



B-Frame Series Circuit Breakers

Features

- Hydraulic-Magnetic Technology
- 100% Rating Capability Independent of Ambient Temperature
- Up to Two Poles
- UL, VDE, CE and CCC approved
- UL 1500 Compliant
- Ratings up to 30A
- Optional Auxiliary Switch
- Wide Range of Circuits, Mountings, Terminations and Time Delays
- Optional Illuminated Rocker Handle
- Precision Tripping

Applications

- Lighting Equipment
- Power Supplies
- Small Generators and Motors
- Entertainment Systems
- Vending Machines
- Suitable for Motor Starting
- Office Equipment
- Telecom Power Distribution
- Railway Signalling Systems
- Marine Power Systems
- Power Distribution Units (PDU)



Technical Data

Product Type	Circuit Breaker	Circuit Breaker	Switch
Approvals	UL 1077 / CSA, UL 1500, IEC / EN 60934, CCC, CE	UL 489A, IEC / EN 60934	UL 508
Number of Poles	1, 2	1	2
Maximum Voltages	240VAC, 65VDC	80VDC	300VDC
Current Ratings	0.1 - 30A (AC), 0.1 - 25A (DC) (For lower ratings please contact factory)	0.1 - 30A	10A
Interrupting Capacity	1kA @ 240VAC 0.5kA @65VDC	0.6kA @ 80VDC	-
Operating Temp. Range	-40°C to +85°C		

Time Delay Data (Standard Delays)

Curve Code	Limits	% Rated Current Trip Time in Seconds						
		125%	150%	200%	300%	400%	600%	1200%
AS	Min - Max	90 - 1200	32 - 400	12 - 100	3.5 - 37	0.6 - 17	0.008 - 5.6	<0.06
BS	Min - Max	15 - 300	7.3 - 90	2.6 - 30	0.47 - 8	0.06 - 3.2	0.006 - 0.7	<0.06
CS	Min - Max	1.3 - 40	0.65 - 7	0.28 - 2.5	0.09 - 0.8	0.04 - 0.49	0.006 - 0.28	<0.06
OP	Max	0.1	0.06	0.04	<0.04	<0.04	<0.04	<0.04

