DD-Frame - Series Circuit Breakers

The DD-Frame is a compact yet very powerful circuit breaker. Using hydraulic-magnetic technology which ensures that breaker performance is unaffected by ambient temperature, the CBI DD-Frame series is suitable for various applications in telecom and datacom equipment. These applications include being the main breaker for battery applications, power supplies, distribution breaker for larger loads in DC branch protection, lighting control, UPS, inverters and DC power switching and in power distribution units (PDU). The DD-Frame is also available as a switch.

Due to its robustness and ability to withstand harsh environmental conditions, the DD-Frame breaker is also used in military applications, railway infrastructure, railway signalling and rolling stock and also in renewable energy solutions for protection in combiner boxes and other battery and storage applications.

DD-Frame profile

The DD-Frame is available in various configurations and can be structured to suit specific requirements. Available in 1 to 6 poles, this robust and versatile circuit breaker comes in both AC and DC configurations with a choice of various time delay characteristics.
Among the common configurations are the front mount standard handle and flush rocker handle options. As for the termination, metric and imperial stud terminals, plug-in (bullet terminal), screw, and clamp terminal configurations are available. The breaker comes with the option of an auxiliary switch and trip alarm. Customer specific configurations, DIN rail mount and various other options are available.

The DD-Frame compact and precision circuit breaker is made of high quality thermoset material, which offers increased electrical and mechanical endurance. The self-cleaning mechanism of the contact actuators ensures that the circuit breaker contacts are kept clean and operate smoothly, offering longer life span.

Approvals

The DD-Frame circuit breaker is CE & CCC compliant and carries various approvals such as VDE, cURus, EAC and CCC. It is also recognised to UL 1077 and UL 508, and listed to UL 489 and UL 489A. Compliant with AS/NZS 60947-2.

(UL 489A)	(UL 489; CSA C22.2 NO.5)	(UL 1077; CSA C22.2 NO.235-04)	(CSA C22.2 No. 5-16)	(IEC / EN 60947-2; IEC / EN 60934)	(GB 14048.2; GB 17701)	(IEC 60947-2; IEC 60934)	(IEC 60947-2)

Hydraulic-Magnetic Circuit Breakers are unaffected by ambient temperature and carries 100% rated current

DD-Frame - Series Circuit Breakers

Features

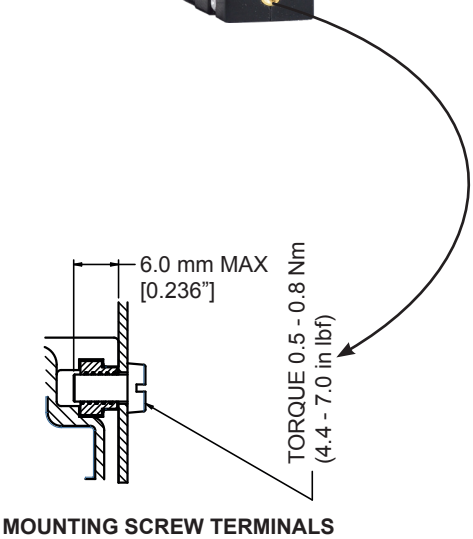
- AC and DC circuit breaker
- Hydraulic-magnetic technology
- 100% rating capability independent of ambient temperature
- Up to six poles
- VDE, EAC and CCC approved, CE certified
- UL compliant (Listed / recognised)
- Ratings 0.1 A to 100 Aac and 400 Adc (Specific certifications)
- Precision tripping characteristics
- Wide range of circuits, mountings, terminations and time delays
- Two colour handle indication (Two tone flush rocker)
- Optional mid-trip indication (Standard handle)
- Optional auxiliary switch and trip alarm
- Optional remote switching (see RAU data sheet)

Applications

- AC and DC branch circuit installations
- Power conditioning
- Telecom DC and Datacom power distribution
- Alternative energy equipment
- UPS equipment
- Lighting control
- Mobile power generation equipment
- Battery protection
- Railway signaling and infrastructure protection

DD-Frame HCR (High Current Rating)

CBI-electric: low voltage offers a higher current rated product, capable of handling current ratings up to 125 A in a single pole, 250 A in a two pole configuration, and 300 A in a three pole configuration at 60 Vdc.



