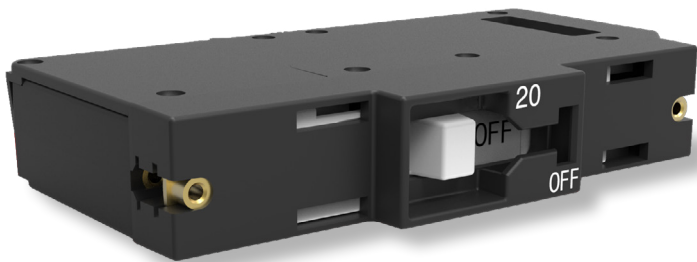


TB-Series

Hydraulic-Magnetic Circuit Breaker

[PRODUCT WEBPAGE](#)

request sample, configure part, watch video



Tandem Circuit Breaker

Developed as a two pole breaker designed to fit into a single rack unit, the TB-Series hydraulic-magnetic circuit breaker delivers versatile functionality for tight spaces. An integrated trip-free mechanism inhibits manual overrides during overcurrent or fault conditions for added safety. This tandem pole breaker is rated up to 20 amps, 120/240VAC, with a max IC of 10,000 amps for UL and 5,000 amps for TUV.

2 Poles

Fits in 1RU

0.10-20

Amps

120/240

VAC

Typical Applications

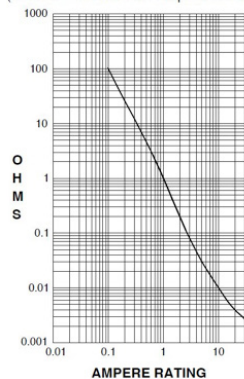
- Datacom
- Power Distribution Units

Tech Specs

Electrical

Maximum Voltage	120/240VAC 50/60 Hz
Current Ratings	Standard current coils: 0.200, 0.350, 0.500, 0.750, 1.00, 2.50, 5.00, 7.50, 10.0, 15.0, 20.0 Amps. See ordering scheme for additional ratings
Auxiliary/Alarm Switch	10.1A 250VAC
Rating(s)	0.1A 80VDC
Dielectric Strength	Meets UL and CSA Requirements and can withstand 1500 VAC, 60Hz for one minute between all electrically isolated terminals. Breakers to hold 100%, and must trip at 125% of rated current and greater within the time limit shown on Table B. Data shown represents breaker response at ambient temperature of 77° F (25° C) with no preloading. Breakers are mounted vertically in standard wall-mount position.
Insulation Resistance	Minimum of 100 Megohms @ 500VDC
Overload	50 operations @ 600% rated current
Inrush Pulse Tolerance	Standard delays 12x rated current, high inrush delays 25x for 1/2 cycle @ 60 Hz
Resistance, Impedance	(Across circuit breaker terminals)

RESISTANCE, IMPEDANCE VALUES
from Line to Load Terminals
(Values Based on Series Trip Circuit Breaker)



CURRENT (AMPS)	TOLERANCE (%)
0.10 - 5.0	± 15
5.1 - 20.0	± 25

Agency Approvals

UL 489 (Listed)	as Molded Case Circuit Breakers
TUV Certified	IEC/EN 60947-2
cULus Certified	CAN/CSA 22.2 No. 5

Time Delay Specs

To view all hydraulic-magnetic circuit breaker time delay values, please visit www.carlingtech.com/sites/default/files/documents/Carling-HM-CB-Time-Delays.pdf

Tables Table A: Voltage and Current Rating

UL489 Listed, cULus and TUV Certified Circuit Breakers						
Circuit Configuration	Voltage			Current Rating	Interrupting Capacity (Amps)	
	Max Rating	Frequency	Phase	Full Load Amps	UL / cULus	TUV
Series	120/240	50 / 60	1	0.10 - 20	10,000	5,000
	240 ¹	50 / 60	1	0.10 - 20	---	5,000

Notes:
1 Voltage rating requires wiring configuration according to TUV, see Dimensional Specifications drawings for wiring diagram.

