

# Industrial Circuit Breakers

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



## Product Number Structure

<b>TEB</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>015</b>	<b>WL</b>
<b>Family/Interruption Rating</b>					<b>Lugs</b>
TEB = Core E / Low Tier					(blank) = Load Lugs
TED = Core E / Mid Tier					WL = Line & Load
THED = Core E / High Tier					
<b>Frame Rating (Amperes)</b>					<b>Ampere Rating</b>
1 = 150					010 to 150
<b>Poles</b>					<b>Voltage Rating</b>
1 = 1 pole					1 = 120V
2 = 2 poles					4 = 480V
3 = 3-poles					2 = 240V
					6 = 600V
					3 = 277V

Interruption Ratings shown on page 6-9

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 <sup>1</sup>	277 Vac	347 Vac <sup>1</sup>	
	Product Number	Product Number	Product Number	Product Number	Product Number	
10	TEB111010 <sup>2,4</sup>	TED113010 <sup>2,4</sup>	—	—	—	
15	TEB111015 <sup>3,4</sup>	TED113015 <sup>3,4</sup>	TED114015 <sup>3,4</sup>	THED113015 <sup>4</sup>	THED114015 <sup>3,4</sup>	
20	TEB111020 <sup>3,4</sup>	TED113020 <sup>3,4</sup>	TED114020 <sup>3,4</sup>	THED113020 <sup>4</sup>	THED114020 <sup>3,4</sup>	
25	TEB111025 <sup>4</sup>	TED113025 <sup>4</sup>	TED114025 <sup>4</sup>	THED113025 <sup>4</sup>	THED114025 <sup>4</sup>	
30	TEB111030 <sup>4</sup>	TED113030 <sup>4</sup>	TED114030 <sup>4</sup>	THED113030 <sup>4</sup>	THED114030 <sup>4</sup>	
35	TEB111035 <sup>4</sup>	TED113035 <sup>4</sup>	—	—	—	
40	TEB111040 <sup>4</sup>	TED113040 <sup>4</sup>	—	—	—	
45	TEB111045 <sup>4</sup>	TED113045 <sup>4</sup>	—	—	—	
50	TEB111050 <sup>4</sup>	TED113050 <sup>4</sup>	—	—	—	
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 6-216 and 6-218.

Ampere Rating	Type TEB		Type TED	Type THED, Hi-Break <sup>5</sup>
	240 Vac, 250 Vdc		480 Vac, 250 Vdc	480 Vac, 250 Vdc
	Product Number		Product Number	Product Number
10	TEB122010WL <sup>2,4</sup>		TED124010WL <sup>2,4</sup>	—
15	TEB122015WL <sup>4</sup>		TED124015WL <sup>4</sup>	THED124015WL <sup>4</sup>
20	TEB122020WL <sup>4</sup>		TED124020WL <sup>4</sup>	THED124020WL <sup>4</sup>
25	TEB122025WLv		TED124025WL <sup>4</sup>	THED124025WL <sup>4</sup>
30	TEB122030WL <sup>4</sup>		TED124030WL <sup>4</sup>	THED124030WL <sup>4</sup>
35	TEB122035WL <sup>4</sup>		TED124035WL <sup>4</sup>	THED124035WL <sup>4</sup>
40	TEB122040WL <sup>4</sup>		TED124040WL <sup>4</sup>	THED124040WL <sup>4</sup>
45	TEB122045WL <sup>4</sup>		TED124045WL <sup>4</sup>	THED124045WL <sup>4</sup>
50	TEB122050WL <sup>4</sup>		TED124050WL <sup>4</sup>	THED124050WL <sup>4</sup>
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	—

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

<sup>2</sup>Not UL listed, rated 5kA @ 120V, 240V and 480V.

<sup>3</sup>Single-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.

<sup>4</sup>UL listed for HID (high intensity discharge).

<sup>5</sup>Two-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.

## Industrial Circuit Breakers

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 6-216 and 6-218.**

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 <sup>1,3</sup>	TED134010WL <sup>1,3</sup>	–	–
15	TEB132015WL <sup>3</sup>	TED134015WL <sup>3</sup>	–	–
20	TEB132020WL <sup>3</sup>	TED134020WL <sup>3</sup>	TED136020WL <sup>3</sup>	THED136020WL <sup>3</sup>
25	TEB132025WL <sup>3</sup>	TED134025WL <sup>3</sup>	TED136025WL <sup>3</sup>	THED136025WL <sup>3</sup>
30	TEB132030WL <sup>3</sup>	TED134030WL <sup>3</sup>	TED136030WL <sup>3</sup>	THED136030WL <sup>3</sup>
35	TEB132035WL <sup>3</sup>	TED134035WL <sup>3</sup>	TED136035WL <sup>3</sup>	THED136035WL <sup>3</sup>
40	TEB132040WL <sup>3</sup>	TED134040WL <sup>3</sup>	TED136040WL <sup>3</sup>	THED136040WL <sup>3</sup>
45	TEB132045WL <sup>3</sup>	TED134045WL <sup>3</sup>	TED136045WL <sup>3</sup>	THED136045WL <sup>3</sup>
50	TEB132050WL <sup>3</sup>	TED134050WL <sup>3</sup>	TED136050WL <sup>3</sup>	THED136050WL <sup>3</sup>
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 <sup>2</sup>	TED136YT100 <sup>2</sup>	–
150NA	–	TED134YT150 <sup>2</sup>	TED136YT150 <sup>2</sup>	–

<sup>1</sup>Not UL listed, rated 5kA @ 120V, 240V and 480V.

<sup>2</sup>Includes factory-installed dummy trip.

<sup>3</sup>UL 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 6-207 to 6-218.

### Add-on Current Limiter — UL Listed

100 kAIC at 480 and 600 VAC<sup>4</sup>

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

<sup>4</sup>For 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

# Internal Accessories

## Molded Case Circuit Breakers

### Accessory Devices and Ratings

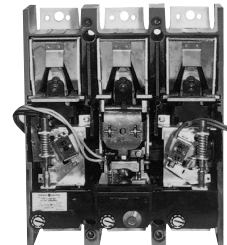
Internally mounted accessories can be either factory or field installed, but should be factory installed when UL listing is required.

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)<sup>1</sup>.

Nonautomatic circuit breakers (molded case switches) require dummy trip units if internal accessories are to be field installed (refer to page 6-73).



J Frame Circuit Breaker with Internal Accessories Mounted in Each Pole

- Pole Positions**  
 L—Left  
 C—Center  
 R—Right
- Lead Wire Exit**  
 S—Side  
 B—Back

Breaker Type	Bell Alarm Switch				Auxiliary Switch <sup>3</sup> or Shunt Trip			Undervoltage Release			Three Coil Shunt Trip			Total Number of Accessories Within any One Circuit Breaker			
	Mounting Pole			Inst. Sheet GEH-	Mounting Pole		Inst. Sheet GEH-	Mounting Pole		Inst. Sheet GEH-	Mounting Pole		Inst. Sheet GEH-				
	L	C	R		L	R		L	R		L	R					
TQB, THQB, THHQB, TXQB, TQL, THQL, THHQL, TXQL, TQC, THQC, THHQC, TXQC	-	-	-	-	UL	-	<sup>4</sup>	-	-	-	-	-	-	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	<sup>4</sup>	-	-	-	-	-	-	One accessory only			
E150 TEB, TEC, TED, THED, THLC1	UL <sup>7</sup>	-	UL	4576	UL <sup>7</sup>	UL	3418 Aux 3416 S.T.	-	UL	3417	-	UL <sup>8</sup>	3434	2-pole circuit breaker—any one 3-pole circuit breaker—any two except UVR and 3-coil shunt trip			
F225 <sup>9</sup> , THLC2, THLC4, TLB2, TLB4	-	-	UL	4620	UL	UL	4653	UL	UL	4653	UL <sup>8</sup>	UL	4622	any two			
J600 THJK	-	UL <sup>8</sup>	-	3320	UL	UL	3321 Aux 3435 S.T.	-	UL	5407	UL <sup>8</sup>	-	3346	Any two plus bell alarm except TB4, TBC4 any one plus bell alarm .			
K1200	-	UL <sup>8</sup>	-	4305	UL	UL	3321 Aux 3344 S.T.	-	UL	5408	UL <sup>8</sup>	-	3346	Any two plus bell alarm			
Accessory-Lead Color Coding <sup>10</sup>	<p><b>Bell Alarm Switch</b></p>				<p><b>Auxiliary Switch</b></p>			<p><b>Shunt Trip</b></p>			<p><b>Undervoltage Release</b></p>			<p><b>Three-Coil Shunt Trip</b></p>			All accessory contacts shown with the circuit breaker in tripped position.

<sup>1</sup>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.

<sup>2</sup>Not UL listed.

<sup>3</sup>600 Vac auxiliary switches are not UL listed.

<sup>4</sup>Accessories are factory installed only.

<sup>7</sup>Left pole mounting available for two-pole THED but not for two-pole TEB, TED.

<sup>8</sup>Not available with lead exit from the back of breaker.

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

<sup>10</sup>Leads are #18 125°C Vulkene insulated.