

L-SERIES

L-FRAME MOULDED CASE CIRCUIT BREAKER



3 pole
Surface Mount



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PRODUCT INTRODUCTION

The CBI L-Frame is a robust hydraulic-magnetic moulded case circuit breaker range engineered for reliable protection across industrial, commercial, and power distribution applications. Designed with 100% rating capacity independent of ambient temperature, the L-Frame series delivers precision tripping, fast reset after overload. Its versatile design includes a three pole configuration with a mechanical trip confirmation button, and a wide selection of optional accessories such as shunt trips, auxiliary switches, undervoltage releases, and lockable handles. With approvals including SANS 60947-2 and DIN/IEC 60947-2, the L-Frame MCCB series offers a high-performance, compliant solution built to operate reliably in demanding environments ranging from telecoms and UPS systems to renewable energy and mobile power generation.

FEATURES

- Hydraulic-magnetic technology
- 100 % rating capacity; independent of ambient temperature
- Three poles
- Ratings up to 600 Aac (1 500 Adc)
- Trip button for mechanical confirmation of operation
- Precision tripping characteristics
- Reset immediately after overload

APPLICATIONS

- AC and DC branch circuit installations
- Reticulation
- Telecom/datacom equipment
- UPS equipment
- Alternative energy equipment
- Mobile power generation
- Battery protection and switching
- Municipal kiosks (feeder breaker)

OPTIONAL ACCESSORIES

- Shunt trip
- Auxiliary switch
- Trip alarm
- Inter-phase barriers
- G4B stub busbar

APPROVALS



SANS 60947-2



TECHNICAL DATA

Product Type		Circuit Breaker L20B	Circuit Breaker L40B	Switch Disconnector L20BN	Switch Disconnector L40BN
Standard Ampere Ratings (A) – AC		100 - 600	100 - 600	-	-
Standard Ampere Ratings (A) - DC		800, 1 500	-	1 200	1 200
Number of Poles		3 (AC); 2 or 3 parallel (DC)	3	3	3
Tripping Curve		L20 / L40	L20 / L40	-	-
Terminations	Standard	G1 lug terminal; bridge onto lug terminal (DC)			
	Optional	G4B stub busbar, 75 - 600 A			

ELECTRICAL	
Dielectric Strength	1 830 - 2 100 V, 50 Hz for one minute after testing
Time Delay Curves	L20 / L40

MECHANICAL	
Endurance	3 000 operations; 2 500 with current, 500 without current (IEC 60947-2 Clause 9.3.4.4)*

ENVIRONMENTAL	
Operating Temperature Range	-40°C to +85°C
Altitude	Tested at 2 000 m above sea level
Flammability	I3 - Ignition does not persist at 850°C after glow wire is withdrawn with an oxygen index of ≥ 28
Humidity	35 to 85% relative
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.

PHYSICAL	
Mounting Options	Surface mount
Number of poles	1 or 3 pole
Weight	6,9 kg - L20B / L40B, 6,1 kg - L20BN / L40BN (unpacked)
Standard Colours	Shell - white Handle – black, red or orange

* Refer to the standard for details

TECHNICAL DATA

Approvals	SANS 60947-2, DIN/EN 60947-2, GB 14048.2	
Product Type	L20B	L40B
Number of Poles	3	3
Operating Voltages (AC)	415 Vac 50 Hz	
Minimum Current Rating	100 A	
Maximum Current Rating	600 A	
Interrupting Capacity	20 kA	40 kA

Approvals	SANS 60947-3, DIN/EN 60947-3 (pending)	
Product Type	L20BN	L40BN
Number of Poles	3	3
Operating Voltages (AC)	415 Vac 50 Hz	
Minimum Current Rating	300 A	
Maximum Current Rating	600 A	
Interrupting Capacity	20 kA	40 kA

Approvals	SANS 60947-2, DIN/EN 60947-2, GB 14048.2	
Product Type	L20B DC	
Number of Poles	2 pole parallel	3 pole parallel
Operating Voltages (DC)	125 Vdc	
Minimum Current Rating	800 A	1 200 A
Maximum Current Rating	1 000 A	1 500 A
Interrupting Capacity	20 kA	

Approvals	UL 489A (pending)	
Product Type	L20B DC	
Number of Poles	2 pole parallel	3 pole parallel
Operating Voltages (DC)	125 Vdc	
Minimum Current Rating	-	-
Maximum Current Rating	800 A	1 500 A
Interrupting Capacity	20 kA	

Approvals	SANS 60947-3, DIN/EN 60947-3 (pending)			
Product Type	L20BN DC		L40BN DC	
Number of Poles	2 pole parallel	3 pole parallel	2 pole parallel	3 pole parallel
Operating Voltages (DC)	125 Vdc			
Current Rating	1 200 A			
Interrupting Capacity	20 kA (SCPD 1 500 A)		40 kA (SCPD 1 500 A)	