Mechanical

Endurance	6,000 ON-OFF operations @ 6 per minute; with rated Current and Voltage. 4,000 ON-OFF operations with no load.
Trip Free	All TB-Series Circuit Breakers will trip on overload, even when Handle is forcibly held in the ON position.
Trip Indication	The operating Actuator moves positively to the OFF position when an overload causes the breaker to trip.

Physical

Internal Circuit Config.	Series, with or without auxiliary / alarm switch
Weight	Approximately 170g/5.75oz per unit
Standard Color	Housing – Black Actuator – White or Black with contrasting ON-OFF legends
Mounting	Refer to the dimensional specs page

Environmental

Designed and tested in accordance with requirements of specification MIL-PRF-55629 & MIL-STD-202 as follows:

Shock	-Withstands 100G's, 6ms sawtooth while carrying rated current per Method 213B, Test Condition "I". Instantaneous and ultra short curves tested @ 90% rated current.
Vibration	-40° C to +85° C
Moisture Resistance/ Humidity	Method 106G, i.e. ten 24-hour Humidity cycles @ +25° C to +65° C, 80-98% RH
Salt Spray	Method 101E, Condition A (90-95% RH@ 5% NaCl Solution, 96 hours)
Thermal Shock	Method 107G, Condition A (Five cycles @ -55° C to +25° C to +85° C to 25° C)
Operating Temperature	-20° C to +85° C
Storage Temperature	-40° C to +85° C

Ordering Scheme

Sample Part Number

T B 2 - B 0 - 24-620 - J 2 1 - C 3

Selection 1 2 3 4 5 6 7 8 9 10 11 12

1. TYPE

T Tandem Breaker

2. SERIES

B B-Series Circuit Breaker

3. POLES

2 Two

4. CIRCUIT

B Series Trip (Current)

5. AUXILIARY SWITCH 3

0 without Aux Switch
1 S.P.D.T., 0.093 Q.C. Term.
2 S.P.D.T., 0.110 Q.C. Term.
3 S.P.D.T., 0.110 Solder Lug
8 S.P.S.T., 0.187 Q.C. Term.
9 S.P.D.T., 0.187 Q.C. Term.

6. FREQUENCY & TIME DELAY

21 50/60Hz Ultra Short
22 50/60Hz Short
24 50/60Hz Medium
26 50/60Hz Long
42 50/60Hz Short, High-inrush
44 50/60Hz Medium, High-inrush
46 50/60Hz Long, High-inrush

7. CURRENT RATING (AMPERES)

CODE	AMPERES				
210	0.10	280	0.80	440	4.00
215	0.15	285	0.85	445	4.50
220	0.20	290	0.90	450	5.00
225	0.25	295	0.95	455	5.50
230	0.30	410	1.00	460	6.00
235	0.35	512	1.25	465	6.50
240	0.40	415	1.50	470	7.00
245	0.45	517	1.75	475	7.50
250	0.50	420	2.00	480	8.00
255	0.55	522	2.25	485	8.50
260	0.60	425	2.50	490	9.00
265	0.65	527	2.75	495	9.50
270	0.70	430	3.00	610	10.00
275	0.75	435	3.50	710	10.50

8. TERMINAL 1

J Screw M5 Back Connect
K Screw 10-32 Back Connect
N Screw M4 Back Connect
Y Screw 8-32 Back Connect

9. ACTUATOR COLOR & LEGEND

Actuator Color	I-O	ON-OFF	Dual	Legend Color
White	A	B	1	Black
Black	C	D	2	White
Red	F	G	3	White
Green	H	J	4	White
Blue	K	L	5	White
Yellow	M	N	6	Black
Gray	P	Q	7	Black
Orange	R	S	8	Black

