

Molded Case Circuit Breakers

Industrial Circuit Breakers

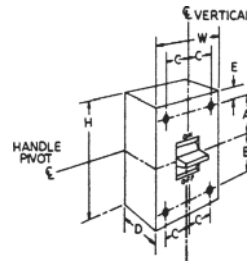
Quick Reference Guide
10-1200A Circuit Breakers
Thermal Magnetic Trip

Section 6

Ratings do not apply to molded case switches.

Maximum interruption ratings and voltages shown. A circuit breaker of the type given in the left-hand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table.

That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.



TEYD, TEYH, TEYL

TEY and TEYF (UL/cUL File E-11592; TEYD/H/L (UL/cUL File E-11592)

Circuit Breaker Type	Ampere Rating	No. Poles	Maximum Voltage Rating		UL Listed Interrupting Rating—kA																	Approx. Ship Wt./Std. Pack
					Vac						Vdc											
			ac	dc	120	120/240	240	277	480/277	480	600	125	250	500	H	W	D	A	B	C	E	
TEY ^{2,3}	15-100	1	277	125	65	—	14	14	—	—	10	—	—	5 1/4	1	3 1/16	—	—	—	—	—	
		2	480/277	250	—		65	14	14	—	—	10	—		2							
		3	—	—	—		—	—	—	—	—	—	—		3							
TEYF ^{2,3}	15-60	1	277	125	65	—	18	18	—	—	10	—	—	5 1/4	1	3 1/16	—	—	—	—	—	
	15-125	2	480/277	250	—		65	18	18	—	—	10	—		2							
	3	—	—	—	—		—	—	—	—	—	—	—		3							
TEYD	15-70	1	277	—	65	65	—	25	—	—	—	—	—	5 1/4	1	3 1/16	—	—	—	—	1 lb	
	15-125	2	480/277	—	—	65	65	—	25	—	—	—	—		2						2 lb	
	3	—	—	—	—	—	—	—	—	—	—	—	—		3						2.7 lb	
TEYH	15-70	1	277	—	65	65	—	35	—	—	—	—	—	5 1/4	1	3 1/16	—	—	—	—	1 lb	
	15-125	2	480/277	—	—	65	65	—	35	—	—	—	—		2						2 lb	
	3	—	—	—	—	—	—	—	—	—	—	—	—		3						2.7 lb	
TEYL	15-70	1	277	125	100	100	—	65	—	—	—	15	—	5 1/4	1	3 1/16	—	—	—	—	1 lb	
	15-125	2	480/277	250	—	100	100	—	65	—	—	42	20		—						2	2 lb
	3	—	—	—	—	—	—	—	—	—	—	42	35		—						3	2.7 lb

E150 (UL/cUL File E-11592)

TEB ^{2,3}	10-100 ⁴	1	120	125	10	—	—	—	—	—	5	—	—	6 5/16	1 3/8	3 3/8	2 41/64	2 15/64	—	23/32	26 lb/24
		2	240	250	—		10					—	5		—				2 3/4		24 lb/12
		3		—			10						—		—				4 1/8		28 lb/8
TED ^{2,3}	10-100 ⁴	1	277, 347 ⁵	125	—	—	—	14	—	10	—	10	—	6 5/16	1 3/8	3 3/8	2 41/64	2 15/64	—	23/32	26 lb/24
		2	480	250			18	—	—	18	—	—	10		—				2 3/4		24 lb/12
	3 ⁷	480, 600	500	14			—	10	10 ¹	4 1/8	28 lb/8										
THED ^{2,3}	15-30	1	277, 347 ⁵	125	—	—	—	65	—	—	—	10 ⁶	—	6 5/16	1 3/8	3 3/8	2 41/64	2 15/64	—	23/32	26 lb/24
	15-100	2	480	250			65	—	—	25	—	18	10 ⁶		—				4 1/8		24 lb/12
	20-100	3 ⁷	600	500			65				10		10 ¹		11/16				28 lb/8		
	110-150						42				10		10 ¹								

J600 (UL File E-11592; TJJ, Fixed Thermal Magnetic Trip Unit; TJK, THJK: Interchangeable Thermal Mag. Trip Unit)

