



D-FRAME SERIES CIRCUIT BREAKERS

APPLICATIONS

- AC and DC Branch Circuit Installations
- Telecom DC Power Distribution
- UPS Equipment
- Mobile Power-Generation Equipment
- Power Conditioning
- Alternative Energy Equipment
- Lighting Controls

FEATURES

- Hydraulic-Magnetic Technology
- 100% Rating Capability
- Up to Six Poles
- UL, CSA, VDE, and TUV Approved
- Ratings up to 250 A
- Optional Trip Alarm Switch and Auxiliary Switch
- Wide Range of Mounting Termination and Time Delays Available



TECHNICAL DATA

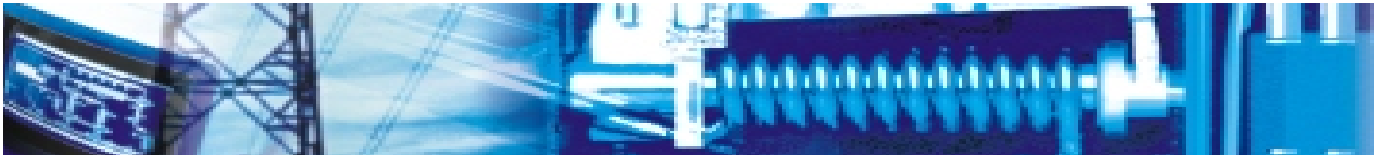
DD				
Approval	UL489/CSA	UL489/CSA/VDE (IEC60947-2)	UL489A/VDE (IEC60947-2)	UL508/VDE (IEC60947-3)
No of Poles	1	2	2	2
Voltage	120 VAC	120/240 VAC	80 VDC	240 VAC
Min Amp	0.1	0.1	0.1	
Max Amp	80	50	250	50
KA Rating	10 KA	5 KA	10 KA	
Notes	CB	CB	CB	SWITCH
Operating Temperature Range		-40°C to +85°C		

D			
Approval	UL1077/CSA	VDE (IEC60934)	UL1077/CSA/VDE (IEC60934)
No of Poles	1 TO 6	1 TO 4	2
Voltage	277/480 VAC	240/415 VAC	8 VDC0
Min Amp	0.02	1	0.1
Max Amp	100	100	125
KA Rating	2 KA	3 KA	3 KA (UL 1077/CSA);5 KA VDE
Notes	5kA With Fuse Back-up		
Operating Temperature Range		-40°C to +85°C	

SUPERIOR PRODUCTS THROUGH EXPERIENCE

EQUIPMENT PROTECTION





TECHNICAL DATA D-FRAME SERIES CIRCUIT BREAKERS

Part Number Coding

Example Code: **D - DA - A - B - A - 1 - PA - B - 0 - X - B - P - AS - 1500 - X - 1**
 Group Number: **0 1 2 3 4 5 6 & 7 8 9 10 11 12 13 14 15 16**

Group 0: Type	
Code	Description
D*	UL489 Approved
	UL1077 Approved

Group 1: Frame and Mounting	
Code	Description
DA*	Front Mounting (Standard)
DB	Snap-In Mounting
DC	Front Mounting, C-Frame Aperture
DE	Front Mounting, Standard Rocker
DF	Front Mounting, Illuminated Rocker
DG	Flush Mounting, Standard Rocker
DK	Flush Mounting, Illuminated Rocker
DL*	Flush Mounting, Flush Rocker

Group 2: Terminations	
Code	Description
A*	Rear Studs for Eye Lugs (M5 or 10-32)
B	Rear Clamp, 30 A Max.
C	Rear Push-On, 25 A Max.
M*	Rear Studs for Eye Lugs (M6 or 1/4-20)
N	Rear Studs (M5 or 10-32) + Flat Base Plate
P	Rear Studs (M6 or 1/4-20) + Flat Base Plate
Q	Studs for Main Circuit, Push-on Terminals for Control Circuit
2*	Plug-in Terminals (6.25 dia. x 21.5)
3*	Plug-in Terminals (7.80 dia. x 24.5)
4*	Rear Screw Terminal (M5 or 10-32)
Z	Special