MOUNTING SCREW TERMINALS

DD-Frame - Series Circuit Breakers

Technical Data

Product Type	DD-Frame
Ambient Operating Temperature	-40°C to +85°C
Endurance	10000 operations; 1500 with current, 8500 without current (IEC 60947-2 Clause 7.2.4.2)* 1000 operations DC, 6000 operations AC (IEC 60934 Clause 9.11)* 10000 operations; 6000 with current, 4000 without current (UL 489 Clause 7.1.5)* As per UL 489 or minimum of 1000 operations with current (UL 489 A Clause 12)* 6000 operations with current (UL 1077 Clause 22)*
Dielectric Strength	1000 - 2000 Vac for one minute (IEC 60947-2 Clause 8.3.3.3, IEC 60934 Clause 9.7)* 1000 Vac plus twice the rated voltage for one minute (UL 489 Clause 7.1.9, UL 489A Clause 8, UL 1077 Clause 23)*
Rated Impulse Withstand Voltage	4 kV (IEC 60947-2 Clause 8.3.3.2)*
Weight	102 g per pole, 160 g with auxiliary switch (unpacked)
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	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.

* Refer to the standard for details

Product Type	Circuit Breaker	Circuit Breaker	Circuit Breaker	Circuit Breaker
Approvals	IEC / EN 60947-2, GB 14048.2, CE, UKCA	IEC / EN 60947-2, GB 14048.2, CE, UKCA	IEC 60947-2, CE, UKCA	AS/NZS 60947-2, IEC 60947-2, CE, UKCA
Number of Poles	1, 2, 3, 4	2 - 5 (parallel)	1, 2 - 3 (parallel)	1, 2
Maximum Voltages	240 / 415 Vac, 80 Vdc	80 Vdc	60 Vdc	125 Vdc
Current Ratings	0.1 - 60 A(ac) 0.1 - 100 A(dc)	110 A - 400 A	125 A, 250 A, 300 A	0.1 A - 60 A
Ics	5 kA (DC),1.25 kA (AC),	5 kA	2.5 kA	2.5 kA
Icu	3 kA (AC), 5 kA (AC) 10 kA (DC)	10 kA	5 kA	5 kA

Product Type	Circuit Breaker		Circuit Breaker	Circuit Breaker
Approvals	UL 489		UL 489 A, CSA C22.2 No. 5 -16	UL 489A, CSA C22.2 No. 5 -16
Number of Poles	1, 2, 3	1	1, 2 - 3 (parallel)	2 - 5 (parallel)
Maximum Voltages	120 Vac, 120 / 240 Vac, 240 Vac, 80 Vdc	277 Vac	60 Vdc	80 Vdc
Current Ratings	0.1 - 80 A(ac) 0.1 - 100 A(dc)	0.1 - 20 A	125 A, 250 A, 300 A	110 A - 400 A
AIC	AC - 10 kA, DC - 20 kA	10 kA	14 kA	20 kA

Product Type	Circuit Breaker	Circuit Breaker	Switch	Switch
Approvals	IEC / EN 60934, CE, GB 17701, UKCA	UL 1077, cURus	UL 508	IEC / EN 60947-3, CE
Number of Poles	1 - 4	1 - 6	1, 2	1, 2
Maximum Voltages	240 Vac / 415 Vac, 80 Vdc	277 Vac / 480 Vac, 80 Vdc	120 Vac / 240 Vac, 80 Vdc	240 Vac
Current Ratings	0.1 A - 100 A (1 p), 0.1 A - 70 A (2 - 3 p)	0.1 A - 100 A (1 p), 0.1 A - 70 A (2 - 4 p)	15 A - 100 A	50 A
Interrupting Capacity	-	2 kA/U2/ U3 (AC) 5 kA/C1 (AC) 5 kAU2/ U3 (DC)	-	-
Rated conditional S/C	3 kA (AC) PC1, 5 kA (DC) PC1	-	-	-
Icm	-	-	-	0.6 kA (for 1 switch)