TJJ, TJK4	200-400	2	600	250	—	—	42	—	—	30	22	—	20	—	10 1/8	8 1/4	3 13/16	3 15/16	3 13/16	1 3/8	1 3/16	16 lb/1
		3		500								—	20	20 ¹								17 1/2 lb/1
TJK6	250-600	2	600	250	—	—	42	—	—	30	22	—	20	—	10 1/8	8 1/4	3 13/16	3 15/16	3 13/16	1 3/8	1 3/16	18 lb/1
		3		500								—	20	20 ¹								20 lb/1
THJK4	200-400	2	600	250	—	—	65	—	—	35	25	—	40	—	10 1/8	8 1/4	3 13/16	3 15/16	3 13/16	1 3/8	1 3/16	16 lb/1
		3		500								—	40	20 ¹								17 1/2 lb/1
THJK6	250-600	2	600	250	—	—	65	—	—	35	25	—	40	—	10 1/8	8 1/4	3 13/16	3 15/16	3 13/16	1 3/8	1 3/16	18 lb/1
		3		500								—	40	20 ¹								20 lb/1

Mag-Break (UL Files E-11592, E-66390; Magnetic Trip Unit)⁸

TJC	400-600	3	600	—	—	—	42	—	—	30	22	—	—	—	10 1/8	8 1/4	3 13/16	3 13/16	3 13/16	1 3/8	1 3/16	16 lb/1
																						17 1/2 lb/1

¹UL listed with poles in series for 500 Vdc ungrounded battery applications.

²UL listed as HACR (heating, air conditioning, and refrigeration).

³15-50A UL listed as HID (high intensity discharge).

⁴10 amp not UL listed, rated 5kA @ 120V, 240V and 480V

⁵UL/cUL listed for 10kA @ 347 Vac (TED) and 18kA @ 347V (THED).

Rated 10kA @ 480V but not UL listed.

⁶UL listed 10kA, GE tested to 20kA.

⁷TED, 3P, 600V, 15A breaker is obsolete. (TED136015WL & THED136015WL)

⁸Per UL 489, interrupting capacities are not shown on product label.

Molded Case Circuit Breakers

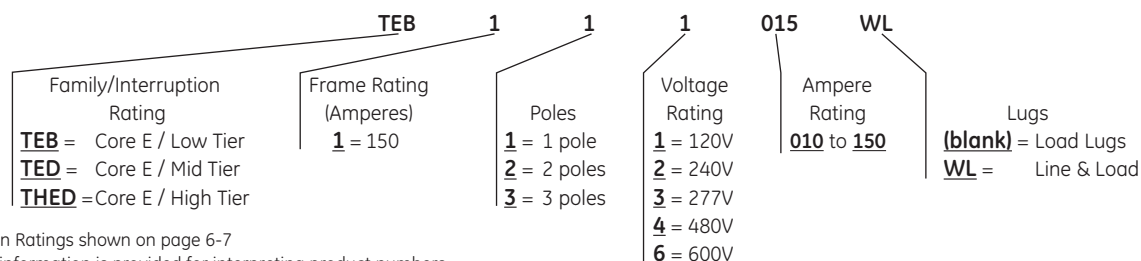
Industrial Circuit Breakers

10-150A Circuit Breakers
Thermal-Magnetic Trip
E150 Line Circuit Breakers
Types TEB, TED, THED
Noninterchangeable Trip

Section 6



Product Number Structure



Interruption Ratings shown on page 6-7

Note: This information is provided for interpreting product numbers (it should not be used to build product numbers).

Single Pole — Includes Cu/Al load lugs only. If line lugs are required, add suffix “WL” to Product Number.