10. MOUNTING

	HORIZONTAL MOUNTING STYLE	BARRIER
1	6-32 x .195 in. Threaded Inserts	Offset
3	6-32 x .195 in. Threaded Inserts	Standard
A	6-32 x .195 in. Threaded Inserts with Actuator Guard	Offset
C	6-32 x .195 in. Threaded Inserts with Actuator Guard	Standard
2	ISO M3 x 5 mm Threaded Inserts	Offset
4	ISO M3 x 5 mm Threaded Inserts	Standard
B	ISO M3 x 5 mm Threaded Inserts with Actuator Guard	Offset
D	ISO M3 x 5 mm Threaded Inserts with Actuator Guard	Standard

	VERTICAL MOUNTING STYLE	BARRIER
5	6-32 x .195 in. Threaded Inserts	Offset
7	6-32 x .195 in. Threaded Inserts	Standard
E	6-32 x .195 in. Threaded Inserts with Actuator Guard	Offset
G	6-32 x .195 in. Threaded Inserts with Actuator Guard	Standard
6	ISO M3 x 5 mm Threaded Inserts	Offset
8	ISO M3 x 5 mm Threaded Inserts	Standard
F	ISO M3 x 5 mm Threaded Inserts with Actuator Guard	Offset
H	ISO M3 x 5 mm Threaded Inserts with Actuator Guard	Standard

11. APPLICATION RATING

C 120/240 VAC

12. AGENCY APPROVAL

A Without Approvals
G UL 489 Listed
3 4 UL 489 Listed, TUV Certified

Notes:

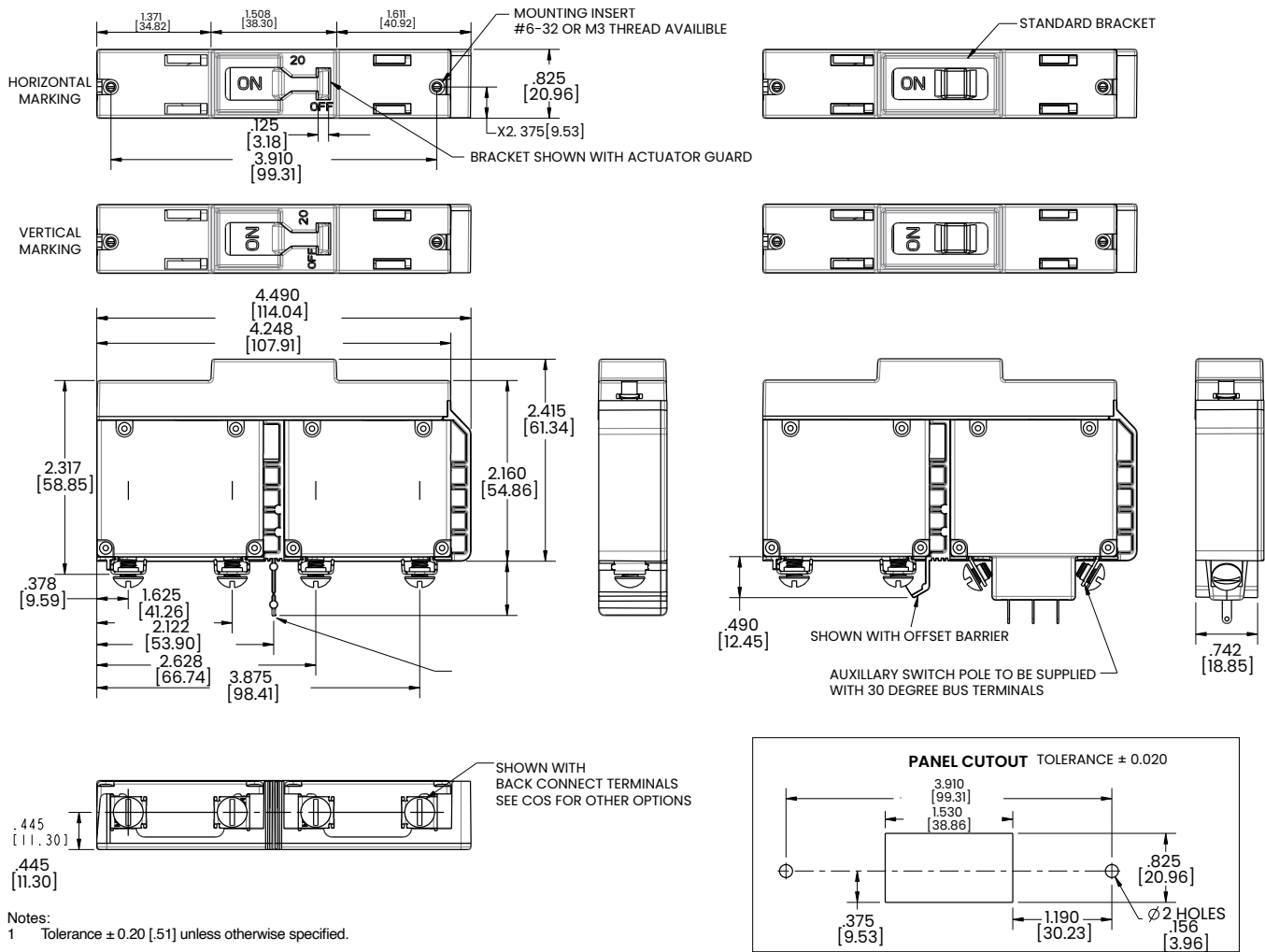
- 1 Pole with auxiliary switch is supplied with 30 degree bus terminals.
- 2 Only available with terminal codes J, K, N, Y.
- 3 Supplied with one auxiliary switch. See dimensional specs drawings for location.
- 4 TUV certification only available with I/O ON/OFF markings (Actuator code: 1, 2, 3, 4, 5, 6, 7, 8)

