EDB, EGB, EJB
1–pole
15–70 A

EDB, EGB, EJB
2–pole
15–125 A

EDB, EGB, EJB
3–pole
15–125 A

EDB, EPD
1-pole with alarm switch

E-frame Circuit Breakers for NF Merchandised Panelboards

Table 9.49: E-frame Thermal-magnetic (480Y/277 Vac Max) *[30][31]*

Ampere Rating	ED, EG, EJ (480Y/277 Vac)		"D" Interrupting Level 18 kA @ 480Y/ 277 Vac	"G" Interrupting Level 35 kA @ 480Y/ 277 Vac	"J" Interrupting Level 65 kA @ 480Y/ 277 Vac	Terminal Wire Range (AWG)
	Hold	Trip	Catalog Number	Catalog Number	Catalog Number	
1-pole, 277 Vac						
15 A	270	875	EDB14015*[32][33]*	EGB14015*[32][33]*	EJB14015*[32][33]*	AL30FD #14–#6 Al or Cu
20 A			EDB14020*[32][33]*	EGB14020*[32][33]*	EJB14020*[32][33]*	
25 A			EDB14025*[33]*	EGB14025*[33]*	EJB14025*[33]*	
30 A			EDB14030*[33]*	EGB14030*[33]*	EJB14030*[33]*	
35 A	630	1800	EDB14035*[33]*	EGB14035*[33]*	EJB14035*[33]*	AL100FD #14–2/0 Al or Cu
40 A			EDB14040*[33]*	EGB14040*[33]*	EJB14040*[33]*	
45 A			EDB14045*[33]*	EGB14045*[33]*	EJB14045*[33]*	
50 A			EDB14050*[33]*	EGB14050*[33]*	EJB14050*[33]*	
60 A			EDB14060	EGB14060	EJB14060	
70 A			EDB14070	EGB14070	EJB14070	
2-pole, 480Y/277 Vac *[34]*						
15 A	270	875	EDB24015*[33]*	EGB24015*[33]*	EJB24015*[33]*	AL30FD #14–#6 Al or Cu
20 A			EDB24020*[33]*	EGB24020*[33]*	EJB24020*[33]*	
25 A			EDB24025*[33]*	EGB24025*[33]*	EJB24025*[33]*	
30 A			EDB24030*[33]*	EGB24030*[33]*	EJB24030*[33]*	
35 A	630	1800	EDB24035*[33]*	EGB24035*[33]*	EJB24035*[33]*	AL100FD #14–2/0 Al or Cu
40 A			EDB24040*[33]*	EGB24040*[33]*	EJB24040*[33]*	
45 A			EDB24045*[33]*	EGB24045*[33]*	EJB24045*[33]*	
50 A			EDB24050*[33]*	EGB24050*[33]*	EJB24050*[33]*	
60 A			EDB24060	EGB24060	EJB24060	
70 A			EDB24070	EGB24070	EJB24070	
80 A	1000	2300	EDB24080	EGB24080	EJB24080	AL100FD #14–2/0 Al or Cu
90 A			EDB24090	EGB24090	EJB24090	
100 A			EDB24100	EGB24100	EJB24100	
110 A			EDB24110	EGB24110	EJB24110	
125 A			EDB24125	EGB24125	EJB24125	
3-pole, 480Y/277 Vac						
15 A	270	875	EDB34015*[33]*	EGB34015*[33]*	EJB34015*[33]*	AL30FD #14–#6 Al or Cu
20 A			EDB34020*[33]*	EGB34020*[33]*	EJB34020*[33]*	
25 A			EDB34025*[33]*	EGB34025*[33]*	EJB34025*[33]*	
30 A			EDB34030*[33]*	EGB34030*[33]*	EJB34030*[33]*	
35 A	630	1800	EDB34035*[33]*	EGB34035*[33]*	EJB34035*[33]*	AL100FD #14–2/0 Al or Cu
40 A			EDB34040*[33]*	EGB34040*[33]*	EJB34040*[33]*	
45 A			EDB34045*[33]*	EGB34045*[33]*	EJB34045*[33]*	
50 A			EDB34050*[33]*	EGB34050*[33]*	EJB34050*[33]*	
60 A			EDB34060	EGB34060	EJB34060	
70 A			EDB34070	EGB34070	EJB34070	
80 A	1000	2300	EDB34080	EGB34080	EJB34080	AL100FD #14–2/0 Al or Cu
90 A			EDB34090	EGB34090	EJB34090	
100 A			EDB34100	EGB34100	EJB34100	
110 A			EDB34110	EGB34110	EJB34110	
125 A			EDB34125	EGB34125	EJB34125	
EPDs (Equipment Protection Devices), 1-pole, 277 Vac, Thermal-magnetic with 30 mA ground-fault protection *[35]*						
15 A	270	875	EDB14015EPD*[32][33]*	EGB14015EPD*[32][33]*	EJB14015EPD*[32][33]*	#14–#6 Cu or #12–#4 Al
20 A			EDB14020EPD*[32][33]*	EGB14020EPD*[32][33]*	EJB14020EPD*[32][33]*	
30 A			EDB14030EPD*[33]*	EGB14030EPD*[33]*	EJB14030EPD*[33]*	
40 A	630	1800	EDB14040EPD*[33]*	EGB14040EPD*[33]*	EJB14040EPD*[33]*	
50 A			EDB14050EPD*[33]*	EGB14050EPD*[33]*	EJB14050EPD*[33]*	