ORDERING INFORMATION

Example Code 1: L20B350

Group	1	2
Requirement	LB-Frame 20 kA	350 A
Long Code	L20B	350

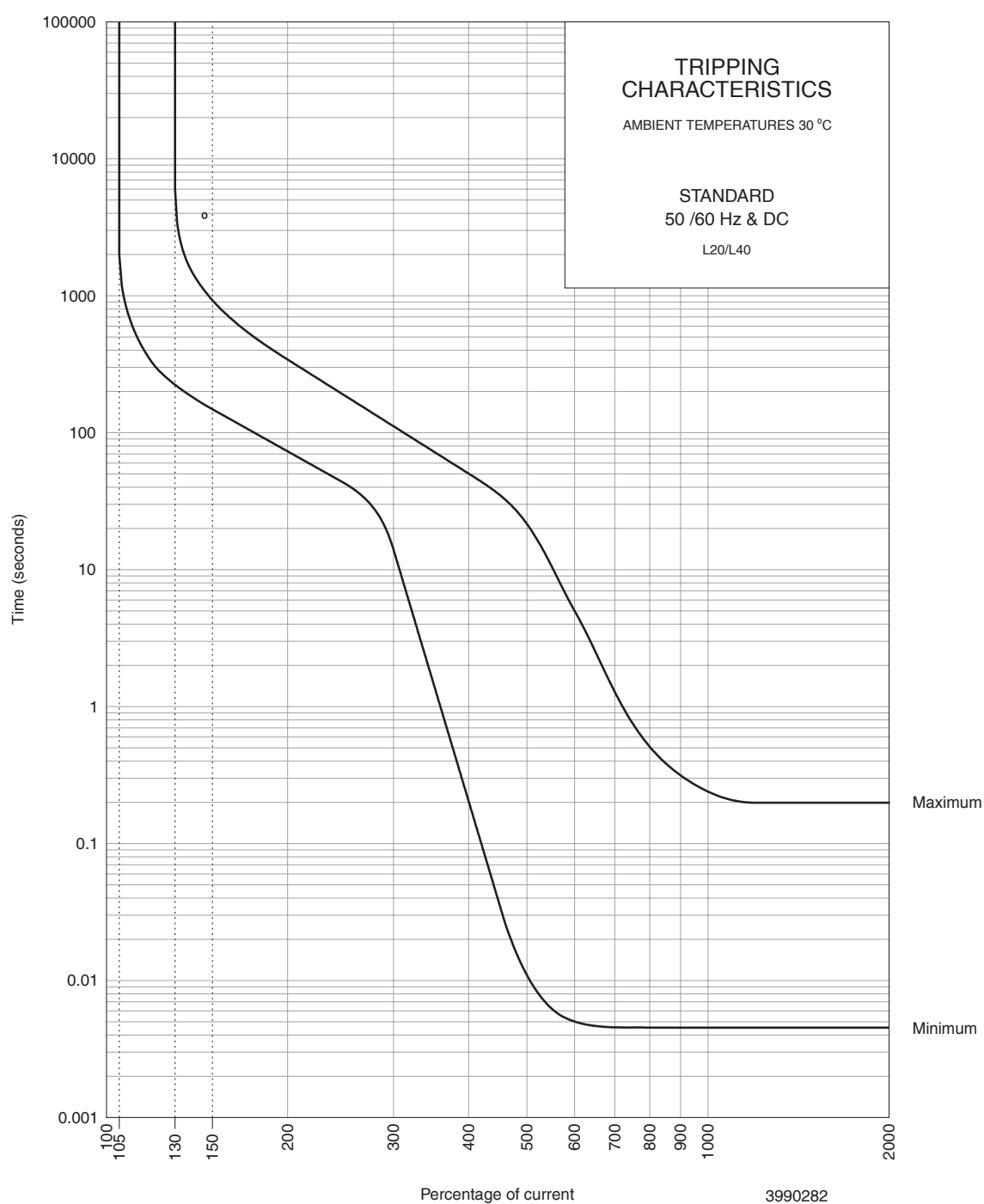
Type	Barriers	Poles	Terminals	kA @ 415 V		Rating (A)	Order No.
				Icu	Ics		
Distribution Circuit Breakers (Mixed Load)							
L20B	4	3	G1	20	20	100, 125, 150	L20B _ _ _
						175, 200, 225	L20B _ _ _
						250	L20B250
						300	L20B300
						350, 400	L20B _ _ _
						450, 500	L20B _ _ _
						600	L20B600
L40B	4	3	G1	40	20	100, 125, 150	L40B _ _ _
						175, 200, 225	L40B _ _ _
						250	L40B250
						300	L40B300
						350, 400	L40B _ _ _
						450, 500	L40B _ _ _
						600	L0B600
Type	Barriers	Poles	Terminals	kA @ 415 V		Rating (A)	Order No.
Switch Disconnectors							
L20BN	4	3	G1	20++		300	L20BN0300
						400	L20BN0400
						500	L20BN0500
						600	L20BN0600
L40BN	4	3	G4B	40++		300	L40BN0300
						400	L40BN0400
						500	L40BN0500
						600	L40BN0600