Group 3: Mounting System and Interphase Barriers	
Code	Description
A*	Metric, No Interphase Barriers
B	Metric, Type A(Small) Interphase Barriers
C*	Imperial, No Interphase Barriers
D	Imperial, Type A(Small) Interphase Barriers
E*	Metric, Type B (Large) Interphase Barriers
F*	Imperial, Type B (Large) Interphase Barriers

Group 4: Handle Configuration	
Code	Description
A*	1 Handle / Pole
D	Rocker with Guards
E*	Rocker without Guards
G*	Reduced Standard Handles / Unit

Group 5: Number of Poles	
Code	Description
1*	Single-Pole Unit
2*	Double-Pole Unit
3	Triple-Pole Unit
4	Four-Pole Unit
5	Five-Pole Unit
6	Six-Pole Unit

Group 6: Rated Voltages	
Code	Description
H	277 VAC
M*	80 VDC / 240 VAC
N*	80 VDC
P	240 VAC
Q	240 / 415 VAC
R	277 / 480 VAC
S*	120 / 240 VAC
T*	120 VAC
U*	80 VDC / 120 VAC
Z	Special (Specify)

Group 7: Voltage Type	
Code	Description
A*	AC
D*	DC
M*	AC/DC

Group 8: Circuit	
Code	Description
1*	Series Mid-Trip
A*	Switch
B*	Series Trip
C	Relay Trip (Current Sensing)
D	Relay Trip (Voltage Sensing)
E	Shunt Trip (Current Sensing)
F	Shunt Trip (Voltage Sensing)
H*	Dual Control (3 Terminals) - Shunt Trip
J	Dual Control (4 Terminals) - Relay Trip
Z	Special (Specify)

Group 9: Auxiliary Switches	
Code	Description
0*	None
5*	Trip Alarm (5 A 125 / 250 VAC)
7*	1 x Change-Over (6 A 250 VAC)
8*	Integral Change-Over (0.1 A 250 VAC)
9*	Special (Specify)

Group 10: Voltages for Illuminated Rocker Units	
Code	Description
X*	Not Applicable
1	100 - 125 VAC
2	220 - 240 VAC
3	8 - 16 VDC
4	16 - 24 VDC
5	24 - 32 VDC
6	32 - 48 VDC
7	48 - 65 VDC
8	65 - 80 VDC
Z	Special (Specify)

Options without * are not applicable to UL489 product.

SUPERIOR PRODUCTS THROUGH EXPERIENCE

EQUIPMENT PROTECTION





TECHNICAL DATA D-FRAME SERIES CIRCUIT BREAKERS

Group 11: Colour of Front Plate		Group 14: Main Circuit Current		Group 15: Du-Con Or Relay Trip Units			
Code	Description	Code	Description	Ratings for Voltage Coils		Ratings for Current Coils	
B*	Black	120M	20 mA	OR			
Z	Special (Specify)	100M*	100mA	Code	Description	Code	Description
Group 12: Handle Colour and Marking Details		0100*	1 A	X	Not Applicable	X*	Not Applicable
Code	Description (I-ON / O-OFF)	1000*	10 A	D110	110 - 120 VDC	M020	20 mA
K*	White (I - O) / On - Off	1375*	13.75 A	D125*	125 VDC	M100	100 mA
L*	Black (I - O) / On - Off	1500*	15 A	A125*	125 VAC	K005	5 A
Z	Special (specify)	2000*	20 A	A220	220 - 240 VAC		
		2500*	25 A	Group 16: Approvals			
		K100*	100 A	Code	Description		
		K125*	125 A (multipole configuration only)	1*	All applicable approvals		
		K250*	250 A (multipole configuration only)	2*	No approvals required		
Group 13: Time Delay							
Code	Time Delay Details	System	Pulse Tolerance	Comments			
AS*	Long Time Delay	50/60 Hz, DC	8 x In				
AI*	Long Time Delay	50/60 Hz, DC	20 x In	AS + Inertia Delay			
AH*	Long Time Delay	50/60 Hz	20 x In				
BS*	Medium Time Delay	50/60 Hz, DC	8 x In				
BI*	Medium Time Delay	50/60 Hz, DC	20 x In	BS + Inertia Delay			
BH*	Medium Time Delay	50/60 Hz	20 x In				
CS*	Short Time Delay	50/60 Hz, DC	6 x In				
CI*	Short Time Delay	50/60 Hz, DC	15 x In	CS + Inertia Delay			
CH*	Short Time Delay	50/60 Hz	15 x In				
US	Ultra-Short Delay	50/60 Hz, DC	--				
OP*	Instantaneous	50/60 Hz, DC	--				
AE	Long Time Delay	50/60 Hz	35 x In	AH + Inertia Delay			
BE	Medium Time Delay	50/60 Hz	35 x In	BH + Inertia Delay			
CE	Short Time Delay	50/60 Hz	35 x In	CH + Inertia Delay			
AD*	Long Time Delay	Dual Rated: 50/60 Hz/DC	8 x In				
BD*	Medium Time Delay	Dual Rated: 50/60 Hz/DC	8 x In				
CD*	Short Time Delay	Dual Rated: 50/60 Hz/DC	8 x In				
AW	Long Time Delay	Dual Rated: 50/60 Hz/DC	20 x In	AD + Inertia Delay			
BW	Medium Time Delay	Dual Rated: 50/60 Hz/DC	20 x In	BD + Inertia Delay			
CW	Short Time Delay	Dual Rated: 50/60 Hz/DC	15 x In	CD + Inertia Delay			
0X	Switch						