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

DD-Frame - Series Circuit Breakers

Technical Data

Aux Switch Specification	
Gold DB3	EN 61058 0.1 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 0.1 A @ 125 / 250 Vac & 0.1 A @ 30 Vdc & 0.3 A @ 60 Vdc
Silver DB2	EN 61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125 / 250 Vac
Silver V4D	EN 61058-1 10 A @ 250 Vac

Torque Table

Description	Size	Torque Value
Front Inserts	M3	0.5 - 0.8 Nm
	6 - 32	5 - 7 lbf.in
Rear Studs	M5	2.0 - 2.8 Nm
	10 - 32	18 - 24 lbf.in
	M6	3.5 - 4.0 Nm
	1/4 - 20	30 - 35 lbf.in
Clamp Screws (DIN Rail mounting)	M3.5	1.2 - 1.5 Nm
Flush Rear Screws	M5	1.7 - 2.3 Nm
	10 - 32	15 - 20 lbf.in

DD-Frame Series Circuit Breakers Ordering Information

Group 1: Frame	**Code**	**Description**		**Comments**			
	D	DD-Frame					
Group 2: Type	**Code**	**Description**		**Comments**			
	2	DD-Frame, DD-Type					
Group 3: Mounting	**Code**	**Description**		**Comments**			
	A	Front Mount, Rectangular Aperture - Standard Toggle Handle		Maximum penetration depth into the product by the mounting screw is 6mm			
	G	Rail and surface mount		DIN and mini rail and surface mount (Auxiliary switch not available)			
	S	Front Mount, Rectangular Aperture - Flush Rocker Handle		Maximum penetration depth into the product by the mounting screw is 6mm			
Group 4: Handle Type or Blank for Reduced Handle	**Code**	**Description**		**Comments**			
	2	Standard Toggle Handle - Mid Trip		Standard Toggle Handle, NOT Available on 60V dc			
	A	Standard Toggle Handle		Standard Toggle Handle, goes to Off Position when tripped			
	C	Cut off Handle		Available on single pole only			
	H	Flush Rocker Handle (100 A Max)		Use with Group 3, code S. Reduced Handle up to three pole only			
	M	Flush Rocker Handle - Two Tone (100 A Max)		Use with Group 3, code S. Reduced Handle up to three pole only			
	Q	Flush rocker handle, Push to Reset (100 A Max); Use Test button to switch OFF.		Use with Group 3, code S. Reduced Handle up to three pole only			
	R	Flush rocker handle, Push to Reset- Two Tone (100 A Max); Use Test button to switch OFF.		Use with Group 3, code S. Reduced Handle up to three pole only			
	W	Blank Pole - No Handle		For reduced handle version on Pole(s) without handle			
Group 5: Termination	**Code**	**Description**		**Comments**			
	3X	Plug-in (bullet) terminal (Ø 7.80 mm X 21.5 mm)		100 A max (80 Vdc), 125 A max (60 Vdc) per terminal			
	4X	Flush rear screw terminal, M5 or 10 - 32		50 A max per terminal			
	5X	Double quick connect M3.5 terminal (6.35 mm X 0.8 mm)		50 A max per terminal			
	AX	Stud terminals, M5 or 10 - 32		60 A max per terminal			
	DX	Quick connect terminals (6.35 mm X 0.8 mm), top & bottom for mounting version G		30 A max. For rail mounting G in group 3 only.			
	LX	Clamp terminal, top & bottom for mounting version G		30 A max. For rail mounting G in group 3 only.			
	MX	Stud terminals, M6 or 1/4 - 20		125 A max per terminal			
Group 6: Total No. of Poles	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**
	1	1 pole metric	4	4 pole metric	A	1 pole imperial	D	4 pole imperial
	2	2 pole metric	5	5 pole metric	B	2 pole imperial	E	5 pole imperial
	3	3 pole metric	6	6 pole metric	C	3 pole imperial	F	6 pole imperial
Group 7: Rated Voltages and Frequency - Main Circuit	**Code**	**Description**	**Comments**	**Code**	**Description**	**Comments**	
	H	125 Vdc	0.1 A - 60 A Max (Single pole only)	N	80 Vdc		
	J	120 Vac; 240 Vac (Apply to listed single pole products)	Refer to certification report for approvals details	R	120 / 240 Vac, 240 Vac, 240 / 415 Vac, 277 / 480 Vac (Apply to recognised multipole products)	Refer to certification report for approvals details	
	K	240 Vac; 277 Vac (Apply to recognised single pole products)	Refer to certification report for approvals details	S	120 / 240 Vac, 240 Vac or 240 / 415 Vac (Apply to listed multipole products)	Refer to certification report for approvals details	
	M	AC & DC Application for multipole units (80 Vdc, 240 Vac, 240 / 415 Vac & 277 / 480 Vac)	Refer to certification report for approvals details	V	60 Vdc	No trip alarm, No mid-trip	
	W	277 Vac (Applicable to listed single pole products)	Refer to certification report for approvals details				