B-Frame Series Circuit Breakers

Long Code

Example Code: BDG2PA-B0KXBS-1500X-12

	Code		Description		Code		Description	
	Group 1: Frame and Handle	BA		Black body, Square handle		BP		Grey body, Square handle
BB			Black body, Paddle handle		BQ		Grey body, Paddle handle	
BC			Black body, Baton handle		BR		Grey body, Baton handle	
BD			Black body, Rocker handle		BS		Grey body, Rocker handle	
BE			Black body, Illuminated Rocker handle		BT		Grey body, Illuminated Rocker handle	
BF			Black body, Push-to-Reset handle		BV		Grey body, Push-to-Reset handle	
BG			Black body, Push-Pull handle		BW		Grey body, Push-Pull handle	
Group 2: Mounting	Code		Description		Code		Description	
	A		Metric (M12)				Thread neck. Rocker handle is not an option.	
	C		Imperial (1/2" - 3/2)				Thread neck. Rocker handle is not an option.	
	G		Snap-in vertical mounting (without rocker guard)				Rocker & Illuminated Rocker handle only.	
	H		Snap-in vertical mounting (with rocker guard)				Rocker & Illuminated Rocker handle only.	
	M		Snap-in horizontal mounting (without rocker guard)				Rocker & Illuminated Rocker handle only.	
	N		Snap-in horizontal mounting (with rocker guard)				Rocker & Illuminated Rocker handle only.	
	P		PCB mounting				M12 thread neck only, 1 pole only.	
	R		Clip-in mounting				Thread neck. Only option for double pole push-to-reset and push-pull handles. Rocker handle is not an option. Rocker handle is not an option.	
Group 3: Number of Poles and Termination	Code		Description		Code		Description	
	1		Single pole unit, quick connect		B		Double pole unit, 90° bent quick connect terminal	
	2		Double pole unit, quick connect		C		Single pole unit, screw terminal (M4 / 8-32)	
	3		Single pole unit, 45° bent screw terminal (M4 / 8-32)		D		Double pole unit, screw terminal (M4 / 8-32)	
	4		Double pole unit, 45° bent screw terminal (M4 / 8-32)		H		Single pole unit, rear flush screw terminal	
	5		Single pole unit, clamp terminal		J		Single pole unit, plug-in terminal	
	6		Double pole unit, clamp terminal		Z		Special - specify	
	A		Single pole unit, 90° bent quick connect terminal					
Group 4: Voltage	Code		Description		Code		Description	
	E		65V DC					
	F		80V DC				Only for UL 489A version.	
	M		65V DC / 240V AC					
	P		240V AC					
	S		300V DC				Only for UL 489A version. See figure. 1	
	T		300V DC				Only for UL 489A version. See figure. 2	
Z		Special - specify						
Group 5: Frequency	Code		Description		Code		Description	
	A		AC				Group 4 option P only.	
	D		DC				Group 4 options E, F, S & T only.	
Group 6: Circuit	Code		Description		Code		Description	
	A		Switch				May be used with auxiliary.	
	B		Series trip				May be used with auxiliary.	
	C		Relay trip (current sensing)				Auxiliary not an option.	
	D		Relay trip (voltage sensing)				Auxiliary not an option.	
	E		Shunt tap (current sensing)				Auxiliary not an option.	
	F		Shunt tap (voltage sensing)				Auxiliary not an option.	
G		1 X switch + 1 X series trip				May be used with auxiliary.		
Group 7: Auxiliary Switch(es)	Code		Description		Code		Description	
	0		Not applicable				Only option with rear flush screw terminal.	
	1		1 X change-over (3A - 125V AC, 3A - 24V DC)				Silver contacts.	
	2		2 X change-over (3A - 125V AC, 3A - 24V DC)				Silver contacts. Double pole units only.	
	3		1 X change-over (0.1A - 125V AC, 0.1A - 30V DC)				Gold contacts.	
	4		2 X change-over (0.1A - 125V AC, 0.1A - 30V DC)				Gold contacts. Double pole units only.	
X		Not applicable						
Group 8: Handle, Indicator Colour and Marking	Code		Description		Code		Description	
	A		Green (I-O & ON-OFF)	J		Orange (I-O)	S	Yellow (ON-OFF)
	B		Green (I-O)	K		White (I-O & ON-OFF)	T	Red (ON-OFF)
	C		White (I-O)	L		Black (I-O & ON-OFF)	U	Orange (ON-OFF)
	D		Black (I-O)	M		Green (ON-OFF)	Y	Red (I-O & ON-OFF)
	E		Blue (I-O)	N		White (ON-OFF)	1	Green (No marking)
	F		Grey (I-O)	P		Black (ON-OFF)	2	White (No marking)
	G		Yellow (I-O)	Q		Blue (ON-OFF)	3	Black (No marking)
	H		Red (I-O)	R		Grey (ON-OFF)	4	Blue (No marking)
Group 9: Voltages for Illuminated Rocker Units	Code		Description		Code		Description	
	1		100 - 125V AC Lead connections		B		200 - 240V AC Quick connect terminals	
	2		200 - 240V AC Lead connections		C		4 - 16V DC Quick connect terminals	
	3		4 - 16V DC Lead connections		D		17 - 32V DC Quick connect terminals	
	4		17 - 32V DC Lead connections		E		33 - 48V DC Quick connect terminals	
	5		33 - 48V DC Lead connections		X		Not applicable	
	A		100 - 125V AC Quick connect terminals		Z		Special - specify	
NOTE: All voltages require the use of an external resistor								
Group 10: Time Delay and Instantaneous Trip Point	Code		Description		Code		Description	
	AS		Long delay	AC or DC	6 - 8	CI	CS & inertia delay	AC or DC
	AI		AS & inertia delay	AC or DC	11 - 12	CD	CS & Dual rated	AC and DC
	AD		AS & Dual rated	AC and DC	6 - 8	CW	CD & inertia delay	AC and DC
	AW		AD & inertia delay	AC and DC	11 - 12	OP	Instantaneous trip	AC or DC
	BS		Medium delay	AC or DC	6 - 8	OPD	Instantaneous trip	AC and DC
	BI		BS & inertia delay	AC or DC	11 - 12	OX	Switch	AC or DC
	BD		BS & Dual rated	AC and DC	6 - 8	XX	Not applicable	
	BW		BD & inertia delay	AC and DC	11 - 12	ZZ	Special - specify	
	CS		Short delay	AC or DC	6 - 8			