TIME DELAY DATA

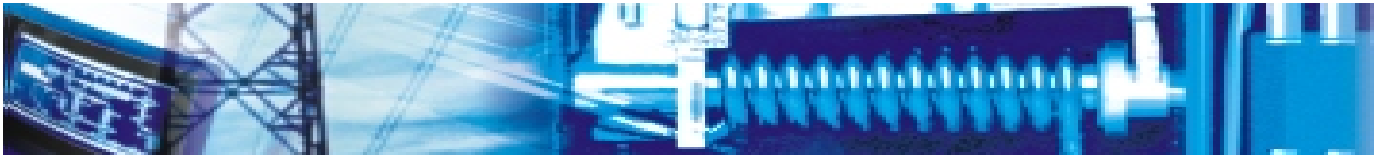
Std. Curve Codes	Limits	Percentage of Rated Current Trip Time in Seconds											
		125%	130%	135%	150%	200%	300%	400%	500%	600%	800%	1000%	1200%
AS	Min (s)	80	68	60	48	21	7	3.5	2	0.45	0.01	0.0075	0.005
	Max (s)	560	500	375	260	80	32	17	19	6.8	0.8	0.08	0.005
BS	Min (s)	12	9	7.5	5.5	2	0.55	0.21	0.12	0.02	0.007	0.006	0.005
	Max (s)	100	90	75	40	14	5	2.8	1.8	1.2	0.5	0.08	0.05
CS	Min (s)	0.6	0.5	0.4	0.3	0.13	0.031	0.014	0.008	0.007	0.005	0.0043	0.0042
	Max (s)	10	6	5	3.5	1	0.2	0.075	0.04	0.03	0.02	0.018	0.018

Contact your nearest CBI office for availability of additional Ratings and Time Delay Curves.
Curves are available online at www.cbibreakers.com or www.cbi.co.za