* Note: For UL508 the connection of the DD Frame with screw terminals shall be made with listed (ZMVV/7) wire connectors (eyelet type, not insulated, with maximum width 9,5 mm) and crimped with the appropriate crimp tool.

DD-Frame - Series Circuit Breakers

DD-Frame Series Circuit Breakers
Ordering Information

	Code	Description	System	Pulse Tolerance (X In)	Code	Description	System	Pulse Tolerance (X In)
Group 8: Time Delay Characteristics (Pulse Tolerance @ 10 ms)	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
	AE	Long delay 50 / 60 Hz AH & inertia delay	AC	28 - 35	CS	Short delay 50 / 60 Hz	AC or DC	6 - 8
	BE	Medium delay 50 / 60 Hz BH & inertia delay	AC	28 - 35	AW	Long delay 50 / 60 Hz AD & inertia delay	AC and DC	16 - 20
	CE	Short delay 50 / 60 Hz CH & inertia delay	AC	28 - 35	BW	Medium delay 50 / 60 Hz BD & inertia delay	AC and DC	16 - 20
	AI	Long delay 50 / 60 Hz AS & inertia delay	AC or DC	16 - 20	CW	Short delay 50 / 60 Hz CD & inertia delay	AC and DC	12 - 15
	BI	Medium delay 50 / 60 Hz BS & inertia delay	AC or DC	16 - 20	H3	Short delay	DC	6 - 8
	CI	Short delay 50 / 60 Hz CS & inertia delay	AC or DC	12 - 15	OP	Instantaneous trip 50 / 60 Hz	AC or DC	None
	AH	Long delay 50 / 60 Hz AS & high inrush	AC	16 - 20	OX	Switch 50 / 60 Hz	AC and DC	
	BH	Medium delay 50 / 60 Hz BS & high inrush	AC	16 - 20				

	Code	Description	Comments
Group 9: Main Circuit Current	XXXX	No current, for voltage trip poles	Refer to page 3 for specific amp ratings in accordance with the relevant approvals and test reports.
		0.1 A to 400 A	

	Code	Description	Comments
Group 10: Circuit Configuration (Circuit Breaker's Internal Construction)	AX	Switch	
	BX	Circuit Breaker (Series Trip, Current Sensing)	
	DX	Switch Relay Trip Voltages Snsing - Centre Terminal Construction (4 Terminal)	Select the type of termination on Group 13
	GX	Circuit Breaker with Dual Control - Shunt Trip Construction - 3rd Terminal Close to Load Side (3 Terminal)	Circuit breaker to handle main current, secondary coil activates remote trip; Select type of termination on Group 13
	H1	Circuit Breaker with Dual Control - Relay Trip Construction - Fly Leads for Relay Trip - Auxiliary Switch (4 terminal)	To be used in combination with Group 13, Code D (Flying Leads)
	HX	Circuit Breaker with Dual Control - Relay Trip Construction (4 terminal)	Select the type of termination on Group 13
	KX	Circuit Breaker with Auxiliary Switch	
	LA	Circuit Breaker with Mid Trip Handle	Handle goes to Mid-point when electrically tripped
	LB	Circuit Breaker with Mid Trip Handle AND Aux Switch	Handle goes to Mid-point when electrically tripped
	LX	Circuit Breaker with Mid Trip Handle AND Trip Alarm	Handle goes to Mid-point when electrically tripped and sends Trip Alarm
	MX	Circuit Breaker with Trip Alarm, but NO Mid Trip (Reversed Function - Latch Type)	Handle goes to OFF position when tripped and send a Trip Alarm