B-Frame Series Circuit Breakers

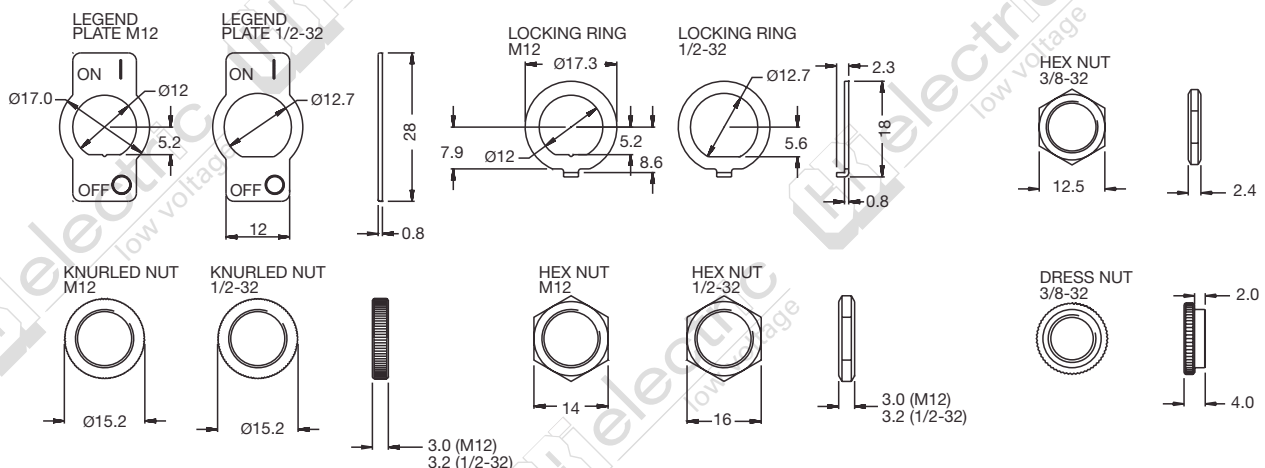
Long Code

Group 11: Main Circuit Current Ratings	Code	Description	Comments	
	020M	20mA	Examples only. Any ampere rating possible from 0.02 - 30A.	
	0500	5A		
	1000	10A		
	1250	12.5A		
	3000	30A		
Group 12: Relay Trip Coils	Code	Description	Code	Description
	A024	24VAC/ DC Voltage Coil	K005	5A Current Coil
	A065	65VAC Voltage Coil	K015	15A Current Coil
	A100	100VAC Voltage Coil	K025	25A Current Coil
	A110	110 - 125VAC Voltage Coil	M020	20mA Current Coil
	A220	220 - 240VAC Voltage Coil	M100	100mA Current Coil
	D012	12VDC Voltage Coil	X	Not Applicable
	D024	24VDC Voltage Coil	Z	Special - Specify
Group 13: Approvals/ Marks	Code	Description	Comments	
	1	UL 1077, CSA, VDE	IEC / EN 60934	
	2	No Approvals		
	3	UL 489A		
Group 14: Safety Marks	Code	Description	Comments	
	1	CCC/CRCC	Required for products exported to Peoples Republic of China.	
	2	No Safety mark		

For options not listed, please contact CBI for assistance

Mounting Accessories

Mounting hardware must be ordered separately. Legend plates available for M12 and 1.2" only.

