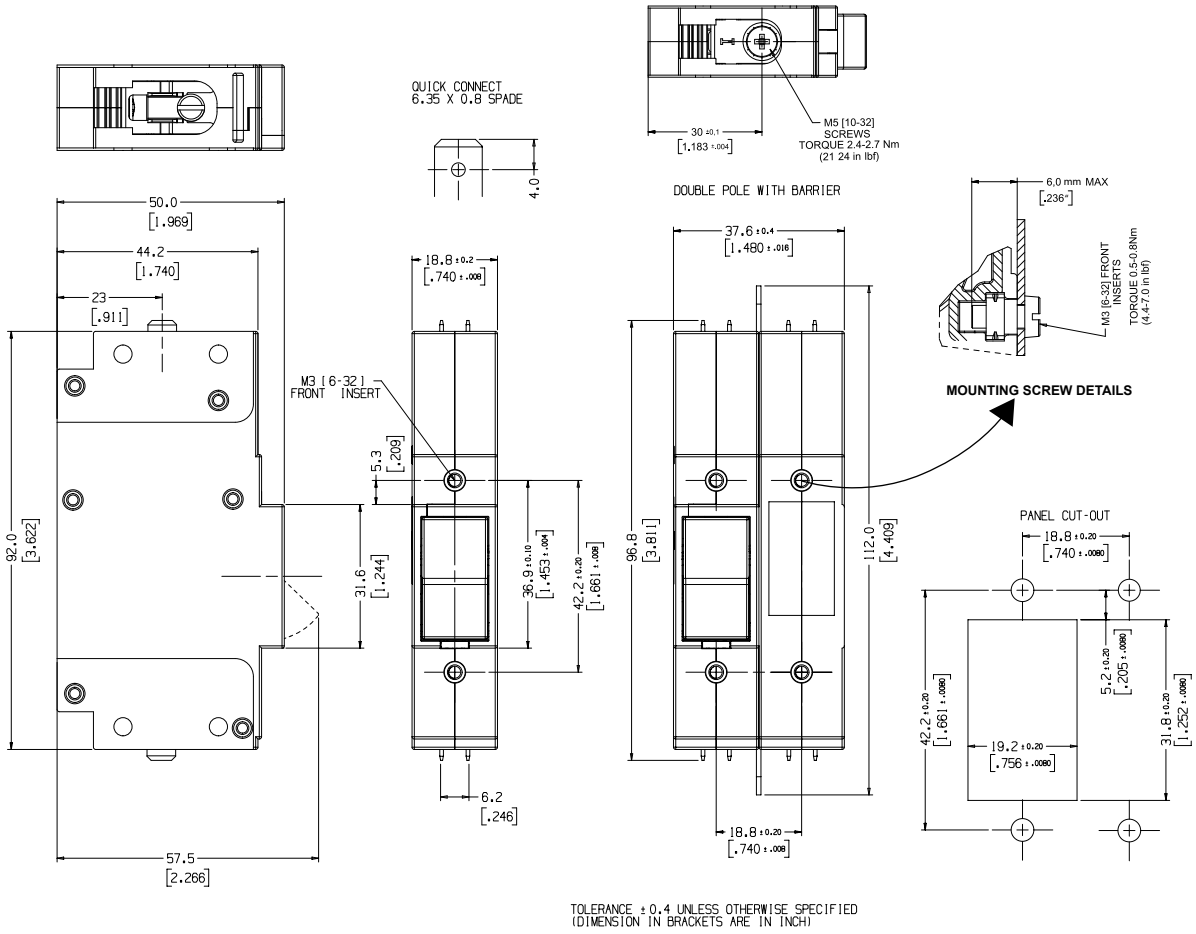
Ordering Information Continues

	Code	Description	Comments
Group 18: Mounting Orientation for Marking	1	Breaker mounted in Vertical Axis with LINE at the BOTTOM, Marking reads left to right - normal horizontal	
	2	Breaker mounted in Horizontal Axis with LINE at the RIGHT HAND SIDE, Marking reads left to right - normal horizontal	
	H	Breaker mounted in Horizontal Axis with LINE at the LEFT HAND SIDE, Marking reads left to right - normal horizontal	
	V	Breaker mounted in Vertical Axis with LINE at the TOP, Marking reads left to right - normal horizontal	
	X	Not applicable	
Group 19: Front Plate Marking and Test Button	**Code**	**Description**	**Comments**
	2	Black Front Plate, No Marking, Rocker Handle, Test Button	Applicable to Rocker handle, Use with Group 4, Codes H, M, Q and R
	B	Black Front Plate NO Marking	
Group 20: Inter-phase Barrier and Terminal Cover	**Code**	**Description**	**Comments**
	E	Inter-Phase Barrier-Z Type	Interphase barrier to be used with the Double Quick Connect Terminal
	X	Not applicable	
Group 21: Approvals (Product Normally Approved to)	**Code**	**Description**	**Comments**
	1	UL recognised UL1077, CUR, IEC/EN60934, CE, UKCA	Verify Certification on physical certificates - attached
	2	UL listed UL489, CUL, IEC/EN60947-2, CE, UKCA	UL489, IEC60947-2@240/415V. Verify Certification on physical certificates - attached
	Z	No approvals	
Group 22: Safety Marks	**Code**	**Description**	**Comments**
	C	CCC (GB14048.2)	GB14048.2
	X	Not applicable	