	Code	Description	Comments
Group 11: Auxiliary and Alarm Switches Types & Options **(Refer to Aux switch specification on page 3)**	A	DB3-Gold Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN 61058 0.1 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 0.1 A	AUX SWITCH NOT AVAILABLE ON RAIL MOUNT-NO LINKS
	B	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN 61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL1054 10 A	AUX SWITCH NOT AVAILABLE ON RAIL MOUNT-NO LINKS
	C	V4D - Silver Tips, Offset Terminals, 4.75mm (0.189") - (10 A @ 250 Vac)	AUX SWITCH NOT AVAILABLE ON RAIL MOUNT-NO LINKS
	K	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN 61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125 / 250 Vac) - OPTION K REVERSED Microswitch - Link from the Load Side of the Circuit Breaker to the C (Common) contact of the Aux Switch.	Option K - REVERSED Microswitch - Link from the Load Side of the Circuit Breaker to the C (Common) contact of the Aux Switch. Aux Switch terminal NOT cropped.
	L	V4D - Silver Tips, Offset Terminals, 4.75 mm (0.189") - (10A @ 250 Vac) - OPTION L - Link from the Load Side of the Circuit Breaker to the NC (Normally Close) contact of the Aux Switch.	Option L - Link from the Load Side of the Circuit Breaker to the NC (Normally Close) contact of the Aux Switch. Aux Switch terminal NOT cropped.
	M	Parallel Bridge Housing - For all Parallel Bridged Poles	Use M for ALL Parallel Bridged Products
	N	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125 / 250 Vac) - OPTION N - Link from the Load Side of the Circuit Breaker to the NC (Normally Close).	Option N - Link from the Load Side of the Circuit Breaker to the NC (Normally Close). Aux Switch terminal NOT cropped.
	P	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125/ 250 Vac) - OPTION A - REVERSED Microswitch - Link from the Load Side of the CB to the C (common) contact of the Aux Switch. NC Cropped	Option A -REVERSED Microswitch - Link from the Load Side of the Circuit Breaker to the C (common) contact of the Aux Switch. Aux NC (Normally Closed) Terminal cropped.
	R	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") - EN61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125 / 250 Vac) - OPTION I - Link from the Load Side of the Circuit Breaker to the NO (Normally Open) contact of the Aux Switch. CUSTOMER SPECIFIC	Option I - Link from the Load Side of the Circuit Breaker to the NO (Normally Open) contact of the Aux Switch. Aux NC (Normally Closed) Terminal cropped. Special Microswitch housing
	V	DB2-Silver Tips, Equally Spaced Terminals, 2.75 mm (0.108") -EN 61058 10 A @ 250 Vac & 0.1 A @ 80 Vdc and UL 1054 10 A @ 125 / 250 Vac) - OPTION V - Link from the Load Side of the Circuit Breaker to the NO (marked NC on housing) contact of the Aux Switch. CUSTOMER SPECIFIC	Option V - Link from the Load Side of the Circuit Breaker to the NO (Normally Open) contact of the Aux Switch. Micro switch housing "NO" position marked as "NC". Aux NC (Normally Closed) Terminal cropped. Special Microswitch housing
	X	Not Applicable	

