

Accessories Selection Guide and Ordering Information

Line and Load Terminals

Line and load terminals provide wire connecting capabilities for specific ranges of continuous current ratings and wire types. Except as noted, terminals comply with Underwriters Laboratories Standards UL 486A and UL 486B. Unless otherwise specified, F-Frame circuit breakers are factory equipped with load terminals only.

Ordering Information

F-Frame circuit breakers and molded case switches have load terminals only as standard equipment. When standard line-end terminals (same as standard load-end terminals) are required, add Suffix **L** to the circuit breaker catalog number. When non-standard or optional line and/or load terminals are required, order by style number. Specify if factory installation is required.

Line and Load Terminals

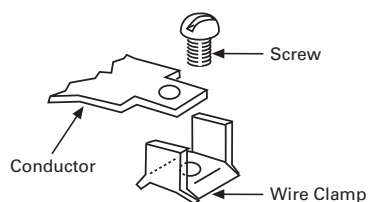
Maximum Breaker Amperes	Terminal Body Material	Wire Type	AWG Wire Range	Metric Wire Range mm ²	Package of Three Terminals Catalog Number
Standard Pressure Type Terminals					
20 (EHD)	Steel	Cu/Al	14–10	2.5–4	3T20FB ②
100	Steel	Cu/Al	14–1/0	2.5–50	3T100FB
225	Aluminum	Cu/Al	4–4/0	25–95	3TA225FD
Optional Pressure Terminals					
50	Aluminum	Cu/Al	14–4	2.5–25	3TA50FB ②
100	Aluminum	Cu/Al	14–1/0	2.5–50	3TA100FD
200	Stainless steel	Cu	4–4/0	25–95	3T150FB
225	Copper	Cu	4–4/0	25–95	3T225FD
225	Aluminum	Cu/Al	6–300 kcmil	16–150	3TA225FDK3 ③
225	Aluminum	Cu/Al	6–300 kcmil	16–150	3TA225FDK ③ ④

Notes

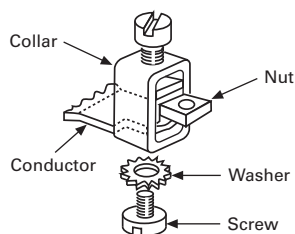
- ① Use on FDE, HFDE and FDCE electronic trip only.
- ② Not for use with ED, EDH, EDC breakers.
- ③ Includes terminal shield kit. Adds approximately 3 inches (76.2) to breaker height. Available for use on three-pole breaker only.
- ④ Replacement use only.

Line and Load Terminals

2

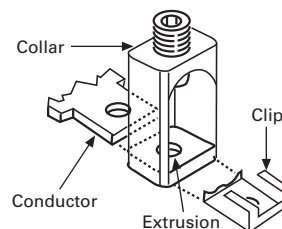
**3T20FB**

Assemble wire clamp to bottom of conductor as shown.

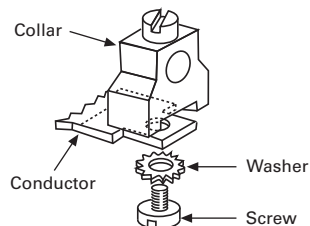
**3T100FB, 3T150FB**

Insert collar enclosing conductor as shown. Locate nut on top of conductor and tighten securely with screw and washer.

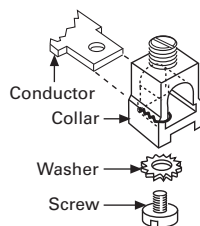
Caution: Collar must surround conductor.

**3TA225FD**

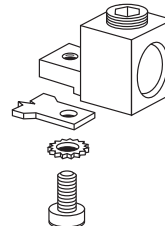
Insert collar enclosing conductor and center on extrusion on collar. Install clip with legs on top of conductor and snap end around bottom of collar.

**3TA50FB**

Assemble collar on top of conductor as shown. Tighten securely with screw and washer.

**3TA100FD**

Collar slides onto conductor and is held in position by a screw and lockwasher.

**3TA225FDK3 (Up to 150 mm²)**

Assemble collar on top of conductor as shown. Tighten securely with screw and washer. Terminal shield must be used with this collar.

Note: For 185 mm², use 3TA225FDK1. Same illustration for 3TA225FDK

Product Selection

Series C High Performance Ratings

Type	Product	Amperes	480 Vac (UL)	600 Vac (UL)
FDC 3P thermal-magnetic	Breaker only	15–225	100	35
	With limiter	40–200	200	200

FD Frame

FD IC Rating—200 kAIC at 600 Vac ^①

Ampere Rating	Breaker with Line Side Mounted Current Limiter ^②	Breaker with Load Side Mounted Current Limiter ^③
Thermal-Magnetic		
40	FDC3040Q01	FDC3040YQ02
45	FDC3045Q01	FDC3045YQ02
50	FDC3050Q01	FDC3050YQ02
60	FDC3060Q01	FDC3060YQ02
70	FDC3070Q01	FDC3070YQ02
80	FDC3080Q01	FDC3080YQ02
90	FDC3090Q01	FDC3090YQ02
100	FDC3100Q01	FDC3100YQ02
110	FDC3110Q01	FDC3110YQ02
125	FDC3125Q01	FDC3125YQ02
150	FDC3150Q01	FDC3150YQ02
175	FDC3175Q01	FDC3175YQ02
200	FDC3200Q01	FDC3200YQ02

Limiter Terminals

Maximum Breaker Amperes	Terminal Body Material	Wire Type	Metric Wire Range mm ²	AWG Wire Range/ Number of Conductors	Catalog Number
Standard Pressure Type Terminals					
250	Aluminum	Cu/Al	10–185	#8–350 (1)	TA250FJ ^④

Breaker Load Terminals (For Line Mounted Limiters Only)

Maximum Breaker Amperes	Terminal Body Material	Wire Type	AWG Wire Range	Metric Wire Range mm ²	Package of Three Terminals Catalog Number
Standard Pressure Type Terminals					
100	Steel	Cu/Al	14–1/0	2.5–50	3T100FB
225	Aluminum	Cu/Al	4–4/0	25–95	3TA225FD

Notes

^① Line and load terminal included.

^② Two interphase barriers provided, mounted on line end of limiter, catalog number **FJ1PBK**.

^③ Four interphase barriers provided, (2) line end of breaker, (2) load end of limiter.

^④ Load side breaker terminations included for units configured with line mounted limiters.

Features

2

Base Mounting Hardware

English base mounting hardware is included with GP frame only. For all other frames, order base mounting hardware separately as per the table to the right.

Base Mounting Hardware

Frame	Catalog Number	
	English	Metric
GP	Included	—
FP	BMH1	BMH1M
KP	BMH3	BMH3M
LP	BMH4	BMH4M
MP	BMH5	BMH5M

Note: Base mounting hardware, is included with GP-Frame breakers. A separate catalog number is not required.

Line and Load Terminals

Both line and load terminals are included with GP-Frame Definite Purpose breakers. For all other frames, add “L” for line and load terminals to be included or “W” for no terminals.

Line and Load Termination

Breaker	Termination Type	Awg Wire Range	Metric Wire Range (mm)	Wire Type	Bolt Size English	Bolt Size Metric	Torque Lb-In	Torque Nm	Catalog Number
GP	Wire	#14–1/0	2.5–50	Cu only	—	—	45	5.1	Included

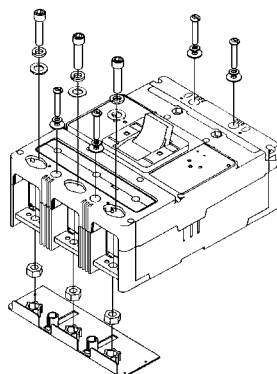
Optional Line and Load Terminals

Breaker	Maximum Amperes	Awg Wire Range	Wire Type	Catalog Number	Catalog Number with Control Wire Termination
FP	100	#14–#10	Cu/Al	3T100FB ①	—
	100	#8	Cu/Al	3T100FB ①	—
	100	#6–#4	Cu/Al	3T100FB ①	—
	100	#3–4/0	Cu/Al	3T100FB ①	—
	200	#3–4/0	Cu only	3T150FB ①	—
	225	#4–4/0	Cu/Al	3TA225FB ①	—
	225	#6–300	Cu/Al	3TA225FDK3 ①	—
	225	#6–300	Cu/Al	3TA225FDK ①②	—
KP	400	250–500 (1)	Cu/Al	TA350K	—
	400	3/0–250 (2)	Cu/Al	3TA400K ①	3TA400KCW
LP	500	250–350 (2)	Cu/Al	TA602LD	TA602LDCW
	600	400–500 (2)	Cu/Al	3TA603LDK ①	3TA603LDKCW
MP	800	3/0–400 (3)	Cu/Al	TA800MA2	TA800MA2CWT
	800	500–750 (2)	Cu/Al	TA801MA	TA801MACWT

Notes

- ① Package of three terminals.
② Replacement use only.

End Cap Accessory Kit



Accessories

End Cap Accessory Kit

End caps for line and load conductor termination are optional with each breaker. End caps secure the conductor with a ring-type connector. The kit includes one end cap, three cap screws, three nuts and three lock washers.

Series C Accessories

For internal accessories, see **Page V4-T2-273**.

For external accessories, see **Page V4-T2-304**.

Accessories Selection Guide and Ordering Information

Enclosures

Type 1 General Purpose

- Surface or flush mounting
- 15–1200 ampere range
- 600 Vac, 500 Vdc

Type 1 enclosed breakers are designed for use in commercial buildings, apartment buildings and other areas where a general purpose enclosure is applicable. The breaker is front operable and is capable of being padlocked in either the ON or OFF position. Ratings through 1200 amperes are listed with Underwriters Laboratories as approved for service entrance application. Both surface and flush mounted enclosures are available.

Type 3R Rainproof Surface Mounting

- Interchangeable hubs (through 400 amperes)
- 15–1200 ampere range
- 600 Vac, 500 Vdc

This general purpose outdoor service center employs a circuit breaker inside a weatherproof sheet steel breaker enclosure to serve

as a main disconnect and protective device for feeder circuits. Ratings through 1200 amperes are listed by Underwriters Laboratories as suitable for service entrance application.

Type 12 Dustproof Surface Mounting

- No knockouts or other openings
- 15–1200 ampere range
- 600 Vac, 500 Vdc

The Type 12 enclosure is designed in line with specifications for special industry applications where unusually severe conditions involving oil, coolant, dust and other foreign materials exist in the operating atmosphere. The handle padlocks in the OFF position and the cover is interlocked with the handle mechanism to prevent opening the cover with the circuit breaker in the ON position. Ratings through 1200 amperes are listed by Underwriters Laboratories as suitable for service entrance application.

Enclosure Selection Data

Breaker Frame Amperes	Enclosure Type Class	Catalog Number
FG 15–225	Type 1	SFDN225
	Type 3R	RFDN225
	Type 12	JFDN225
JG 175–250	Type 1	SJDN250
	Type 3R	RJDN250
	Type 12	JJDN250
KG 300–400	Type 1	SKDN400
	Type 3R	RKDN400
	Type 12	JKDN400
LG 450–600	Type 1	SLDN600
	Type 3R	RLDN600
	Type 12	JLDN600
NG 700–1200	Type 1	SNDN1200
	Type 3R	RNDN1200
	Type 12	JNDN1200

Options and Accessories

Standard Terminals

Breaker Frame	Max. Amp Rating	AWG Wire Range	Metric Wire Range mm ²	Catalog Number
FG	100	14–1/0	2.5–50	3T100FB ①
FG	150	4–4/0	25–95	3TA225FD ①
JG	250	4–350 kcmil	25–185	TA250KB
KG	350	250–500 kcmil	120–240	TA350K
KG	400	3/0–250 kcmil (2)	95–120	3TA400K ①
LG	600	250–500 kcmil (2)	120–240	3TA603LDK
NG	700	1–500 kcmil (2)	50–300	TA700NB1
NG	1000	3/0–400 kcmil (3)	95–185	TA1000NB1
NG	1200	4/0–500 kcmil (4)	120–300	TA1200NB1

Neutral Kits, Insulated and Groundable

Max. Enclosure Rating (Amperes)	Main Lug Number Size Cu/Al	Ground Lug Size Cu/Al	Catalog Number
100	(1) 14–1/0	(1) 14–1/0	INK100
250	(1) 6–350 kcmil	(1) 4–300 kcmil	INK250
400	(1) 4–750 kcmil or (2) 1/0–250 kcmil	(1) 4–300 kcmil	INK400
600	(2) 250–500 kcmil	(1) 4–300 kcmil	INK600
1200	(3) 1/0 to 750 kcmil or (4) 1/0 to 750 kcmil	(1) 6–250 kcmil	INK1200

Internal Accessories

Auxiliary Switch ②

Breaker Frame	Factory Mounted	1A-1B	Factory Mounted	2A-2B
		Field Kit Catalog Number		Field Kit Catalog Number
FG ③	A06	A1X1PK	A13	A2X1RPK
JG	A06	A1X2PK	A13	A2X2PK
KG	A06	A1X3PK	A13	A2X3PK
LG	A06	A1X4PK	A13	A2X4PK
NG	A06	A1X5PK	A13	A2X5PK

Shunt Trip ②

Breaker Frame	Rating	Factory Mounted	Field Kit Catalog Number
FG ③	12–24 Vdc	S02	SNT1LP03K
JG	12–24 Vdc	S42	SNT2P04K
KG	12–24 Vdc	S42	SNT3P04K
LG	12–24 Vdc	S02	SNT4LP03K
NG	12–24 Vdc	S02	SNT5LP03K

Notes

① Package of three terminals.

② Other accessories are available. Same as standard frame breakers.

③ Field installation on the FG Frame is not UL listed.

DC Breaker Terminal Wire Ranges

Breaker Frame	Maximum Breaker Ampacity	Terminal Body Material	Wire Type	AWG Wire Range/ Number of Conductors	Metric Wire Range mm ²	Number of Terminals Included	Standard Terminal Catalog Number
EGEDC, EGSDC, EGHDC	100	Aluminum	Cu/Al	14–1/0	2.5–50	3	3TA125EF
HFDDC	20	Steel	Cu/Al	14–10 (1)	2.5–4 (1)	3	3T20FB
	100	Steel	Cu/Al	14–1/0 (1)	2.5–50 (1)	3	3T100FB
	225	Aluminum	Cu/Al	4–4/0 (1)	25–95 (1)	3	3TA225FD
	250	Aluminum	Cu/Al	4–350 (1)	25–185 (1)	1	T250FJ
JGEDC, JGSDC, JGHDC	250	Stainless steel	Cu	4–350 (1)	25–185 (1)	1	T250FJ
HJDDC	250	Aluminum	Cu/Al	4–350 kcmil (1)	25–185 (1)	1	TA250KB
HKDDC	225	Aluminum	Cu/Al	3–350 kcmil (1)	35–185 (1)	1	TA300K
	350	Aluminum	Cu/Al	250–500 kcmil (1)	120–240 (1)	1	TA350K
	400	Aluminum	Cu/Al	3/0–250 kcmil (2)	95–120 (1)	3	3TA400K
LGEDC, LGSDC, LGHDC	400	Aluminum	Cu/Al	2–500 (1)	35–240 (1)	1	TA350LK
	630	Aluminum	Cu/Al	2–500 kcmil (2)	35–240 (2)	1	TA632L
	630	Aluminum	Cu/Al	2–500 kcmil (2)	35–240 (2)	3	3TA632LK
HLDDC	500	Aluminum	Cu/Al	3/0–350 kcmil (2)	95–150 (2)	1	TA602LD
	600	Aluminum	Cu/Al	400–500 kcmil (2)	185–240 (2)	3	3TA603LDK
HMDLDC	600	Aluminum	Cu/Al	1–500 kcmil (2)	—	1	TA700MA1
	800	Aluminum	Cu/Al	3/0–400 kcmil (3)	—	1	TA800MA2
NBDC	700	Aluminum	Cu/Al	3/0–400 kcmil (3)	95–185 (3)	1	TA1000NB1
	800	Aluminum	Cu/Al	3/0–400 kcmil (3)	95–185 (3)	1	TA1000NB1
	900	Aluminum	Cu/Al	3/0–400 kcmil (3)	95–185 (3)	1	TA1000NB1
	1000	Aluminum	Cu/Al	3/0–400 kcmil (3)	95–185 (3)	1	TA1000NB1
	1200	Aluminum	Cu/Al	4/0–500 kcmil (4)	120–240 (4)	1	TA1200NB1

Note: RGHDC breakers include six rear connectors as standard.

Molded Case Switches

Eaton's DC molded case switches are used in applications requiring a compact, high-capacity disconnect. They are UL 489 listed and have automatic high instantaneous current protection. These devices do not provide overload protection.

Molded Case Switches

Maximum Continuous Ampere Rating at 40 °C	Interrupting Capacity (Volts DC)	Poles in Series	With Line and Load Terminals Catalog Number	Without Line and Load Terminals Catalog Number
600 Vdc Maximum				
100	42	3	HFDDC3100KL	HFDDC3100KW
150	42	3	HFDDC3150KL	HFDDC3150KW
225	42	3	HFDDC3225KL	HFDDC3225KW
250	65	3	JGKDC3250KSG	JGKDC3250KSW
250	42	3	HJDDC3250K	HJDDC3250KW
400	35	3	HKDDC3400K	HKDDC3400KW
	65	3	LGKDC3400KSG	LGKDC3400KSW
600	65	3	LGKDC3630KSG	LGKDC3630KSW
	35	3	HLDDC3600K	HLDDC3600WK
800	35	3	HMDLDC3800K	HMDLDC3800WK
500 Vdc Maximum				
100	65	3	EGK3100KSG	EGK3100KSW
250 Vdc Maximum				
100	50	2	HFDDC2100KL	HFDDC2100KW
150	50	2	HFDDC2150KL	HFDDC2150KW
225	50	2	HFDDC2225KL	HFDDC2225KW
1200	50	①	HLDDC21200K ①	HLDDC21200WK ①

Note

① Four-pole frame with two-pole connected in parallel.

Accessories**Line and Load Terminals**

Breaker Type	Maximum Breaker Amperes	Wire Type	AWG Wire Range (No. Conductors)	Catalog Number
E ² F/E ² FM	100	Cu/Al	#14–1/0 (1)	3T100FB (package of three)
	150	Cu	#4–4/0 (1)	3T150FB (package of three)
E ² J/E ² JM	250	Cu	#4–350 (1)	T250KB
E ² K/E ² KM/E ² KW	225	Cu	#3–350 (1)	T300K
	350	Cu	250–500 (1)	T350K
	400	Cu	2/0–250 (2)	3T400K (three-pole kit)
E ² LME/E ² LMZ	400	Cu/Al	500–750 (1)	3TA631LK
E ² L/E ² LM/E ² LW	400	Cu/Al	4/0–600 (1)	3TA401LDK (three-pole kit)
	600	Cu	250–350 (2)	T602LD
E ² M/E ² MM/E ² MW	600	Cu	(2) 2/0–500 kcmil	T600MA1
	600	Cu/Al	(2) 1–500 kcmil	TA700MA1
	800 std.	Cu/Al	(3) 3/0–400 kcmil	TA800MA2
	800	Cu/Al	(2) 500–750 kcmil	TA801MA
	800	Cu	(3) 3/0–300 kcmil	T800MA1
E ² N/E ² NM	700	Cu	2/0–500 (2)	T700NB1
	1000	Cu	3/0–500 (3)	T1000NB1
	1200	Cu	3/0–400 (4)	T1200NB3
	1600	Cu/Al	500–1000 (4)	TA1600RD
	2000	Cu/Al	2–600 (6)	TA2000RD

End Cap Terminals—For Use with Ring Type Terminals

Breaker Type	Maximum Breaker Amperes	Catalog Number	Metric Catalog Number	Imperial
E ² F/E ² FM	150	KPEK1	KPEMK1	—
E ² J/E ² JM	250	KPEK2	KPEMK2	—
E ² K/E ² KM/E ² KW	400	KPEK3	KPEMK3	—
E ² LME/E ² LMZ	400	—	L3RTWK	—
E ² L/E ² LM/E ² LW	600	KPEK4	KPEMK4	—

External Accessories**Padlockable Handle Lock Hasp**

Breaker Type	Catalog Number
E ² F/E ² FM	PLK1
E ² J/E ² JM	PLK3
E ² K/E ² KM/E ² KW	PLK3
E ² LME/E ² LMZ	LPHL
E ² L/E ² LM/E ² LW	HLK4
E ² M/E ² MM/E ² MW	HLK4
E ² N/E ² NM	PLK5
E ² R/E ² RM	HLK6