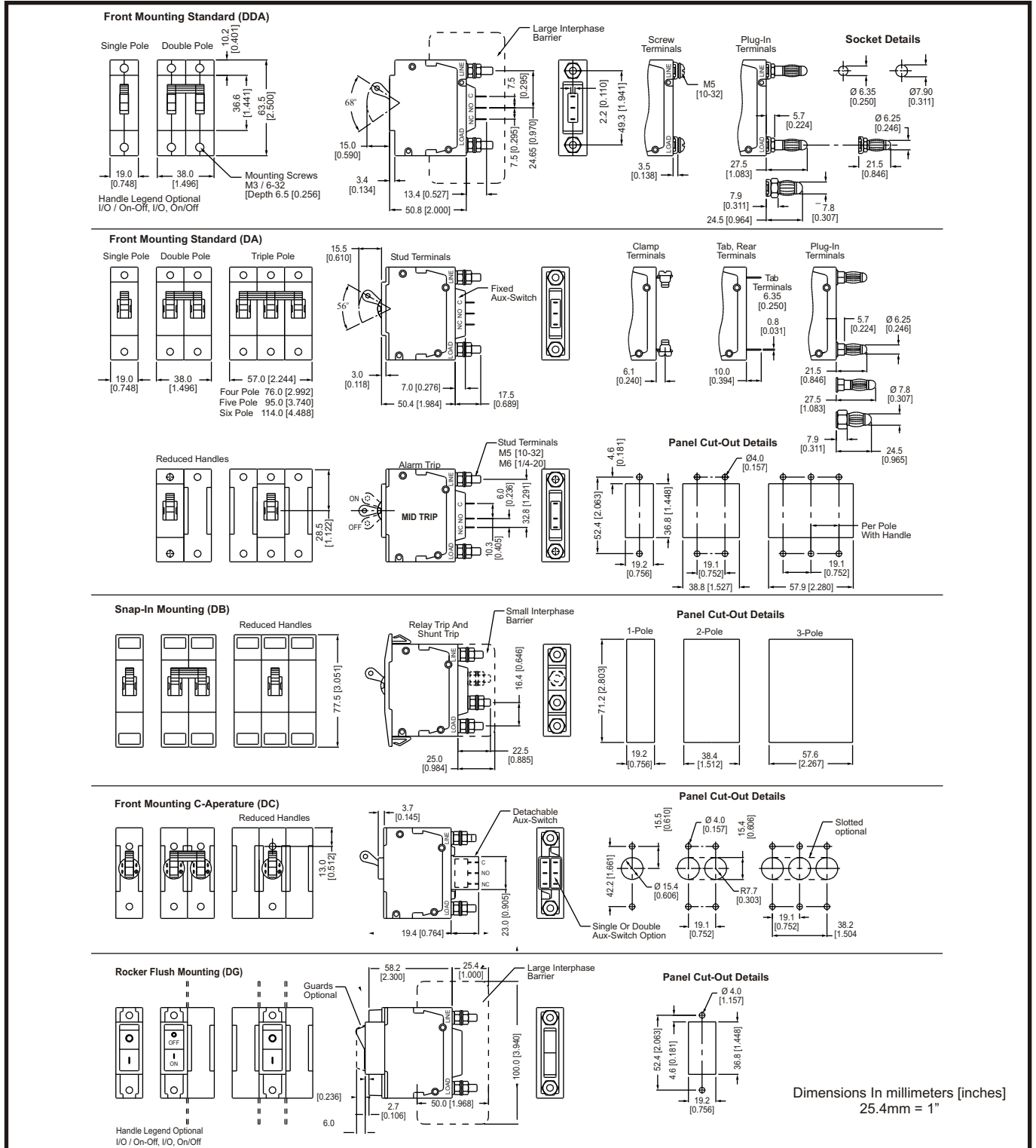
SUPERIOR PRODUCTS THROUGH EXPERIENCE

EQUIPMENT PROTECTION





TECHNICAL DATA D-FRAME SERIES CIRCUIT BREAKERS



SUPERIOR PRODUCTS THROUGH EXPERIENCE

Circuit Breaker Industries Ltd

Private Bag 2016 Isando 1600
Tripswitch Drive, Elandsfontein,
Gauteng, South Africa
Tel: +27 11 928-2000 Fax: +27 11 392-2354
E-mail: cbi@cbi.co.za Website: www.cbi.co.za

Circuit Breaker Industries GmbH
Postfach 101240 D-86882
Landsberg, Germany
Tel: +49 8191 9472900 Fax: +49 8191 94729011
E-mail: office@cbbreakers.de, Website: www.cbbreakers.com

Circuit Breaker Industries Inc.
35E Uwchlan Ave, Suite 328,
Exton, PA 19341, U.S.A.
Tel: 610 524 9949 Fax: 610 524 9945
E-mail: info@cbbreakers.com, Website: www.cbbreakers.com