NOTE: All EDB, EGB, and EJB circuit breakers are UL Listed as HACR Type. For 50°C calibration, use a CA suffix. NF branch circuit breakers are fungus proof as standard.

[30] Maximum allowable branch breaker pair combination = 170 A.
[31] 100 A Maximum at 600Y/347 Vac
[32] UL Listed as SWD (Switching duty rated).
[33] UL Listed as HID (High Intensity Discharge rated).
[34] UL Listed for use on 240 V Corner-grounded Delta Systems (Grounded B Phase). See data bulletin 2700DB0202.
[35] All EPDs occupy two spaces, with or without Alarm Switch option. For alarm switch, add the suffix BA. EPD circuit breakers may not be used in systems with phase to ground voltages other than 277 Vac.

Table 9.50: Factory installed Electrical Accessories

Auxiliary Switch (1A/1B)	Alarm Switch (NO)	Coil Burden Max. (VA)	Minimum Recommended Supply Transformer (VA)
		288	50
Monitors circuit breaker contact status and provides a remote signal indicating the circuit breaker contacts are OPEN or CLOSED. **Application** Max Load = 10 A @ 120 Vac 50/60 Hz Terminals for #14 AWG Cu wire	Used with control circuits and is actuated only when the circuit breaker has tripped. **Application** Max Load = 7 A @ 120 Vac 50/60 Hz Terminals for #14 AWG Cu wire.	Shunt Trip—Trips the circuit breaker from a remote location by means of a coil energized from a separate circuit. A 120 V shunt trip will operate at 55% or more of rated voltage. **Application** For use with momentary or maintained push button. 120 Vac 50/60 Hz Terminals for #14 AWG Cu wire.	

Table 9.51: Factory Installed Electrical Accessory Packages for ED, EG, EJ Circuit Breakers

Accessory Package	Suffix
Auxiliary Switch and Alarm Switch *[36][37]*	AABA
Shunt Trip Package *[36][37]*	SA
Auxiliary Switch/Alarm Switch/Shunt Trip Package *[36][37]*	AABASA
Alarm Switch (N.O.) Package for EPDs only	BA

Table 9.52: Terminal Nut Insert Kit

Circuit Breaker Type	Qty. per Kit	Catalog No.
ED, EG, EJ	3	TIKFD

Table 9.53: Handle Accessories

Circuit Breaker Type	No. of Poles	Catalog No.
E-frame Fixed Padlock Attachment, Lock ON/OFF		
ED, EG, EJ	1, 2, or 3	EDPA
E-frame Fixed padlock attachment, Lock OFF only		
ED, EG, EJ	1, 2, or 3	EDPAF
E-frame Removable padlock attachment, Lock OFF only		
ED, EG, EJ	1, 2, or 3	HPAFD
E-frame Handle Ties		
ED, EG, EJ	Ties 2 – 1P	ECB2HT
	Ties 3 – 1P	ECB3HT

Table 9.54: Interrupt Ratings (kA)

	EDB	EGB	EJB
120 V	25	65	100
240 V	18 (1P), 25	35 (1P), 65	65 (1P), 100
480Y/277 V	18	35	65
600Y/347 V *[38]*	14	18	25

Table 9.55: Mechanical Lug Kit Information (Al lugs for use with Al or Cu wire) *[37]*

