

## B-Frame Series Circuit Breakers



## Features

- UL 489A and ULI077 Approvals
- CSA and VDE Approved
- Wide Range of Standard Time Delays, Operating Currents and Circuit Configurations Available
- Wide Range of Mounting and Terminations Available
- Hydraulic-Magnetic Technology
- 100% Rating Capability, Independent of Ambient Temperature

## Applications

- Lighting Equipment
- Power Supplies
- Small Generators and Motors
- Entertainment Systems
- Vending Machines
- Office Equipment
- Telecom Power Distribution
- Railway Signaling Systems
- Marine Power Systems
- PDU Units

## Technical Data

Product Type	Circuit Breaker	Circuit Breaker	Circuit Breaker
Approvals	cUR <sub>ss</sub> (ULI077/CSA)	VDE (EN 60934)	UL489A/VDE (EN60934)
Number of Poles	1, 2	1, 2	1
Maximum Voltage	240V AC/65V DC	240V AC/65V DC	80V DC
Current Rating	0.02A to 30A (25A DC)	0.02A to 30A (25A DC)	0.1 to 30A
Interrupting capacity	500A at 65V DC 1kA at 240V AC	500A at 65V DC 1kA at 240V AC	600A at 80V DC
Operating Temperature Range	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C

## Time Delay Data

Std. Curve Codes	Limits	Percentage of Rated Current Trip Time in Seconds									
		125%	150%	200%	300%	400%	500%	600%	800%	1000%	1200%
AS	Min (s)	90	32	12	3.5	0.6	0.012	0.008	0.0064	0.005	0.0044
	Max (s)	1200	400	100	37	17	10	5.6	0.2	0.058	0.038
BS	Min (s)	15	7.3	2.6	0.47	0.06	0.012	0.006	0.0042	0.0037	0.0036
	Max (s)	300	90	30	8	3.2	1.4	0.7	0.08	0.05	0.04
CS	Min (s)	1.3	0.65	0.28	0.09	0.04	0.015	0.006	0.0043	0.004	0.004
	Max (s)	40	7	2.5	0.8	0.49	0.36	0.28	0.075	0.048	0.03

## B-Frame Series Circuit Breakers

## Long Code

Group	Code	Description	Comments
<b>Group 1: Frame and Handle</b>	BA	Black Body, Square Handle	
	BB	Black Body, Paddle Handle	
	BC	Black Body, Baton Handle	
	BD	Black Body, Rocker Handle	
	BE	Black Body, Illum. Rocker Handle	
	BF	Black Body, Push-to Reset Handle	
	BG	Black Body, Push-Pull Handle	
<b>Group 2: Mounting</b>	Code	Description	Comments
	A	Metric (M12)	
	C	Imperial (1/2" - 32)	
	G	Snap-in Vertical Mounting (Without Rocker Guard)	
	H	Snap-in Vertical Mounting (With Rocker Guard)	
	M	Snap-in Horizontal Mounting (Without Rocker Guard)	
	N	Snap-in Horizontal Mounting (With Rocker Guard)	
	Q	3/8" - 32 Threadneck	Only option for Double Pole Push-to Reset and Push-Pull Handles
	R	Clip-in Mounting	
<b>Group 3: No. of Poles</b>	Code	Description	Comments
	1	Single Pole Unit, Quick Connect	25A Max. VDE; 30A UL
	2	Double Pole Unit, Quick Connect	25A Max. VDE; 30A UL
	A	Single Pole Unit, 90° Bent Terminal QC	25A Max. VDE; 30A UL
	B	Double Pole Unit, 90° Bent Terminal QC	25A Max. VDE; 30A UL
	C	Single Pole Unit, Screw Terminal - M4/8-32	30A Max.
	D	Double Pole Unit, Screw Terminal - M4/8-32	30A Max.
	H	S/Pole Rear Flush Screw	Only for UL489A; 30 Max.
	I	D/Pole Rear Flush Screw	Only for UL489A; 30 Max.
	Z	Special specify	
<b>Group 4: Voltage</b>	Code	Description	Comments
	E	65VDC	
	F	80VDC	Only for UL489A
	M	65VDC / 240VAC	
	P	240V	
	X	120VDC / 240VAC	
	Z	Special specify	
<b>Group 5: Frequencies</b>	Code	Description	Note
	A	AC	
	D	DC	
	M	AC / DC	
<b>Group 6: Circuit</b>	Code	Description	Comments
	A	Switch	May be used with Auxiliary
	B	Series Trip	May be used with Auxiliary
	C	Relay Trip (Current Sensing)	
	D	Relay Trip (Voltage Sensing)	
	E	Shunt Tap (Current Sensing)	
	F	Shunt Tap (Voltage Sensing)	
<b>Group 7: Auxiliary Switch(es)</b>	Code	Description	Comments
	0	Not applicable	Only option with rear flush screw terminal
	1	1 x Change-Over (3A 125V AC)	Silver Contact
	2	2 x Change-Over (3A 125V AC)	Silver Contact, Double Pole Units Only
	3	1 x Change-Over (0.1A 125VAC)	Gold Contact
<b>Group 8: Handle, Indicator Colour and Marking</b>	Code	Description	Comments
	2	White (No Marking)	
	3	Black (No Marking)	
	K	White (I/O and On/Off)	
	L	Black (I - O and On/Off)	
	X	Not Applicable	
<b>Group 9: Voltages for Illuminated Rocker Units</b>	Code	Description	Comments
	Z	Special - Specify	
	1	100 - 125V AC Lead Connections	
	2	200 - 240V AC Lead Connections	
	3	4 - 16V DC Lead Connections	
	4	16 - 24V DC Lead Connections	
	5	24 - 32V DC Lead Connections	
	6	32 - 48V DC Lead Connections	
	A	100 - 125V AC QC Term	
	B	200 - 240V AC QC Term	
	C	8 - 16V DC QC Term	
	D	16 - 24V DC QC Term	
	E	24 - 32V DC QC Term	
F	32 - 50V DC QC Term		
X	Not applicable		
Z	Special - Specify		

