



R-Frame Molded Case Circuit Breaker Frames

600 Volts ac, 50/60 Hz, 3 Poles only. Suitable for Reverse Feed.
 Complete breaker requires frame and rating plug.
 For 4-wire GF applications, select neutral CT from Table 3, Order separately.
 IC Ratings shown are at 480 Vac.

Circuit Breaker Frame Selection MicroVersaTrip Plus™ Trip Units

Current Sensor	Trip Function	Standard Rating		100% Rating	
		Catalog Number	List Price, GO-135S	Catalog Number	List Price, GO-135S
1000 A	LIT	TRLA36BA10	\$10610.00	TRLL36BA10	\$13871.00
	LSIT	TRLA36BB10	11975.00	TRLL36BB10	15236.00
	LIGT	TRLA36BC10	11820.00	TRLL36BC10	15081.00
	LSIGT	TRLA36BD10	13185.00	TRLL36BD10	16446.00
	LIGTZ1	TRLA36BE10	12405.00	TRLL36BE10	15666.00
	LSIGTZ1	TRLA36BF10	13770.00	TRLL36BF10	17031.00
	LSIGTZ2	TRLA36BG10	14355.00	TRLL36BG10	17616.00
1600 A	LIT	TRLA36BA16	10610.00	TRLL36BA16	13871.00
	LSIT	TRLA36BB16	11975.00	TRLL36BB16	15236.00
	LIGT	TRLA36BC16	11820.00	TRLL36BC16	15081.00
	LSIGT	TRLA36BD16	13185.00	TRLL36BD16	16446.00
	LIGTZ1	TRLA36BE16	12405.00	TRLL36BE16	15666.00
	LSIGTZ1	TRLA36BF16	13770.00	TRLL36BF16	17031.00
	LSIGTZ2	TRLA36BG16	14355.00	TRLL36BG16	17616.00
2000 A	LIT	TRLA36BA20	11488.00	TRLL36BA20	14986.00
	LSIT	TRLA36BB20	12853.00	TRLL36BB20	16351.00
	LIGT	TRLA36BC20	12698.00	TRLL36BC20	16196.00
	LSIGT	TRLA36BD20	14063.00	TRLL36BD20	17561.00
	LIGTZ1	TRLA36BE20	13283.00	TRLL36BE20	16781.00
	LSIGTZ1	TRLA36BF20	14648.00	TRLL36BF20	18146.00
	LSIGTZ2	TRLA36BG20	15233.00	TRLL36BG20	18731.00

Current Sensor	Trip Function	Standard Rating		100% Rating	
		Catalog Number	List Price, GO-135S	Catalog Number	List Price, GO-135S
1000 A	LIT	TRPA36BA10	\$12465.00	TRPP36BA10	\$16258.00
	LSIT	TRPA36BB10	13830.00	TRPP36BB10	17623.00
	LIGT	TRPA36BC10	13675.00	TRPP36BC10	17468.00
	LSIGT	TRPA36BD10	15040.00	TRPP36BD10	18833.00
	LIGTZ1	TRPA36BE10	14260.00	TRPP36BE10	18053.00
	LSIGTZ1	TRPA36BF10	15625.00	TRPP36BF10	19418.00
	LSIGTZ2	TRPA36BG10	16210.00	TRPP36BG10	20003.00
1600 A	LIT	TRPA36BA16	12465.00	TRPP36BA16	16258.00
	LSIT	TRPA36BB16	13830.00	TRPP36BB16	17623.00
	LIGT	TRPA36BC16	13675.00	TRPP36BC16	17468.00
	LSIGT	TRPA36BD16	15040.00	TRPP36BD16	18833.00
	LIGTZ1	TRPA36BE16	14260.00	TRPP36BE16	18053.00
	LSIGTZ1	TRPA36BF16	15625.00	TRPP36BF16	19418.00
	LSIGTZ2	TRPA36BG16	16210.00	TRPP36BG16	20003.00
2000 A	LIT	TRPA36BA20	13472.00	TRPP36BA20	17566.00
	LSIT	TRPA36BB20	14837.00	TRPP36BB20	18931.00
	LIGT	TRPA36BC20	14682.00	TRPP36BC20	18776.00
	LSIGT	TRPA36BD20	16047.00	TRPP36BD20	20141.00
	LIGTZ1	TRPA36BE20	15267.00	TRPP36BE20	19361.00
	LSIGTZ1	TRPA36BF20	16632.00	TRPP36BF20	20726.00
	LSIGTZ2	TRPA36BG20	17217.00	TRPP36BG20	21311.00

**Table 3
 R-Frame Current Sensors and Rating plugs.**

Sensor	Current Rating	Rating Plug Cat. No.	List Price, GO-245A
1000 A	400 A	TR10B400	\$89.00
	600 A	TR10B600	89.00
	800 A	TR10B800	89.00
	1000 A	TR10B1000	89.00
1600 A	600 A	TR16B600	89.00
	800 A	TR16B800	89.00
	1000 A	TR16B1000	89.00
	1200 A	TR16B1200	89.00
	1600 A	TR16B1600	89.00
2000 A	800 A	TR20B800	89.00
	1000 A	TR20B1000	89.00
	1200 A	TR20B1200	89.00
	1600 A	TR20B1600	89.00
	2000 A	TR20B2000	89.00
Rating Plug Removal Tool		TRTOOL	12.00 [Ⓞ]

① GO-135S.

4 MOLDED CASE CIRCUIT BREAKERS

Molded Case Circuit Breakers

K 1200 Line

- Thermal Magnetic Circuit Breakers
- Magnetic Breakers
- Molded-Case Switches

These breakers are available only with interchangeable trip units. Two frame sizes are available, the 800 ampere frame (300 to 800 amperes) and the 1200 ampere frame (600 to 1200 amperes). Trip units are not interchangeable between frames.

"Complete Circuit Breaker" price includes frame, trip, Cu/Al line, and load lugs. Units will be shipped unassembled unless specified "must be factory assembled." If line lugs are not required on the breaker, eliminate "WL" from catalog number and subtract price of line lugs.

To order the frame, trip, and lugs separately, select the required components from table. Magnetic circuit breakers must be ordered as components. A complete breaker consists of frame, trip and one line and one load lug per pole. Price of ordering "Complete Circuit Breaker" vs. frame, trip, and line and load lugs separately is the same.

Molded-case switches can also be ordered as complete units (designated Type TKMA--Y) or as separate components. They are UL listed only as complete units. To indicate required lugs, see the table below.

Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded-case switches are UL listed in File E-57546.

R Frame—1000/1600/2000 Amp Molded-Case Circuit Breakers

- Solid-state MicroVersaTrip Plus™ or MicroVersaTrip PM™ Trip Unit
- Interchangeable trip unit via rating plugs
- 65 and 100 kA ratings available
- Standard and 100% rated versions
- Uses standard Power Break® accessories
- Stationary/manual only

Current Limiting Circuit Breakers

- 150, 225, 400 and 600 ampere frame sizes
- UL listed interrupting ratings are 200 kA at 240 and 480 volts ac maximum and 50 kA at 600 volts ac maximum
- Thermal magnetic construction

Circuit Breakers with MicroVersaTrip® Trip Units

- Solid-state construction with MicroVersaTrip RMS-9 digital rms sensing microprocessor trip units.
- Available in J and K frame construction with ampere ratings from 60-1200A.

For ordering information see pages 4-36 through 4-41. UL listed, File E-11592. All breakers are UL listed in File E-11592.

Tri-Break® Line

- Integrally Fused Thermal Magnetic Circuit Breakers
- Integrally Fused Magnetic Circuit Breakers
- Integrally Fused Molded-Case Switches

These breakers are available in four types. Type TB1 (15-100 amperes) catalog numbers include frame, trip, line and load lugs, and current limiters all *factory assembled*. Types TB4 (125 to 400 amperes), TB6 (300 to 600 amperes) and TB8 (600 to 800 amperes) include frame, trip and limiters, *factory assembled*, but do not include line or load lugs. If line and load lugs are required, order separately. Unless otherwise noted, TB1, TB4, TB6, and TB8 breaker components are UL listed in File E-42263. Fused molded-case switches are UL listed in File E-57546.

Mag-Break® Line

- Magnetic only circuit breakers (motor circuit protectors)

These breakers are available only with noninterchangeable adjustable magnetic trip, in frame Types E, F, J, K, and Tri-Break. All breakers are shipped factory assembled, complete with Cu/Al line and load lugs.

All magnetic only circuit breakers and limiters are UL Component Recognized in Files E-11592 and E-66390, respectively, unless otherwise noted.

Accessories

Order accessories from the appropriate table:

Thermal Magnetic Circuit Breakers, Magnetic Circuit Breakers, and Molded-Case Switches — pages 4-48 to 4-65.

MicroVersaTrip RMS-9 or 4-function Solid-State Circuit Breakers — pages 4-48 to 4-65.

- Ⓞ Installation of accessories in molded-case switches requires dummy trip; see page 4-51 for information. Dummy trip not required for Tri-Break or Q Line molded-case switches.

Spectra RMS™ Breakers — pages 4-47 to 4-65.

Spectra RMS™ Breakers with MicroVersaTrip Plus™ Trip Units or MicroVersaTrip PM™ Trip Units — pages 4-32 to 4-35 and 4-47 to 4-65.

Molded-Case Circuit Breaker and Switch Terminal Configuration Code

Order standard Cu/Al lugs by using suffix codes presented. Order lugs separately if special lugs are required. For optional lugs, see page 4-62.