Ampere Rating	Type TEB	Type TED		Type THED	
	120 Vac 125 Vdc	277 Vac 125 Vdc	347 Vac ¹	277 Vac	347 Vac ¹
	Product Number	Product Number	Product Number	Product Number	Product Number
10	TEB111010 ^{2,4}	TED113010 ^{2,4}			
15	TEB111015 ^{3,4}	TED113015 ^{3,4}	TED114015 ^{3,4}	THED113015 ⁴	THED114015 ^{3,4}
20	TEB111020 ^{3,4}	TED113020 ^{3,4}	TED114020 ^{3,4}	THED113020 ⁴	THED114020 ^{3,4}
25	TEB111025 ⁴	TED113025 ⁴	TED114025 ⁴	THED113025 ⁴	THED114025 ⁴
30	TEB111030 ⁴	TED113030 ⁴	TED114030 ⁴	THED113030 ⁴	THED114030 ⁴
35	TEB111035 ⁴	TED113035 ⁴	—	—	—
40	TEB111040 ⁴	TED113040 ⁴	—	—	—
45	TEB111045 ⁴	TED113045 ⁴	—	—	—
50	TEB111050 ⁴	TED113050 ⁴	—	—	—
60	TEB111060	TED113060	—	—	—
70	TEB111070	TED113070	—	—	—
80	TEB111080	TED113080	—	—	—
90	TEB111090	TED113090	—	—	—
100	TEB111100	TED113100	—	—	—

Two Pole — Includes Cu/Al line and load lugs. For optional lugs, see page 6-102 and 6-104.

Ampere Rating	Type TEB	Type TED	Type THED, Hi-Break ⁵
	240 Vac, 250 Vdc	480 Vac, 250 Vdc	480 Vac, 250 Vdc
	Product Number	Product Number	Product Number
10	TEB122010WL ^{2,4}	TED124010WL ^{2,4}	—
15	TEB122015WL ⁴	TED124015WL ⁴	THED124015WL ⁴
20	TEB122020WL ⁴	TED124020WL ⁴	THED124020WL ⁴
25	TEB122025WL ⁴	TED124025WL ⁴	THED124025WL ⁴
30	TEB122030WL ⁴	TED124030WL ⁴	THED124030WL ⁴
35	TEB122035WL ⁴	TED124035WL ⁴	THED124035WL ⁴
40	TEB122040WL ⁴	TED124040WL ⁴	THED124040WL ⁴
45	TEB122045WL ⁴	TED124045WL ⁴	THED124045WL ⁴
50	TEB122050WL ⁴	TED124050WL ⁴	THED124050WL ⁴
60	TEB122060WL	TED124060WL	THED124060WL
70	TEB122070WL	TED124070WL	THED124070WL
80	TEB122080WL	TED124080WL	THED124080WL
90	TEB122090WL	TED124090WL	THED124090WL
100	TEB122100WL	TED124100WL	THED124100WL
110	—	TED124110WL	—
125	—	TED124125WL	—
150	—	TED124150WL	—

¹Suitable for 10 kAIC at 480 Vac, but not labeled or UL listed.

²Not UL listed, rated 5kA @ 120V, 240V and 480V.

³Single-pole, 15- and 20-ampere breakers are also UL listed as switching duty breakers, suitable for switching 120 Vac (TEB), 277, 347 Vac (TED, THED) fluorescent lighting loads.

⁴UL listed for HID (high intensity discharge).

⁵Two-pole breaker is furnished in three-pole case.

Notes: All TEB, TED, THED breakers UL listed as HACR type except 10 ampere.

All TEB, TED, THED breakers suitable for reverse feed.

60/75°C rating through 100 amperes, 75°C rating above 100 amperes.

Molded Case Circuit Breakers

Industrial Circuit Breakers

Section 6

10-150A Circuit Breakers

Thermal-Magnetic Trip

E150 Line Circuit Breakers

Types TEB, TED, THED

Noninterchangeable Trip

Three Pole — Includes Cu/Al line and load lugs. For optional lugs, see page 6-102 and 6-104.