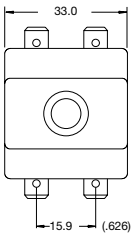
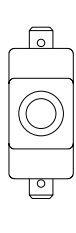
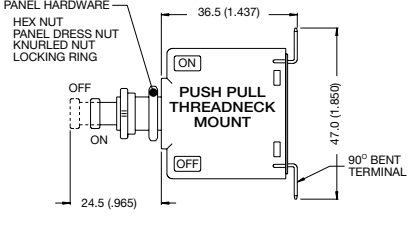
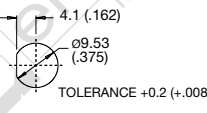
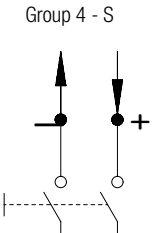
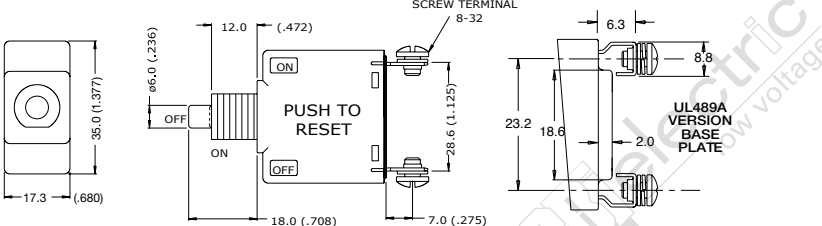
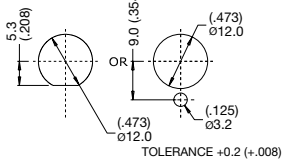
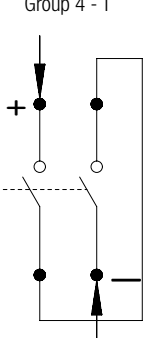
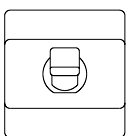

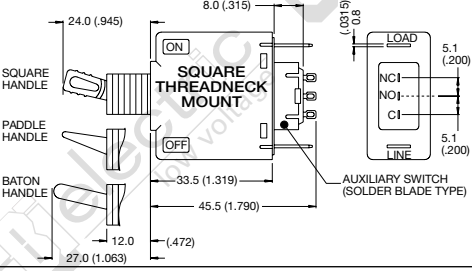
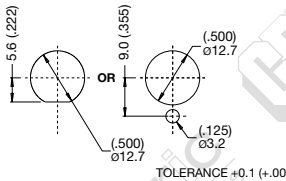
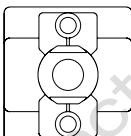
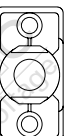
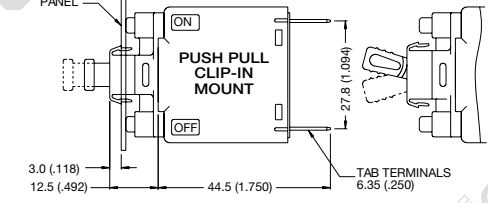
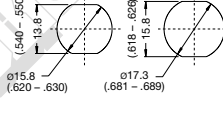
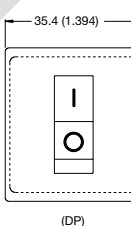
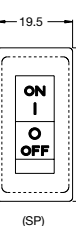
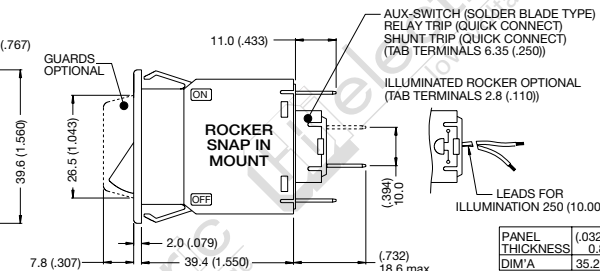
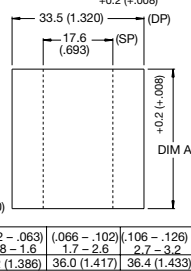
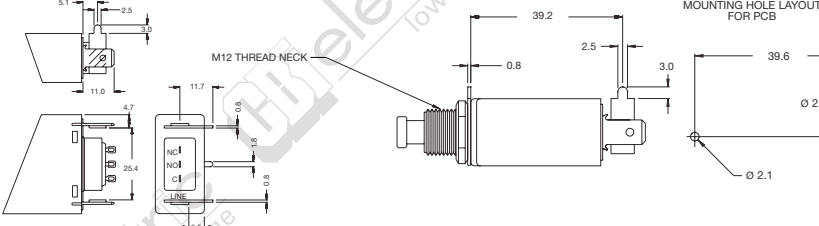
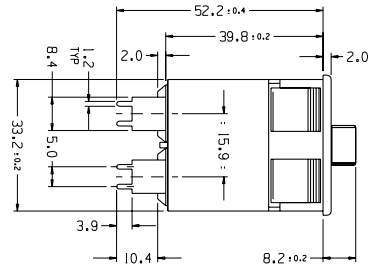