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### Long Code

#### Group 10: Time Delay and Instantaneous Trip Point

Code	Description	System	Pulse Tolerance	Comments
AD	Long Time Delay (Dual Rated)	AC and DC	8 x In	
AI	AS + Inertia Delay	AC or DC	12 x In	
AS	Long Time Delay	AC or DC	8 x In	
AW	AD + Inertia Delay (Dual Rated)	AC and DC	12 x In	
BD	Medium Time Delay (Dual Rated)	AC and DC	8 x In	
BI	BS + Inertia Delay	AC or DC	12 x In	
BS	Medium Time Delay	AC or DC	8 x In	
BW	BD + Inertia Delay (Dual Rated)	AC and DC	12 x In	
CD	Short Time Delay (Dual Rated)	AC and DC	8 x In	
CI	CS + Inertia Delay	AC or DC	12 x In	
CS	Short Time Delay	AC or DC	8 x In	
CW	CD + Inertia Delay (Dual Rated)	AC and DC	12 x In	
OP	Instantaneous	AC or DC	None	
OPD	Instantaneous (Dual Rated)	AC and DC	None	
OX	Switch	AC and DC	Not Applicable	
ZZ	Special specify			

#### Group 11: Main Circuit Current Ratings

Code	Description	Comments
020M	20mA	
1000	10A	
1250	12.5A	
3000	30A	
XXXX	No Rating	

#### Group 12: Relay Trip Coils

Code	Description	Comments
A024	24V AC/DC Voltage Coil	
A065	65V AC Voltage Coil	
A100	100V AC Voltage Coil	
A110	110 - 125V AC Voltage Coil	
A220	220 - 240V AC Voltage Coil	
D012	12V DC Voltage Coil	
D024	24V DC Voltage Coil	
K005	5A Current Coil	
K015	15A Current Coil	
K025	25A Current Coil	
M020	20mA Current Coil	
M100	100mA Current Coil	
XXXX	Not Applicable	
ZZZZ	Special - Specify	

#### Group 13: Approvals

Code	Description	Comments
1	UL 1077; CSA; VDE	
2	No Approvals	
3	UL 489A	

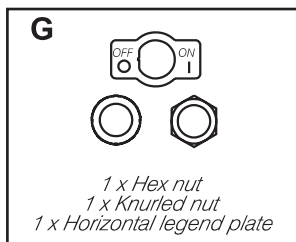
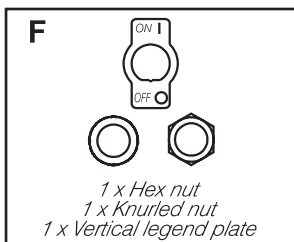
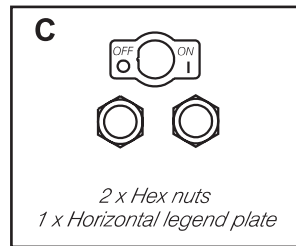
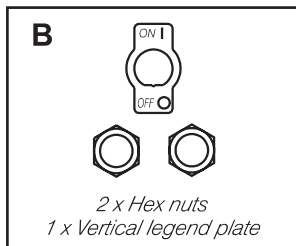
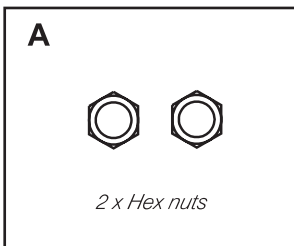
#### Group 14: Safety Marks