Ampere Rating	Type TEB	Type TED		Type THED, Hi-Break
	240 Vac	480 Vac	600 Vac	600 Vac
	Product Number	Product Number	Product Number	Product Number
10	TEB132010WL ^{1,3}	TED134010WL ^{1,3}	—	—
15	TEB132015WL ³	TED134015WL ³	—	—
20	TEB132020WL ³	TED134020WL ³	TED136020WL ³	THED136020WL ³
25	TEB132025WL ³	TED134025WL ³	TED136025WL ³	THED136025WL ³
30	TEB132030WL ³	TED134030WL ³	TED136030WL ³	THED136030WL ³
35	TEB132035WL ³	TED134035WL ³	TED136035WL ³	THED136035WL ³
40	TEB132040WL ³	TED134040WL ³	TED136040WL ³	THED136040WL ³
45	TEB132045WL ³	TED134045WL ³	TED136045WL ³	THED136045WL ³
50	TEB132050WL ³	TED134050WL ³	TED136050WL ³	THED136050WL ³
60	TEB132060WL	TED134060WL	TED136060WL	—
70	TEB132070WL	TED134070WL	TED136070WL	THED136070WL
80	TEB132080WL	TED134080WL	TED136080WL	—
90	TEB132090WL	TED134090WL	TED136090WL	THED136090WL
100	TEB132100WL	TED134100WL	TED136100WL	THED136100WL
110	—	TED134110WL	TED136110WL	THED136110WL
125	—	TED134125WL	TED136125WL	THED136125WL
150	—	TED134150WL	TED136150WL	THED136150WL
100NA	—	TED134YT100 ²	TED136YT100 ²	—
150NA	—	TED134YT150 ²	TED136YT150 ²	—

¹Not UL listed, rated 5kA @ 120V, 240V and 480V.

²Includes factory-installed dummy trip.

³UL listed for HID (high intensity discharge).

Notes: All TEB, TED, THED breakers UL listed as HACR type except 10 ampere.

All TEB, TED, THED breakers suitable for reverse feed.

60/75°C rating through 100 amperes, 75°C rating above 100 amperes.

Accessories: See pages 6-38 to 6-43 and 6-93 to 6-105.

Add-on Current Limiter — UL Listed

100 kAIC at 480 and 600 VAC⁴

Ampere Rating	Product Number
15	TEDL36015
20	TEDL36020
30 and 60	TEDL36060
100	TEDL36100

⁴For use with 3 Pole TED/THED only

E150 Reference Publications

TDR Operating Mechanism	GEH-2994
Shunt Trip	GEH-3416
Undervoltage Release	GEH-3417
Auxiliary Switch	GEH-3418
Three Coil Shunt Trip	GEH-3434
Mechanical Interlock	GEH-4310
TDM Operating Mechanism	GEH-4335
Bell Alarm	GEH-4576
Plug-in Mounting Base	GEH-4610
STDA Flange Handle	GEH-5314
STDA Operating Mechanism	GEH-5684
Cable Operator Mechanism	GEH-6290
Motor Operator	GEH-6500
Back Connected Studs	GEJ-3609
Padlocking Device - Standard	GEJ-5143
E150 Outline Drawing	139C3643SH1, 2, 4

Molded Case Circuit Breakers

Internal Accessories

Molded Case Circuit Breakers

Section 6

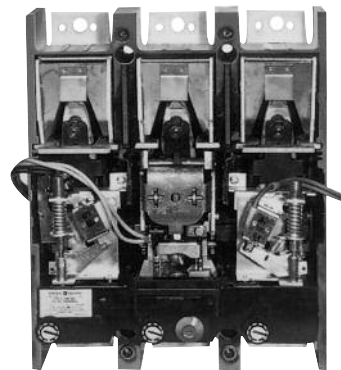
Accessory Devices and Ratings

Internally mounted accessories can be either factory or field installed, but should be factory installed when UL listing is required.

Factory installed devices with leads exiting from the side are UL listed, but when leads exit from the back the UL listing is void.

For accessory installation combinations refer to table below. "Mounting Pole" refers to left-, center- or right-hand pole as seen when facing the front of the breaker. Control leads may exit the breaker from its side (S) or back (B)¹.

Nonautomatic circuit breakers (molded case switches) require dummy trip units if internal accessories are to be field installed (refer to page 6-43).



