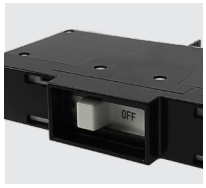
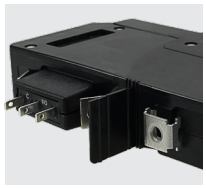
TB-Series
CIRCUIT BREAKER

The TB-Series is a space saving, tandem pole circuit breaker specifically designed to fit a two pole breaker into a one rack unit, making it ideal for datacom and PDU applications.

The TB-Series is designed with a common trip linkage ensuring if one pole trips, the tandem pole simultaneously trips. It also features a trip-free mechanism, a safety feature making it impossible to manually hold the contacts closed during overcurrent or fault conditions. TB-Series options include available handle guard to prevent inadvertent actuation and an auxiliary switch.

2 poles; ratings from 0.10 to 20 amps, 120/240VAC; UL 489 Listed, TUV, IEC/EN 60947-2.





Product Highlights:
- Fits in 1RU
- 2 Pole Protection in a 1 Pole Package
- Common Trip Included
- Optional Auxiliary Switch

Typical Applications:
- Datacom
- Power Distribution Units

Carling Technologies®
Innovative Designs. Powerful Solutions.

Electrical Tables

Table A: Voltage and Current Rating

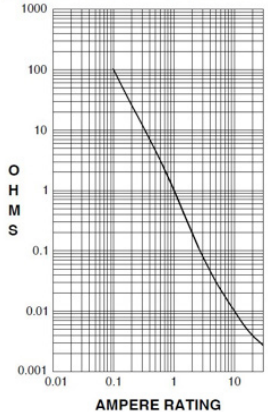
TB SERIES TABLE A : UL489 LISTED, cUL and TUV CERTIFIED CIRCUIT BREAKERS						
Circuit Configuration	Voltage			Current Rating	Interrupting Capacity (Amps)	
	Max Rating	Frequency	Phase	Full Load Amps	UL / cUL	TUV
Series	120/240	50 / 60	1	0.10 - 20	10,000	5,000
	240 [1]	50 / 60	1	0.10 - 20	---	5,000

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

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. Other ratings available - consult ordering scheme.
Auxiliary/Alarm Switch Rating(s)	10.1A 250VAC 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 Listed (489) as Molded Case Circuit Breakers
TUV Certified IEC/EN 60947-2
CUL Certified CAN/CSA 22.2 No. 5

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 Configurations	Series, with or without auxiliary / alarm switch
Weight	Approximately 170g/5.75oz per unit
Standard Colors	Housing – Black Actuator – White or Black with contrasting ON-OFF legends
Mounting	Refer to the dimensional specifications 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	Withstands 0.060" excursion from 10-55Hz, and 10G's 55-500Hz, at rated current per Method 204D, Test Condition A. Instantaneous and ultrashort curves tested @ 90% of rated current.
Moisture Resistance/ Humidity	Method 106G, i.e. ten 24-hour cycles @ +25°C to +65°C, 80-98% RH
Salt Spray	Method 101E, Condition A (90-95% RH@ 5% NcCl 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

*Manufacturer reserves the right to change product specification without prior notice.

T	B	2	–	B	0	–	24	–	620	–	J	2	1	–	C	3
1 Type	2 Series	3 Poles		4 Circuit	5 Auxiliary Switch		6 Frequency & Delay		7 Current Rating		8 Terminal	9 Actuator Color	10 Mounting/ Barriers		11 Application Rating	12 Agency Approval

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	**611**	11.00
215	0.15	**285**	0.85	**445**	4.50	**711**	11.50
220	0.20	**290**	0.90	**450**	5.00	**612**	12.00
225	0.25	**295**	0.95	**455**	5.50	**712**	12.50
230	0.30	**410**	1.00	**460**	6.00	**613**	13.00
235	0.35	**512**	1.25	**465**	6.50	**614**	14.00
240	0.40	**415**	1.50	**470**	7.00	**615**	15.00
245	0.45	**517**	1.75	**475**	7.50	**616**	16.00
250	0.50	**420**	2.00	**480**	8.00	**617**	17.00
255	0.55	**522**	2.25	**485**	8.50	**618**	18.00
260	0.60	**425**	2.50	**490**	9.00	**620**	20.00
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	ON-OFF	Dual	Legend Color
White	**B**	**1**	Black
Black	**D**	**2**	White
Red	**G**	**3**	White
Green	**J**	**4**	White
Blue	**L**	**5**	White
Yellow	**N**	**6**	Black
Gray	**Q**	**7**	Black
Orange	**S**	**8**	Black