For options not listed, please contact CBI

LB Accessories Ordering Information

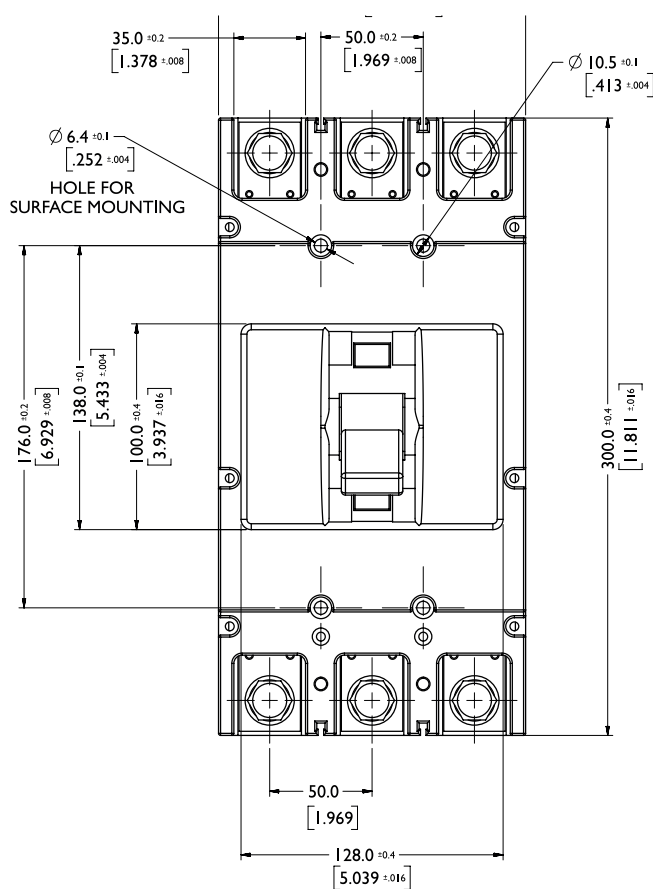
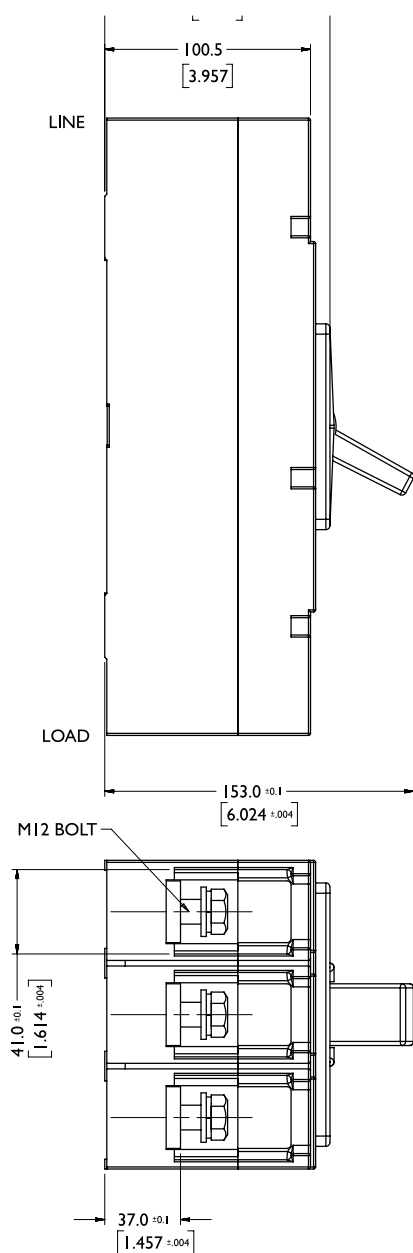
Description	Comments	Order Number
Shunt Trip	24 Vdc 110 Vac 220 - 240 Vac 380 - 415 Vac	LBSHT024 LBSHT110 LBSHT220 LBSHT380
Auxiliary Switch		LBAUX
Trip Alarm Switch		LBALARM
G4B Stub Busbar (500 - 600 A)	3 per set for line or load side	4120166
Phase Barriers	Set of 4	LBKIT

TIME DELAY CURVE



PERCENTAGE OF RATED CURRENT	105%	130%	135%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	225	199	150	75	14	0.2	0.01	0.005	0.0045	0.0045	0.0045	0.0045	0.0045
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	6000	1980	930	345	110	50	27	5	1.28	0.5	0.312	0.24	0.02

DIMENSIONAL DRAWINGS



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

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