Pole Positions

L—Left
C—Center
R—Right

Lead Wire Exit

S—Side
B—Back

J Frame Circuit Breaker with Internal Accessories Mounted in Each Pole

Breaker Type	Bell Alarm Switch			Inst. Sheet GEH-	Auxiliary Switch ³ or Shunt Trip		Inst. Sheet GEH-	Undervoltage Release		Inst. Sheet GEH-	Three Coil Shunt Trip		Inst. Sheet GEH-	Total Number of Accessories Within any One Circuit Breaker
	Mounting Pole				Mounting Pole			Mounting Pole			Mounting Pole			
	L	C	R		L	R		L	R		L	R		
TQB, THQB, THHQB, TXQB, TQL, THQL, THHQL, TXQL, TQC, THQC, THHQC, TXQC	—	—	—	—	UL	—	4	—	—	—	—	—	—	One accessory only. Mounts in a one-inch frame and increase overall breaker size by one pole. May be applied to 1-, 2-, or 3-pole breakers.
TQD, THQD	—	—	—	—	—	UL	4	—	—	—	—	—	—	One accessory only
E150 TEB, TEC, TED, THED, THLC1, TB1 ^{5,6,8}	UL ⁷	—	UL	4576	UL ⁷	UL	3418 Aux 3416 S.T.	—	UL	3417	—	UL ⁸	3434	2-pole circuit breaker—any one 3-pole circuit breaker—any two except UVR and 3-coil shunt trip
F225 ⁹ TFC, TFJ, TFK, THFK, THLC2, THLC4, TLB2, TLB4	—	—	UL	4620	UL	UL	4653	UL	UL	4653	UL ⁸	UL	4622	any two
J600 TJC, TJD, TJJ, TJK, THJK, TB4 ⁵ , TBC4 ⁵	—	UL ⁸	—	3320	UL	UL	3321 Aux 3435 S.T.	—	UL	5407	UL ⁸	—	3346	Any two plus bell alarm except TB4, TBC4 any one plus bell alarm .
K1200 TKC, TKM, THKM TB6 ⁵ , TBC6 ⁵ TB8, TBC8	—	UL ⁸	—	4305	UL	UL	3321 Aux 3344 S.T.	—	UL	5408	UL ⁸	—	3346	Any two plus bell alarm

Accessory-Lead Color Coding ¹⁰						All accessory contacts shown with the circuit breaker in tripped position.
	Bell Alarm Switch	Auxiliary Switch	Shunt Trip	Undervoltage Release	Three-Coil Shunt Trip	

¹ Except TFC and TFJ, F225 line model 4 frames and trips (mfg. code date J101+ (1981 or later), and THLC2, THLC4, TLB4 are UL listed for field installation of most accessories.

² Not UL listed.

³ 600 Vac auxiliary switches are not UL listed.

⁴ Accessories are factory installed only.

⁵ UL listed at 200 AIC without internal accessories, 100 AIC with internally mounted accessories.

⁶ Accessories not available for single-pole TEB/TED frame. Use two-pole circuit breaker.

⁷ Left pole mounting available for two-pole THED but not for two-pole TEB, TED.

⁸ Not available with lead exit from the back of breaker.

⁹ UL listed interrupting capacity with accessories: 10 kAIC at 600 Vac, 22 kAIC at 480 Vac, 22 kAIC at 240 Vac.

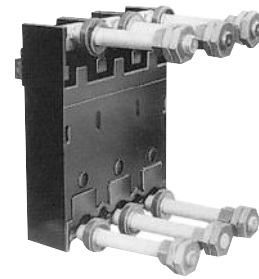
¹⁰ Leads are #18 125°C Vulkene insulated.