Circuit Breaker Application				Number of Wires Per Lug and Wire Range	Catalog Number	Lugs Per Kit
Standard	Ampere Rating	Optional	Ampere Rating			
EDB, EGB, EJB	15–30 A	—	—	one #12—#6 AWG Al or one #14—#6 AWG Cu	AL30FD	3
	35–125 A	EDB, EGB, EJB	15–30 A *[39]*	one #12—2/0 AWG Al or one #14—2/0 AWG Cu	AL100FD	3
—	—	EDB, EGB, EJB	15–125 A	one #14—1/0 AWG Cu	CU100FD	3

[36] Accessory package takes an additional pole space.
[37] Not available for EPD.
[38] Requires use of ExBx6xxx circuit breakers, i.e. EDB16015 for a 1P, 15A circuit.
[39] Factory installed only. Use suffix “LH”

Factory Assembled Main Circuit Breakers—600Y/347 Vac maximum

Table 9.56: NF Panelboard Factory Assembled Interiors—600Y/347 Vac Max

Single Phase 3-Wire (1P/3W), or Three Phase 4-Wire (3P/4W)*[40]*							
Mains Rating (Amps)				Max. Number of One-Pole Circuit Breakers	Bus Material	Min. Box Depth (inches)	
Main Lugs Only	Circuit Breaker Frame	Main Breaker*[41]*	Main Switch*[41]*			Main Lugs Only	Main Breaker / Switch
125 Max	ED, EG, EJ*[42]*	15–125	–	18, 30	Al, Cu	5.75 in.	5.75 in.
125 Max	HD/HG/HJ/HL/HR	15–125	110–125	18, 30, 42, 54*[43]*	Al, Cu	5.75 in.	5.75 in.
250 Max	JD/JG/JJ/JL/JR	150–250	150–250	30, 42, 54, 66	Al, Cu	5.75 in.	5.75 in.
400 Max	LA/LH	125–400	300–400	30, 42, 54, 66, 84	Al, Cu	5.75 in.	5.75 in.
600 Max	LG/LJ/LL/LR*[44]*	125–600	450–600	30, 42, 54, 66*[45]*, 84	Cu	5.75 in.	8.75 in.*[46]*
800 Max	MG	600–800	—	30, 42, 54	Cu	8.75 in.*[47]*	8.75 in.*[48]*
	PG, PJ, PL	600–800	600–800				

NOTE: Factory Assembled Main Circuit Breakers (600Y/347 Vac maximum). 600Y/347 Vac applications require use of ExBx6xxx branch circuit breakers, i.e. EDB16015 for a 1P, 15A circuit.*[49]*

400 A and 600 A panelboards, 1Ø or 3Ø

PowerPacT L-frame - see Tables in Section 7.

Table 9.57: Main Circuit Breaker

No. of Poles	Trip Unit Options	Frame Sizes	Ampacity
3	LI, LSI, Switch	LG, LJ, LL, LR	125–600 A

LA/LH, PowerPacT H and J-frame circuit breakers are also available—see Tables in Section 7 and Supplemental Digest Section 3.

Table 9.58: PowerPacT L Main Circuit Breaker Cabinet Height (inches)

Max. No. of Branch Spaces (Does not include sub-feed circuit breaker spaces)	NEMA 1 Enclosure (20 in. W x 8.75 in. D)*[50]*	Vented NEMA 3R Enclosure (26 in. W x 8.75 in. D)*[51]*	
	400 / 600 A interior	400 A	600 A
30	68	68	74
42	74	74	80
54	80	80	86

Table 9.59: Sub-feed Circuit Breakers for NF Panelboards*[52]*

Interior Mains Rating	Mains Type	Sub-Feed Circuit Breaker(s)			Space Factor *[53]*
		Ampacity	Poles	MCCB Frame	
250 - 800 A	Main Lugs	110 - 150	2, 3	HD, HG, HJ, HL, HR*[54]*, *[55]*	18 inches
		150 - 250	2, 3	JD, JG, JJ, JL, JR*[55]*, *[56]*	
250 - 400 A	PowerPacT J or LA/ LH Main Circuit Breaker	110 - 150	2, 3	HD, HG, HJ, HL, HR*[54]*, *[55]*	
		150 - 250	2, 3	JD, JG, JJ, JL, JR*[55]*, *[56]*	
		125 - 600	2, 3	LA or LH*[57]*	
			3	LG, LJ, LL, LR*[58]*	
400 - 600 A *[59]*, *[60]*	PowerPacT L Main Circuit Breaker*[61]*	110 - 150	2, 3	HD, HG, HJ, HL, HR*[54]*, *[55]*	18 inches
		150 - 250	2, 3	JD, JG, JJ, JL, JR*[55]*, *[56]*	
		125 - 400	2, 3	LA / LH*[57]*	12 inches
		125 - 600	3	LG, LJ, LL, LR*[59]*	18 inches
800 A*[62]*	Main Circuit Breaker	110 - 150	2, 3	HD, HG, HJ, HL, HR*[54]*, *[55]*	12 inches
		150 - 250	2, 3	JD, JG, JJ, JL, JR*[55]*, *[56]*	18 inches
		125 - 400	2, 3	LA / LH	12 inches
		125 - 600	3	LG, LJ, LL, LR	18 inches

[40] NF panelboards without neutral connections may be applied in 3-phase, 4-wire grounded Wye systems, except at the Service Entrance.
[41] Factory Assembled Interiors are rated for trip current of Main Breaker / Switch.
[42] Back-Fed Main Breaker applications only.
[43] Three Phase Copper only.
[44] PowerPacT L crcuit breakers may only be installed on 600 A NF panelboard interiors. 400 A max. PowerPacT L circuit breakers should be selected for applications requiring trip ampacities between 125 - 400 A.
[45] NF Panelboards with PowerPacT L Main Circuit Breaker or Switch are limited to a maximum of 54 branch circuits.
[46] NF Panelboards with PowerPacT L Main Circuit Breaker or Switch require 8.75" deep enclosures and three point latch trim fronts.
[47] Enclosures limited to NEMA Type 1 only.
[48] 8.75" Enclosures limited to 26" Wide NEMA Type 1.
[49] Requires use of ExBx6xxx branch circuit breakers, i.e. EDB16015 for a 1P, 15A circuit.
[50] D9 8.75" deep enclosure and three point latch door is required for PowerPacT L Main Circuit Breaker, Switch, or Sub-Feed Circuit Breaker. See Table 9.48 NF Main Circuit Breaker Interiors - Use I-Line Panelboard for 3Ø3W Delta applications above 240 Vac, page 9-30.
[51] PowerPacT L not available in non-vented (NEMA Type 3R/5/12, or 4/4X) enclosures.
[52] See Digest Section 7 for Interrupting Ratings and Catalog Numbers of PowerPacT H-, J-, L-, and LA/LH frame MCCBs. NEMA 3R applications with sub-feed breakers greater than 150 A require 8.75" deep, 26" wide enclosure - reference PBA603WP for dimensions.
[53] Space Factor is the length required for sub-feed circuit breaker. Please reference Product Selector output for panelboard enclosure dimensions.
[54] Three pole HD, HG, HR MCCBs are installed for single phase sub-feed circuit breaker applications.
[55] One or two sub-feed circuit breakers may be selected.
[56] Three pole JR MCCBs are installed for single phase sub-feed circuit breaker applications.
[57] NF Panelboards with LA / LH sub-feed circuit breakers are shipped fully assembled.
[58] NF Panelboards with PowerPacT L main and sub-feed circuit breakers require 26" wide, 8.75" deep enclosure with 3-point latch trim front. Reference PBA758 or PBA754 drawings for dimensions in NEMA Type 1 or 3R enclosures, respectively.
[59] NF Panelboards with PowerPacT L circuit breakers require 8.75" a deep enclosure with 3-point latch trim front. Reference PBA559x drawings for dimensions, where x may be blank, HR, HRT, or T.
[60] Add 6" to space factor for NF Panelboards with 600 A PowerPacT L circuit breakers in NEMA 3R enclosures. Reference PBA754 drawing for dimensions. Maximum sub-feed breaker is 400A when installed with a 600 A rated main circuit breaker in a NEMA 3R enclosure.
[61] NF Panelboards with PowerPacT L main circuit breaker and any sub-feed circuit breaker(s) are shipped completely assembled in 26" wide, 8.75" deep enclosures, with gutter mounted neutral assemblies.
[62] NF Panelboards with 800 A rated main circuit breaker are shipped completely assembled in 26" wide, 8.75" NEMA 1 enclosures. Reference PBA756 or PBA756HR drawing for dimensions.