10 MOUNTING [2]

	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

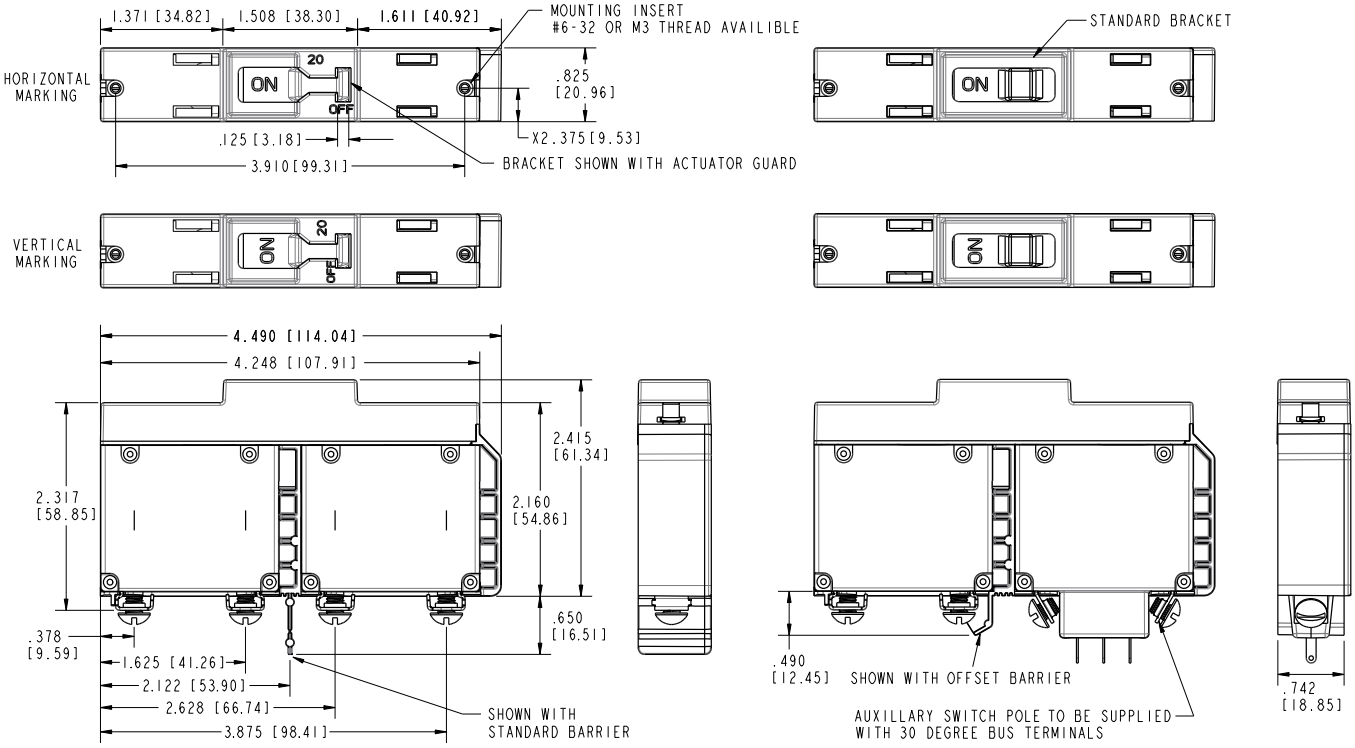
	VERTICAL MOUNTING STYLE	BARRIER
5	6-32 x .195 in. Threaded Inserts	Offset
7	6-32 x .195 in. Threaded Inserts	Standard
E	6-32 x .195 in. Threaded Inserts with Actuator Guard	Offset
G	6-32 x .195 in. Threaded Inserts with Actuator Guard	Standard
6	ISO M3 x 5 mm Threaded Inserts	Offset
8	ISO M3 x 5 mm Threaded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

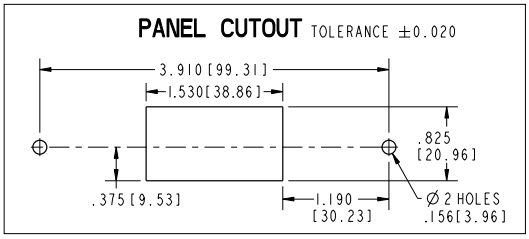
11 APPLICATION RATING
C 120/240 VAC

12 AGENCY APPROVAL
A Without Approvals
G UL489 Listed
3 [4] UL489 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)

Dimensional Specifications: in. [mm]





Notes:
1 All dimensions are in inches [millimeters].
2 Tolerance ± 0.20 [.51] unless otherwise specified.

Wiring Diagrams: