

Typical F-Frame Breaker  
F-Frame Breaker with Electronic Trip Unit



F-Frame (10–225 Amperes)

Product Description

- All Eaton’s F-Frame circuit breakers are HACR rated
- All circuit breakers 10 through 30 amperes are suitable for HID (high intensity discharge) use
- All F-Frame circuit breakers are suitable for reverse feed use

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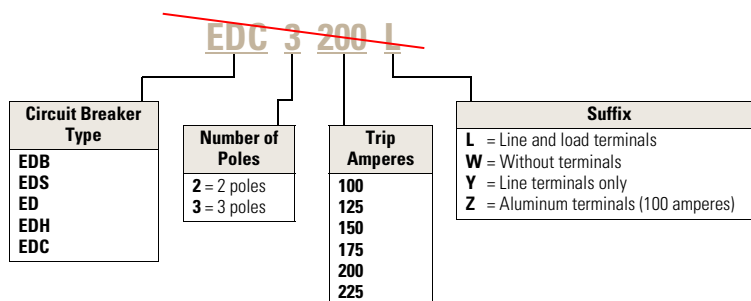
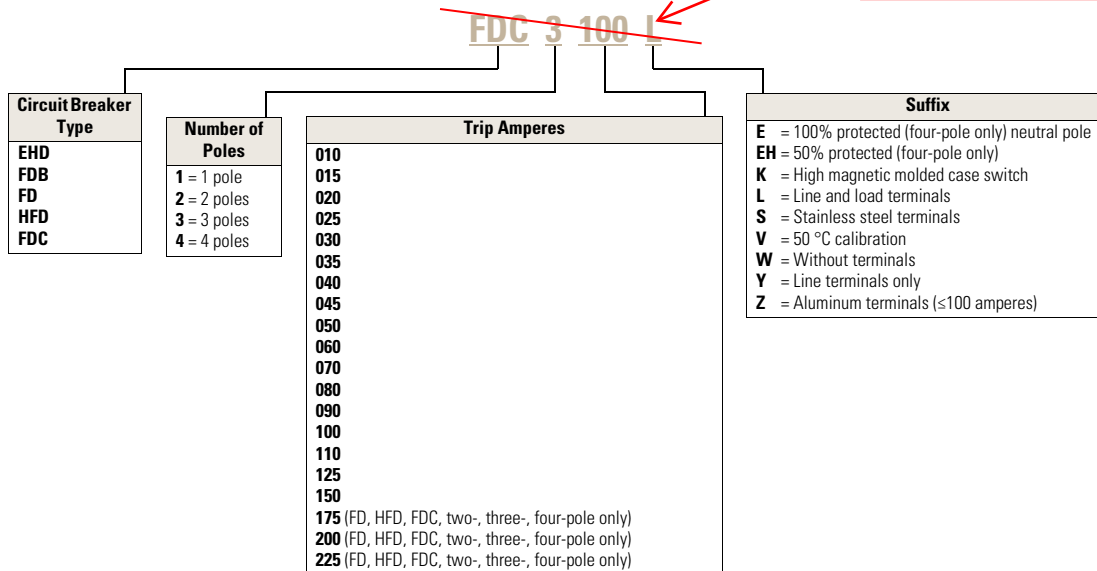
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**Catalog Number Selection**

This information is presented only as an aid to understanding catalog numbers.  
It is not to be used to build catalog numbers for circuit breakers or trip units.

**FD-Frame Circuit Breakers with Thermal-Magnetic Trip Unit Technology**

Example see below for  
Catalog numbers



QTY:1 - **FD3030L** (for K39 in Kitchen see attached Drawing with this Submittal)

QTY:1 - **FD3060L** (for K41 in Kitchen see attached Drawing with this Submittal)

**Type FD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units  
(Includes Terminals on Load End Only)**

Maximum Continuous Ampere Rating at 40 °C	277 Vac Maximum, 125 Vdc 35 kAIC at 277 Vac Single-Pole	600 Vac Maximum, 250 Vdc 35 kAIC at 480 Vac		
	Catalog Number	Two-Pole Catalog Number	Three-Pole Catalog Number	Four-Pole Catalog Number
10 ①	FD1010	—	—	—
15	FD1015 ②	FD2015	FD3015	FD4015
20	FD1020 ②	FD2020	FD3020	FD4020
25	FD1025	FD2025	FD3025	FD4025
30	FD1030	FD2030	FD3030	FD4030
35	FD1035	FD2035	FD3035	FD4035
40	FD1040	FD2040	FD3040	FD4040
45	FD1045	FD2045	FD3045	FD4045
50	FD1050	FD2050	FD3050	FD4050
60	FD1060	FD2060	FD3060	FD4060
70	FD1070	FD2070	FD3070	FD4070
80	FD1080	FD2080	FD3080	FD4080
90	FD1090	FD2090	FD3090	FD4090
100	FD1100	FD2100	FD3100	FD4100
110	FD1110	FD2110	FD3110	FD4110
125	FD1125	FD2125	FD3125	FD4125
150	FD1150	FD2150	FD3150	FD4150
175	—	FD2175	FD3175	FD4175
200	—	FD2200	FD3200	FD4200
225	—	FD2225	FD3225	FD4225

**Notes**

① Not UL listed. 5 kAIC interrupting rating.