DD-Frame Series Circuit Breakers
Ordering Information

Group 12: Voltage and Current Ratings for Dual Control, Shunt and Relay Trip Construction	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**
	XX	Not applicable	A3	65 Vac 50 / 60 Hz	B0	12 Vdc	B3	80 Vdc
	A1	12 Vac 50 / 60 Hz	A4	110 - 125 Vac 50 / 60 Hz	B1	24 Vdc	**Recommended pulse duration: 20 ms to 40 ms**	
	A2	24 Vac 50 / 60 Hz	A5	220 - 240 Vac 50 / 60 Hz	B2	48 Vdc		

Group 13: Terminal Options for Dual Control, Shunt and Relay Coils	**Code**	**Description**	**Comments**
	X	Not Applicable	
	B	Screw Terminals M5 OR 10 - 32	Only available with Flush Rear Screw Terminal Group 5, Code D
	C	Quick Connect Terminals (0.8 mm x 6.35 mm)	
	D	Flying Leads (wire terminals)	
	E	Stud Terminals (M5 / 10 - 32)	
Group 14:	**Code**	**Description**	**Comments**
	X	Future use	
Group 15: Customer Specific	**Code**	**Description**	
	X	Not applicable	
	S	Customer Specific Product	
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	For reduced handle version
	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**
	D	I - O / ON - OFF	
	H	I - O / ON - OFF and AMP RATING	Standard marking for a Flush Rocker Handle
	I	ON - I marked on Functional handle, PUSH TO RESET and AMP RATING marked on non-functional handle	Group 3, Code S Only. Use with Group 4, Code R or Q.
	J	ON - I marked on functional handle,OFF - O and AMP RATING marked on non-functional handle. Special agreement between manufacture and customer.	Group 3, Code S Only. Use with Group 4, Code R or Q. Special agreement between manufacture and customer.
	X	Not Applicable	
Group 18: Mounting Orientation for Marking	**Code**	**Description**	**Comments**
	1	Breaker mounted in Vertical Axis with LINE at the BOTTOM, 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	
	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	
	X	Not Applicable	
Group 19: Front Plate Marking and Test Button	**Code**	**Description**	**Comments**
	1	Standard Marking, Standard Toggle Handle, with Test Button	Applicable to Standard Handle option fitted with a test button. Only available on a Single Pole
	2	No Marking, Rocker Handle, Test Button	Applicable to Rocker handle , Use with Group 4, Codes H, M, Q and R
	A	Standard Marking on Standard Toggle Handle	Applicable to the Standard Toggle Handle
	B	No Marking for Pole without Handle	Applicable to all the poles without handles (multipoles with blank poles, reduced handle products)

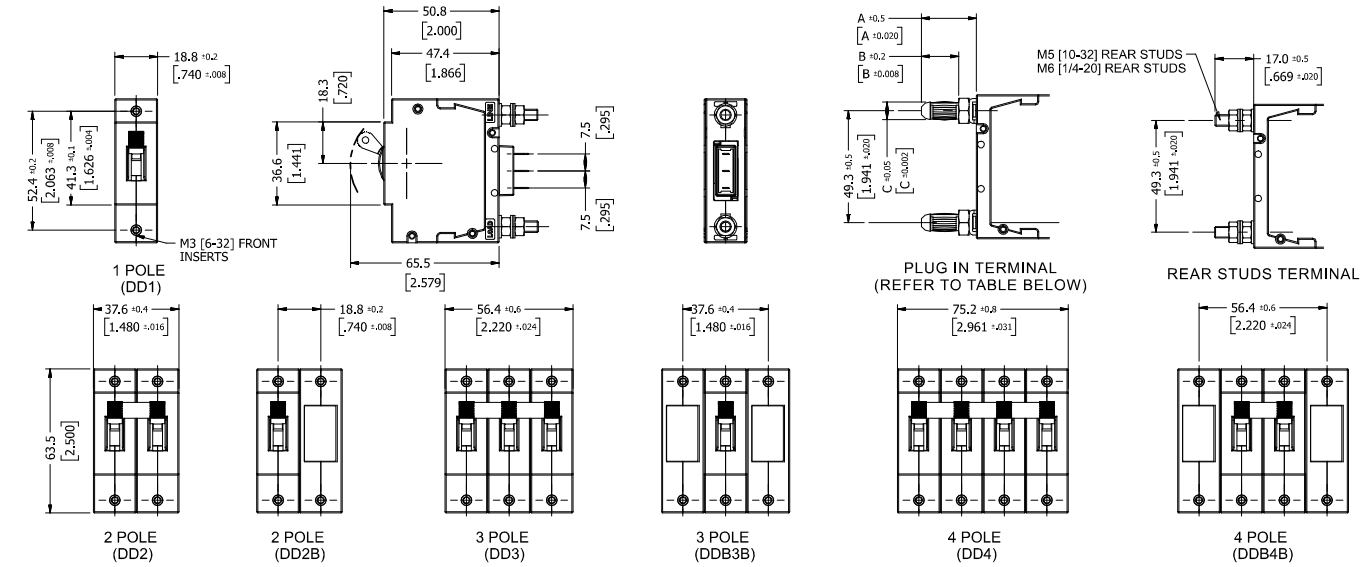
Group 20: Inter-phase Barrier and Terminal Cover	**Code**	**Description**	**Comments**	**Code**	**Description**	**Comments**
	X	Not applicable		A	Inter-phase barrier - small	Inter-phase barriers and terminal covers may be required for multi-pole products with UL listed and UL recognised approvals. See DD-Frame Technical Guide.
	1	Terminal cover(s)		B	Inter-phase barrier - large	
	2	Terminal cover(s)		C	Inter-phase barrier - Z type large	
	3	Inter-phase barrier & terminal cover - large		D	Inter-phase barrier - Z type small	
	4	Inter-phase barrier & terminal cover - Z type				

DD-Frame - Series Circuit Breakers

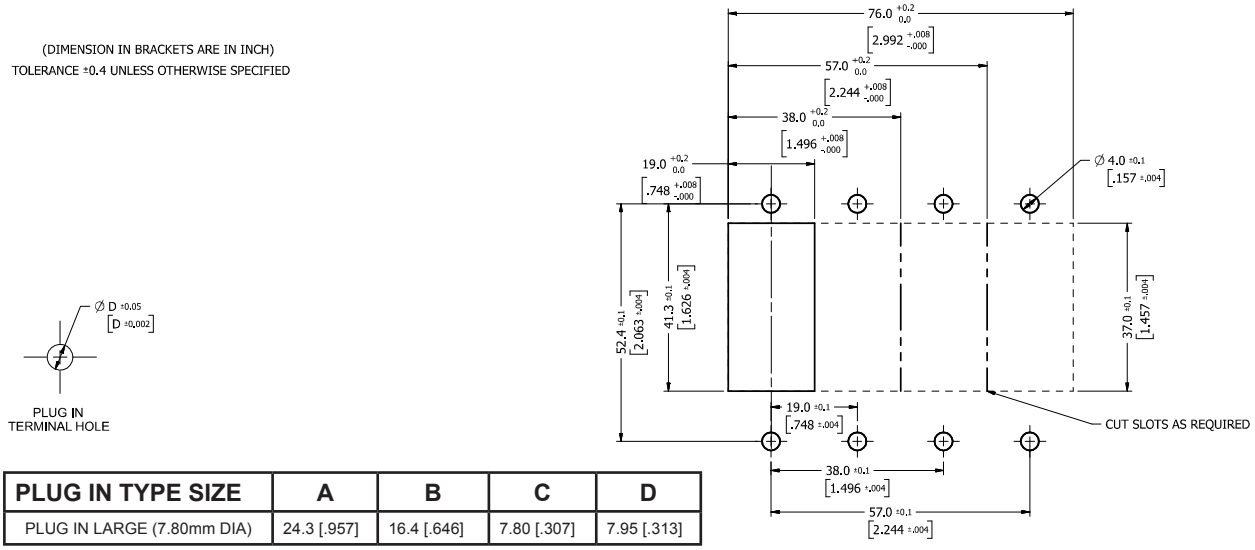
DD-Frame Series Circuit Breakers
Ordering Information