Code	Description	Comments
1	CCC	
2	No Safety Mark	

For Options not listed please contact CBI for assistance

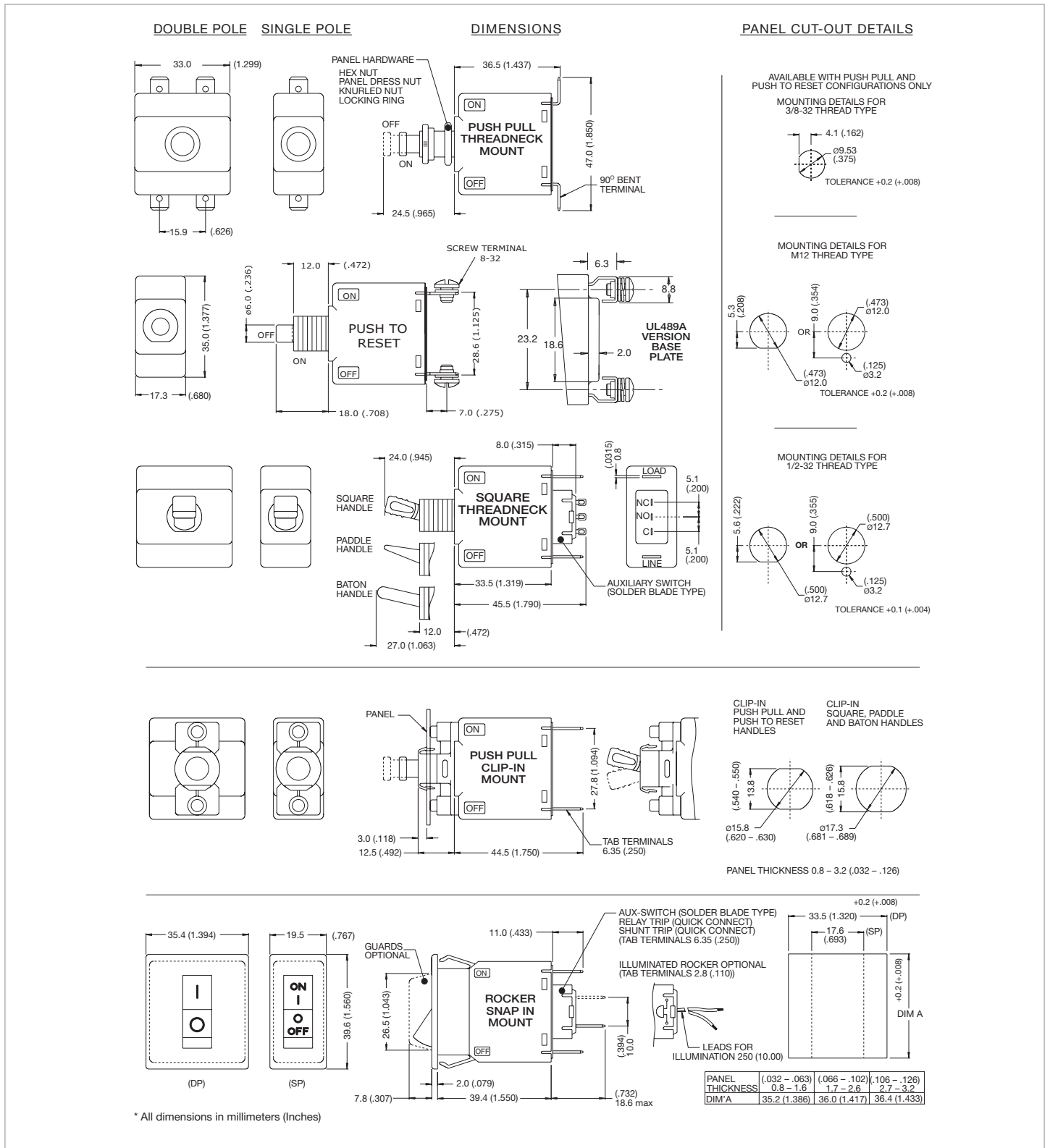
**Example code: BA-C-I-PA-B-I-3-XXXX-AS-I000-X-I-I**

### Mounting kits



\* Mounting hardware must be ordered separately.  
Legend plates available for M12 and 1/2" only.

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