② UL listed for SWD applications, see NEC Article 240.83(d).

## Enclosed Circuit Breakers



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## Description

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## Product Description

- 15–1200A
- Enclosed device used to open and close a circuit

## Application Description

## NEMA 1 General Purpose

**Surface or Flush Mounting  
15–1200A, 600 Vac, 500 Vdc**

NEMA 1 enclosed breakers are designed for indoor 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 the OFF position. Ratings through 1200A are listed with Underwriters Laboratories as suitable for service entrance application. Both surface and flush mounted enclosures are available.



NEMA 1 General Purpose

**NEMA 3R Rainproof  
Surface Mounting ①****Interchangeable Hubs (through  
400A) 15–1200A, 600 Vac, 500 Vdc**

This general purpose outdoor service center employs a circuit breaker inside a weatherproof sheet steel enclosure to serve as a main disconnect and protective device for feeder circuits. The breaker is front operable and is capable of being padlocked in the OFF position. Ratings through 1200A are listed by Underwriters Laboratories as suitable for service entrance application.



NEMA 3R Rainproof Surface Mounting

**NEMA 4/4X, 5 Water  
and Dustproof****Stainless Steel—Type 304  
Surface Mounting 15–1200A,  
600 Vac, 500 Vdc**

This enclosure meets NEMA 4/4X and 5 requirements for water and dustproof applications and has no knockouts or other openings. It is particularly well suited for use in dairies, borax mines, breweries, paper mills and other process industries. The operating handle can be padlocked in the OFF position, and is interlocked to prevent the door from opening when the breaker is ON. Ratings through 1200A are Underwriters Laboratories listed as suitable for service entrance application.



NEMA 4/4X Water and Dustproof

## Note

- ① SFDN enclosed breakers do not have a door interlock to prevent door from being opened when breaker is "ON."

### Product Selection

1. Use the data on **Page V2-T1-120** to determine type of enclosure required.
2. Use the data on **Page V2-T1-114** and **V2-T1-115** to determine circuit breaker required.
3. **Pages V2-T1-116** through **V2-T1-122** include rough-in dimensional information.

### Enclosure Only

**TOTAL QTY: 2**  
1 for K39  
1 for K41

Breaker Frame	Breaker Ampere Range	Enclosure NEMA Class	Catalog Number
<b>Series C Breakers</b>			
GHC, GD (two- and three-pole only) GHCGFEP (single-pole only)	15–100	1 surface	<b>SGDN100</b> <sup>①</sup>
		3R	<b>RGDN100</b>
		12	<b>JGDN100</b>
		12K	<b>DGDN100</b>
EHD, FD, FDB, HFD	15–100	4/4X, 5 stainless steel	<b>WGDN100</b>
		1 surface	<b>SEDN100</b>
		1 flush	<b>FFDN100</b>
		3R	<b>RFDN100</b>
		12	<b>JFDN100</b>
		12K	<b>DFDN100</b>
EHD, FD, FDB	15–50	4/4X, 5 stainless steel	<b>WFDN100</b>
		7/9 cast aluminum	<b>XFDN050B</b>
		7/9 cast aluminum	<b>XFDN225B</b>
		1 surface	<b>SFDN225</b>
		1 flush	<b>FFDN225</b>
		3R	<b>RFDN225</b>
HFD, FDC	60–225 <sup>②</sup>	12	<b>JFDN225</b>
		12K	<b>DFDN225</b>
		4/4X, 5 stainless steel	<b>WFDN225</b>
		1 surface	<b>SJDN250</b>
		1 flush	<b>FJDN250</b>
		3R	<b>RJDN250</b>
FD, FDB, HFD, ED, EDN, EDC, FDC (15–225A)	125–225	12	<b>JJDN250</b>
		12K	<b>DJDN250</b>
		4/4X, 5 stainless steel	<b>WJDN250</b>
		7/9 cast aluminum	<b>XJDN250B</b>
		1 surface	<b>SJDN250</b>
		1 flush	<b>FJDN250</b>
JD, JDB, HJD, JDC	125–250	3R	<b>RJDN250</b>
		12	<b>JJDN250</b>
		12K	<b>DJDN250</b>
		4/4X, 5 stainless steel	<b>WJDN250</b>
		7/9 cast aluminum	<b>XJDN250B</b>
		1 surface	<b>SJDN250</b>

#### Notes

- ① Suitable for use with single-pole breaker. Base mounting plate kit. QCCBP required.  
 ② Maximum wire size: 4/0.  
 ③ Can be field converted to NEMA Type 3R.