Mounting Kit Ordering Information

Reference	A	B	C	D	E	F	G	H	I	J	K
Mounting Kit Description	2 x Hex Nuts	2 x Hex Nuts 1 x Vertical Legend Plate	2 x Hex Nuts 1 x Horizontal Legend Plate	2 x Hex Nuts 1 x Vertical Legend Plate 1 x Locking Ring	2 x Hex Nuts 1 x Horizontal Legend Plate 1 x Locking Ring	1 x Hex Nut 1 x Knurled Nut 1 x Vertical Legend Plate	1 x Hex Nut 1 x Knurled Nut 1 x Horizontal Legend Plate	1 x Hex Nut 1 x Knurled Nut 1 x Vertical Legend Plate 1 x Locking Ring	1 x Hex Nut 1 x Knurled Nut 1 x Horizontal Legend Plate 1 x Locking Ring	1 x Hex Nut 1 x Dress Nut	1 x Hex Nut 1 x Knurled Nut

Reference	M12 Order Number	1/2" - 32 Order Number	3/8" - 32 Order Number
A	3670031	3670041	3670129
B	3670032	3670042	-
C	3670033	3670043	-
D	3670034	3670044	-
E	3670035	3670045	-
F	3670036	3670046	-
G	3670037	3670047	-
H	3670038	3670048	-
I	3670039	3670049	-
J	-	-	3670130
K	3670338	3670337	-