[Configure Complete Part Number >](#)

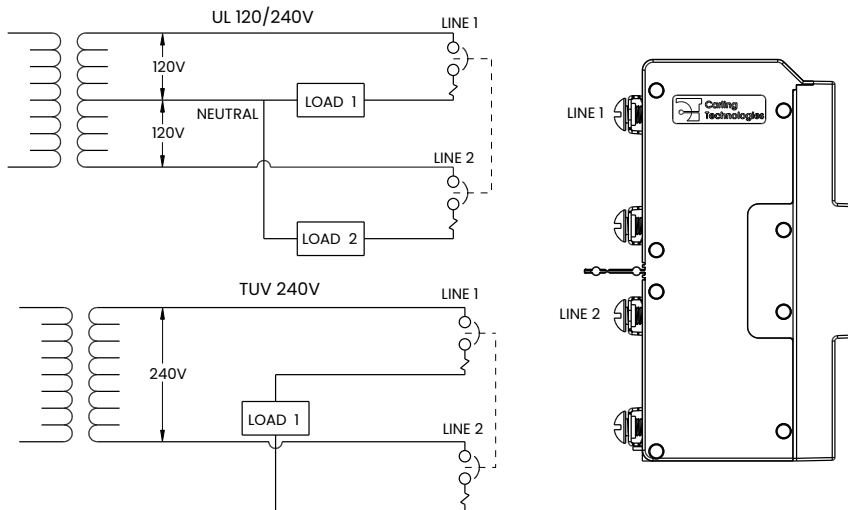
[Browse Standard Parts >](#)

Dimensional Specs

inches [millimeters]



Wiring Diagrams:



Authorized Sales Representatives and Distributors

Click on a region of the map below to find your local representatives and distributors or visit www.carlingtech.com/findarep.



About Carling

Founded in 1920, Carling Technologies is a leading manufacturer of electrical and electronic switches and assemblies, circuit breakers, electronic controls, power distribution units, and multiplexed power distribution systems. With six ISO9001 and IATF16949 registered manufacturing facilities and technical sales offices worldwide, Carling Technologies Sales, Service and Engineering teams do much more than manufacture electrical components, they engineer powerful solutions! To learn more about Carling please visit www.carlingtech.com/company-profile.

To view all of Carling's environmental, quality, health & safety certifications please visit www.carlingtech.com/environmental-certifications.

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