Breaker/Switch Type	Suffix				
	Blank	WL	XL	X2	LL
TQD/TJD	Load Lugs Only	Line and Load Lugs	—	Line Lugs Only	No Lugs
Molded Case Breakers, Thermal Magnetic	Load Lugs Only	Line and Load Lugs	—	Line Lugs Only	No Lugs
Molded Case Switch	Line and Load Lugs	—	No Lugs	Line Lugs Only	Load Lugs Only
Spectra RMS™ Breakers	No Lugs	Order Lugs Separately			
J,K, MicroVersaTrip® Breakers	No Lugs	Order Lugs Separately			
Mine Duty™ Breakers	No Lugs	Order Lugs Separately			
Mag-Break® Breakers	Line and Load Lugs	—	—	—	—

For E 150 circuit breakers suffix XL is used to specify "no lugs".

R-Frame Molded Case Circuit Breakers

Solid-State Interchangeable Trip
400-2000 Amperes
600 Volts ac

65,000/100,000 kAIC @ 480 Volts
Standard and 100% Rated

MicroVersaTrip Plus™ and MicroVersaTrip PM™ Trip Units
Suitable for Reverse Feed

How To Order:

1. Select frame catalog number
2. Select rating plug for current rating from Table 3 on page 4-38.
3. Select appropriate accessories and lugs from page 4-66. Include suffix "s" for factory installation.

Example:

Frame **TRPP36BD10**
 Rating Plug **TR10B600**
 Neutral CT **TSVG810A**
 Shunt Trip **TPST12**
 Auxiliary Switch **TPAS2AB4**
 Padlocking Provision Standard
 Line Side Terminations (Optional) (3)**TP16FCA**
 Load Side Terminations
 Adapter Kit (1)**TPLUGA16**
 Lugs (2 per pole) (6)**TPLUG108**

Frame Selection:

- IC and UL Current Rating (From Table 1)
 - Standard Break
 - Hi-Break®
 - 100% Standard Break
 - 100% Hi-Break®

- Trip Unit Type
 - MicroVersaTrip Plus
 - MicroVersaTrip PM w/o Protective Relays
 - MicroVersaTrip PM with Protective Relays

- Trip Unit Functions (From Table 2)
 - LIT
 - LSIT
 - LIGT
 - LSIGT
 - LIGTZ1
 - LSIGTZ1
 - LSIGTZ2

- Current Sensor (From Table 3)
 - 1000 A
 - 1600 A
 - 2000 A

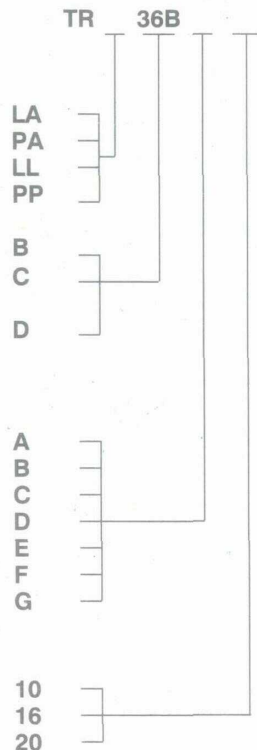


Table 1
R-Frame UL Listed Interrupting Ratings - rms Symmetrical Amperes.

Frame Type	Continuous Current Rating		Interrupting Rating (rms sym.)
	80%	100%	
Standard Break	LA	LL	240 Vac 100,000 Amperes 480 Vac 65,000 Amperes 600 Vac 50,000 Amperes
Hi-Break	PA	PP	240 Vac 125,000 Amperes 480 Vac 100,000 Amperes 600 Vac 65,000 Amperes

Table 2 ③
MicroVersaTrip Plus™ Trip Unit Selection
Trip Unit Function Definitions

Long-Time (L)	Adjustable current setting Adjustable long-time delay
Short-Time (S)	Adjustable short-time pick-up Adjustable short-time delay with I ^t Adjustable short-time delay without I ^t
Instantaneous (I)	Adjustable pick-up
Ground Fault (G)	Adjustable ground fault pick-up Adjustable ground fault delay with I ^t Adjustable ground fault delay without I ^t
Trip Indication Target (T1, T2)	Overload/short circuit targets (T1) Overload/short circuit/ground fault targets (T2)
Zone Selective Interlock (Z1, Z2)	Ground fault (Z1) Ground fault/short-time (Z2)

Trip Unit Functions Available

R-Frame Breaker Function Code	Long Time (L)	Short Time (S)	Instantaneous (I)	Ground Fault (G) ①	Targets (T)		Zone Interlock GF (Z1) ②	Zone Interlock GF, ST (Z2)
					OL, SC	OL, SC, GF		
A	•	—	•	—	•	—	—	—
B	•	—	•	•	—	•	—	—
C	•	—	•	•	—	•	—	—
D	•	—	•	•	—	•	—	—
E	•	—	•	•	—	•	—	—
F	•	•	•	•	—	•	—	—
G	•	•	•	•	—	•	—	•

- ① For single-phase, 3-wire or 3-phase, 4-wire GF applications select neutral-current sensor on page 4-66.
- ② Zone interlocking requires purchase of interlock module TIM1 (120 Vac control voltage)
- ③ Refer to Section 5 for a full description of MicroVersaTrip PM functions.