## Technical Data and Specifications

## Industrial Circuit Breaker Selection

Circuit Breaker Type	Continuous Ampere Rating at 40°C	Number of Poles					UL Listed Interrupting Rating rms Symmetrical Amperes									
			Vac	Vdc	Type of Trip ①	Federal Spec. W-C-375b	Vac Ratings						Vdc Ratings ②			
							120	120/240	240	277	480	600	125	250	125/250	
G-Frame																
GHC	15–100	1	120	125	N.I.T.U.	12c, 13a	65,000	—	—	—	—	—	14,000	—	—	
GHC	15–100	2, 3	240	125/250	N.I.T.U.	13b	—	—	65,000	—	—	—	—	—	14,000	
GHC	15–100	1	277	125	N.I.T.U.	12c, 13a	—	—	—	14,000	—	—	14,000	—	—	
GHC	15–100	2, 3	277/480	215/250	N.I.T.U.	13b	—	—	—	14,000	14,000	—	—	—	14,000	
GD	15–100	3	480	250	N.I.T.U.	13b	—	—	65,000	—	22,000	—	—	10,000	—	
F-Frame ←																
ED	100–225	2, 3	240	125	N.I.T.U.	12b	—	—	65,000	—	—	—	10,000	—	—	
EDH	100–225	2, 3	240	125	N.I.T.U.	14b	—	—	100,000	—	—	—	10,000	—	—	
EDC	100–225	2, 3	240	125	N.I.T.U.	1	—	—	200,000	—	—	—	10,000	—	—	
EHD	15–100	1	277	125	N.I.T.U.	13a	—	—	—	14,000	—	—	10,000	—	—	
EHD	15–100	2, 3	480	250	N.I.T.U.	13b	—	—	18,000	—	14,000	—	—	10,000	—	
FDB	15–150	2, 3	600	250	N.I.T.U.	18a	—	—	18,000	—	14,000	14,000	—	10,000	—	
FDB	15–150	4	600	250	N.I.T.U.	③	—	—	18,000	—	14,000	14,000	—	10,000	—	
FD	15–225	1	277	125	N.I.T.U.	13a	—	—	—	25,000	—	—	10,000	—	—	
FD	15–225	2, 3	600	250	N.I.T.U.	22a	—	—	65,000	—	25,000	18,000	—	10,000	—	
FD	15–225	4	600	250	N.I.T.U.	③	—	—	65,000	—	25,000	18,000	—	10,000	—	
HFD	15–225	1	277	125	N.I.T.U.	13a	—	—	—	65,000	—	—	10,000	—	—	
HFD	15–225	2, 3	600	250	N.I.T.U.	22a	—	—	100,000	—	65,000	25,000	—	20,000	—	
HFD	15–225	4	600	250	N.I.T.U.	③	—	—	100,000	—	65,000	25,000	—	20,000	—	
FDC	15–225 ④	2, 3	600	250	N.I.T.U.	24a	—	—	200,000	—	100,000	35,000	—	20,000	—	
FDC	15–225	4	600	250	N.I.T.U.	③	—	—	200,000	—	100,000	35,000	—	20,000	—	
J-Frame																
JDB	70–250	2, 3	600	250	N.I.T.U.	22a	—	—	65,000	—	35,000	18,000	—	10,000	—	
JD	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	65,000	—	35,000	18,000	—	10,000	—	
HJD	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	100,000	—	65,000	25,000	—	22,000	—	
JDC	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	200,000	—	100,000	35,000	—	22,000	—	
K-Frame																
DK	250–400	2, 3	240	250	N.I.T.U.	14b	—	—	65,000	—	—	—	—	10,000	—	
KDB	100–400	2, 3	600	250	N.I.T.U.	23a	—	—	65,000	—	35,000	25,000	—	10,000	—	
KD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	65,000	—	35,000	25,000	—	10,000	—	
HKD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	100,000	—	65,000	35,000	—	22,000	—	
KDC	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	200,000	—	100,000	50,000	—	22,000	—	
LG-Frame																
LGE	250–600	3, 4	600	250	I.T.U.	23a	—	—	65,000	—	35,000	18,000	—	22,000	—	
LGS	250–600	3, 4	600	250	I.T.U.	23a	—	—	85,000	—	50,000	25,000	—	22,000	—	
LGH	250–600	3, 4	600	250	I.T.U.	23a	—	—	100,000	—	65,000	35,000	—	42,000	—	

## Notes

① N.I.T.U. is non-interchangeable trip unit and I.T.U. is interchangeable trip unit.

② Two-pole circuit breaker, or two poles of three-pole circuit breaker at 250 Vdc.

③ Not defined in W-C-375b.

④ Not suitable for use with 100A enclosures.