Molded Case Circuit Breakers

External Accessories

Lugs and Associated Hardware

Section 6



Breaker with Line and Load Studs

Lugs, Line Shields, Covers and Bus Connectors

Accessory	Wire Range	For Use With	Product Number	Description
Copper-Aluminum Lugs	(1) #14-6 Cu, #12-2 Al	TQC (15-60A) (Non DIN Rail)	TQAL3	Single Lug
	(1) #4-1/0 Cu-Al	TQC (70-100A)	TQAL4	Single Lug
	(1) #4-300 kcmil Cu-Al	TQD	TCAL25	Single Lug
			TCALK325	3-Lug Kit
	(1) #14-8	E150, THLC1, TB1, (15-30A)	TCAL14	Single Lug
	(1) #14-3 Cu, #12-1 Al	E150, THLC1, TB1, (15-60A)	TCAL12	Single Lug
	(1) #6-2/0 Cu, #4-2/0 Al	E150, THLC1, TB1, (70-90A)	TCAL12A	Single Lug
	(1) #3-3/0 Cu, #1-3/0 Al	E150, THLC1, TB1, (100-150A)	TCAL15	Single Lug
	(1) #4-300 kcmil Cu-Al	F225	TCAL24	Single Lug
			TCALK324	3-Lug Kit
	(1) 6-600 kcmil or (2) 2/0-250 kcmil Cu-Al	J400, TB4, J600 (Thru 400A), TJD	TCAL43	Single Lug
	(2) 4/0-350 kcmil Cu or (2) 300-500 kcmil Al	J600 (450-600A)	TCAL63	Single Lug
			TCALK363	3-Lug Kit
	(1) 750 kcmil Cu-Al	J400 TJD	TCAL47	Single Lug
	(1) 3/0-500 kcmil or (2) 3/0-250 kcmil Cu-Al	TLB4, THLC4	TCLK43	Single Lug
	(2) 1/0-250 kcmil or (1) #4-600 kcmil Cu-Al	K1200, TB6 (300-400A)	TCAL41	Single Lug
			TCAL61	Single Lug
	(2) 2/0-500 kcmil Cu-A	K1200, TB6 (300-600A)	TCALK261	2-Lug Kit w/ Wrench
			TCALK361	3-Lug Kit w/ Wrench
			TCAL81 ¹	Single Lug
	(3) 3/0-500 kcmil Cu-Al	K1200, TB8 (600-800A)	TCALK281 ¹	2-Lug Kit w/ Wrench
			TCALK381 ¹	3-Lug Kit w/ Wrench
			TCAL91 ¹	Single Lug
	(3) 3/0-500 kcmil Cu-Al	TK4V - Load end	TCALK291 ¹	2-Lug Kit w/ Wrench
			TCALK391 ¹	3-Lug Kit w/ Wrench
			TCAL121 ²	Single Lug
	(4) 250-350 kcmil Cu or (4) 250-500 kcmil Al	K1200 (1000-1200A)	TCALK2121 ²	2-Lug Kit w/ Wrench
			TCALK3121 ²	3-Lug Kit w/ Wrench
			TCAL122 ³	Single Lug
	(3) 750 kcmil Cu-Al	K1200 (1200A)	TCALK2122 ³	2-Lug Kit w/ Wrench
			TCALK3122 ³	3-Lug Kit w/ Wrench
			TCAL131 ²	Single Lug
	(4) 250-350 kcmil Cu or (4) 250-500 kcmil Al	TK4V - Load end	TC012	Single Lug
Copper Only Lugs With Follower and Extra Plating	#14-2/0	E150, TB1 (thru 150A)	TC012	Single Lug
	#4-300 kcmil Cu	TFJ (250A)	TC024	Single Lug
	(1) 6-600 kcmil or (2) 1/0-250 kcmil Cu	J400, TB4	TC043	Single Lug
	(2) 250-350 kcmil Cu	J600	TC063	Single Lug
	(1) 1/0-600 kcmil or (2) 1/0-250 kcmil Cu	K1200, TB6 (300-400A)	TC041 ⁴	Single Lug
	(2) 2/0-500 kcmil Cu	K1200, TB6, (300-600A)	TC061	Single Lug
	(3) 3/0-500 kcmil Cu	K1200, TB8 (600-800A)	TC081A	Single Lug
	(3) 3/0-500 kcmil Cu	TK4V - Load end	TC091	Single Lug
	(4) 250-400 kcmil Cu	K1200 (1000-1200A)	TC0121	Single Lug
	(4) 250-400 kcmil Cu	TK4V - Load end	TC0131	Single Lug
Line Shield		TEB, TEC, TED, THED	TEDLS	
		TFJ, TFK, TFC	TFKLS	
		TJJ, TJK, TJC	TJKLS	
Lug Cover, TKM Breaker (two per breaker)		TC061, TCAL61, TCAL81 Lugs, TC081A	789A448G1	
		TC0121, TCAL121 Lugs	789A448G2	
Connector (back strap)		TKM	TKMC1	
Line voltage control wire kit for terminating control wire at breaker lugs		K1200	SKLVK ⁶	

¹Not suitable for 100 A aluminum conductor.

²Suitable for 500 kcmil copper for voltage drop considerations.

³Not UL listed, requires user supplied lug cover.

⁴Not UL listed.

⁵End cover supplied with 800A frame is used as lug cover.

⁶3-pole kit.