For options not listed, please contact CBI

T Frame 42.2mm space between front insets



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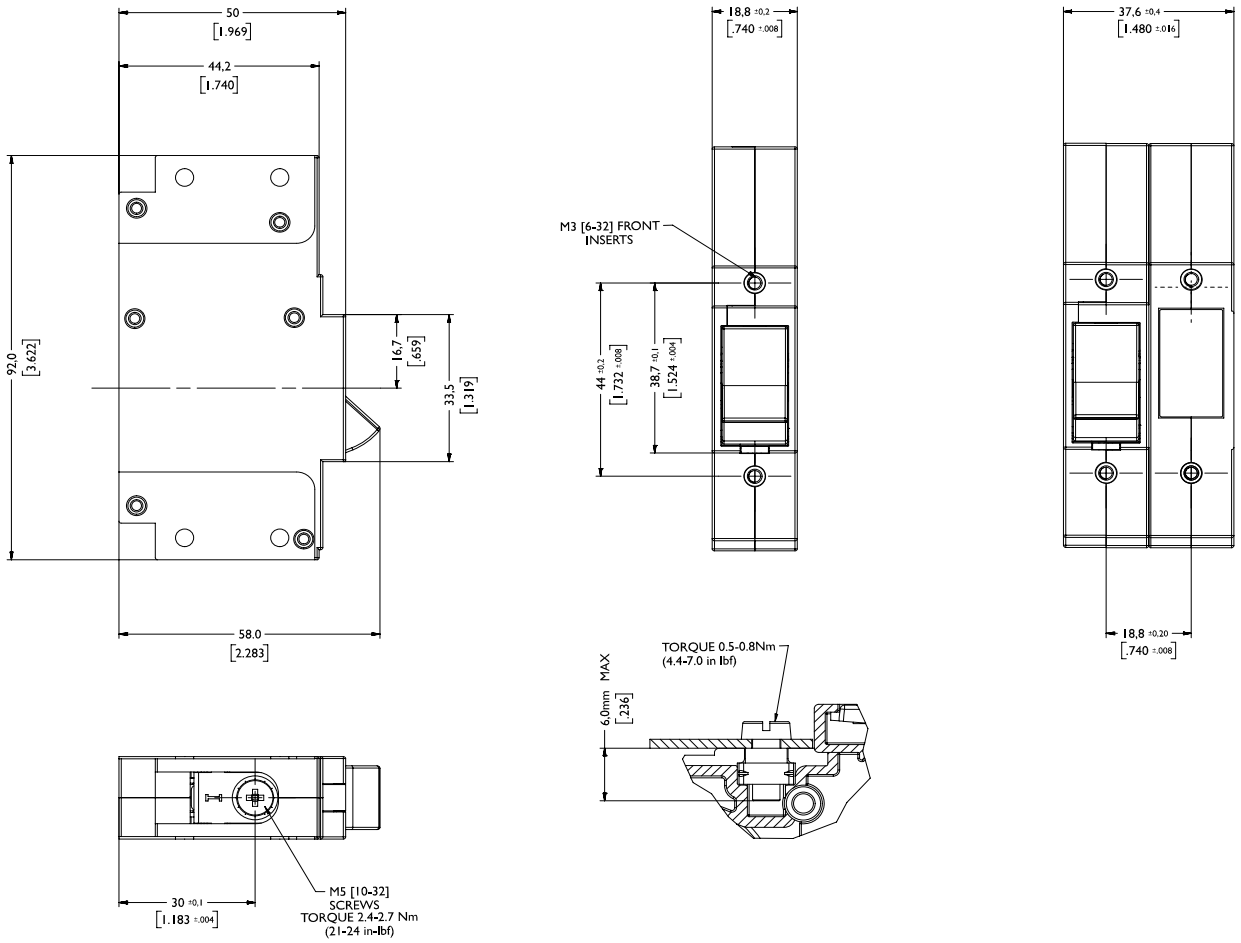
T-Frame: Outline Dimensions

T Frame 44 mm space between front insets



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