B-Frame Series Circuit Breakers

Double Pole	Single Pole	Dimensions	Panel cut-out details	300V DC Circuit diagrams												
		 <p>PANEL HARDWARE HEX NUT PANEL DRESS NUT KNURLED NUT LOCKING RING</p> <p>PUSH PULL THREADNECK MOUNT</p> <p>90° BENT TERMINAL</p>	<p>AVAILABLE WITH PUSH PULL AND PUSH TO RESET CONFIGURATIONS ONLY</p> <p>MOUNTING DETAILS FOR 3/8-32 THREAD TYPE</p>  <p>4.1 (162) Ø9.53 (375) TOLERANCE +0.2 (+.008)</p>	<p>Group 4 - S</p> 												
<p>Dimensions</p>  <p>SCREW TERMINAL 8-32</p> <p>PUSH TO RESET</p> <p>UL489A VERSION BASE PLATE</p>			<p>Panel cut-out details</p> <p>MOUNTING DETAILS FOR M12 THREAD TYPE</p>  <p>5.3 (208) 9.0 (354) Ø12.0 (473) Ø12.0 (473) Ø3.2 (125) TOLERANCE +0.2 (+.008)</p>	<p>Figure.1</p> <p>Group 4 - T</p>  <p>Figure. 2</p>												
		<p>Dimensions</p>  <p>SQUARE HANDLE</p> <p>PADDLE HANDLE</p> <p>BATON HANDLE</p> <p>SQUARE THREADNECK MOUNT</p> <p>AUXILIARY SWITCH (SOLDER BLADE TYPE)</p>	<p>Panel cut-out details</p> <p>MOUNTING DETAILS FOR 1/2-32 THREAD TYPE</p>  <p>5.6 (222) 9.0 (355) Ø12.7 (500) Ø12.7 (500) Ø3.2 (125) TOLERANCE +0.1 (+.004)</p>													
		<p>Dimensions</p>  <p>PANEL</p> <p>PUSH PULL CLIP-IN MOUNT</p> <p>TAB TERMINALS 6.35 (250)</p>	<p>Panel cut-out details</p> <p>CLIP-IN PUSH PULL AND PUSH TO RESET HANDLES</p> <p>CLIP-IN SQUARE, PADDLE AND BATON HANDLES</p>  <p>5.40 - .553 (13.8) 6.18 - .628 (15.8) Ø15.8 (620 - .630) Ø17.3 (681 - .689) PANEL THICKNESS 0.8 - 3.2 (.032 - .126)</p>													
		<p>Dimensions</p>  <p>GUARDS OPTIONAL</p> <p>ROCKER SNAP IN MOUNT</p> <p>AUX-SWITCH (SOLDER BLADE TYPE) RELAY TRIP (QUICK CONNECT) SHUNT TRIP (QUICK CONNECT) TAB TERMINALS 6.35 (250)</p> <p>ILLUMINATED ROCKER OPTIONAL (TAB TERMINALS 2.8 (110))</p> <p>LEADS FOR ILLUMINATION 250 (10.00)</p>	<p>Panel cut-out details</p>  <p>33.5 (1.320) (DP) 17.6 (693) (SP) +0.2 (+.008) DIM A</p> <table border="1"> <tr> <td>PANEL THICKNESS</td> <td>(.032 - .063)</td> <td>(.066 - .102)</td> <td>(.106 - .126)</td> </tr> <tr> <td>DIM A</td> <td>0.8 - 1.6</td> <td>1.7 - 2.6</td> <td>2.7 - 3.2</td> </tr> <tr> <td></td> <td>35.2 (1.386)</td> <td>36.0 (1.417)</td> <td>36.4 (1.433)</td> </tr> </table>	PANEL THICKNESS	(.032 - .063)	(.066 - .102)	(.106 - .126)	DIM A	0.8 - 1.6	1.7 - 2.6	2.7 - 3.2		35.2 (1.386)	36.0 (1.417)	36.4 (1.433)	
PANEL THICKNESS	(.032 - .063)	(.066 - .102)	(.106 - .126)													
DIM A	0.8 - 1.6	1.7 - 2.6	2.7 - 3.2													
	35.2 (1.386)	36.0 (1.417)	36.4 (1.433)													
<p>PCB Mount Standard</p>  <p>M12 THREAD NECK</p> <p>MOUNTING HOLE LAYOUT FOR PCB</p>			<p>PCB Mount (Special - Specify)</p> 													

AUSTRALIA

CBI-electric: Australia
90 Fairbank Road Clayton South
Melbourne Victoria 3169 Australia
Tel: + 61 39590 3500
Fax: +61 3 9551 1051
Email: headoffice@cbi-electric.com.au
Website: www.cbi-electric.com.au

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
Website: www.cbi-electric.com

USA

CBI-electric: North America
35E Uwchlan Ave Suite 328
Exton PA 19341 USA
Tel: +91 610 524 9949
Fax: +91 610 524 9945
E-mail: info@cibreakers.com
Website: www.cbi-electric.com