Group 21: Approvals (Product Normally Approved to)	Code	Description	Comments
	1	UL recognised UL 1077, CUR, IEC / EN 60934, CE, UKCA	Normally certified to these specifications
	2	UL listed UL 489, CUL, IEC / EN 60947 - 2, CE, UKCA	Normally certified to these specifications
	3	UL listed UL 489A, IEC / EN 60947 - 2, CE, UKCA	Normally certified to these specifications
Group 22: Safety Marks	**Code**	**Description**	**Comments**
	X	Not applicable	
	C	GB 14048.2 / GB 17701, CCC	

Outline Dimensions: Panel Cutout Standard Handle



(DIMENSION IN BRACKETS ARE IN INCH)
TOLERANCE ±0.4 UNLESS OTHERWISE SPECIFIED

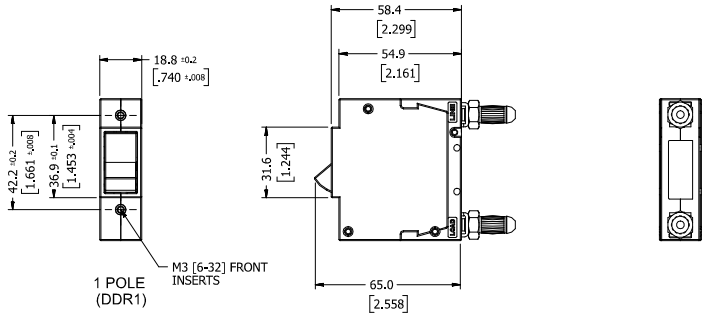


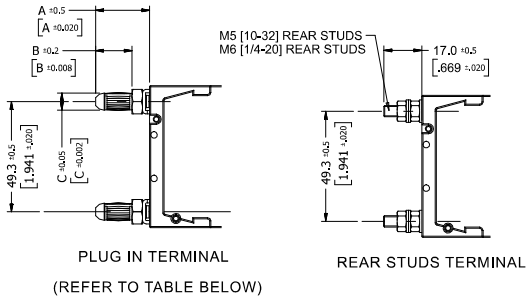
PLUG IN TYPE SIZE	A	B	C	D
PLUG IN LARGE (7.80mm DIA)	24.3 [.957]	16.4 [.646]	7.80 [.307]	7.95 [.313]

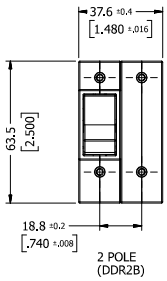
* Other plug-in version available on special request up to 80 A

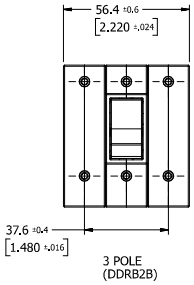
DD-Frame - Series Circuit Breakers

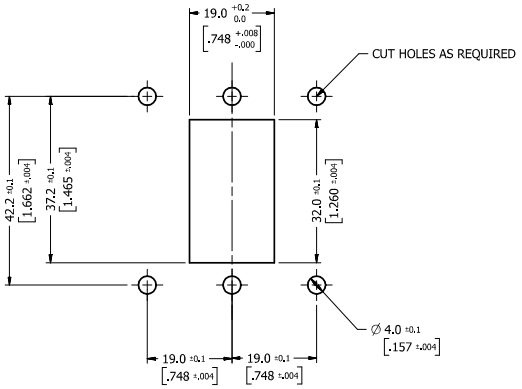
Outline Dimensions: Panel Cutout Rocker Handle

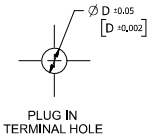












PLUG IN TYPE SIZE	A	B	C	D
PLUG IN LARGE (7.80mm DIA)	24.3 [.957]	16.4 [.646]	7.80 [.307]	7.95 [.313]

TOLERANCE ±0.4 UNLESS OTHERWISE SPECIFIED
(DIMENSION IN BRACKETS ARE IN INCH)

* Other plug-in version available on special request up to 80 A

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