

Table 7.51: D-Frame (600 A 600 Vac) 3P 50/60 Hz Circuit Breaker with Lugs and Electronic Trip Units♦

Electronic Trip Unit Type	Trip Function	Trip Unit	Continuous Current▲	G Interrupting		J Interrupting		L Interrupting		Terminal Wire Range (AWG/kcmil)
				Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	
Standard	LS	STR23SP	150 A	DGL36150E20	5081.00	DJL36150E20	8478.00	DLL36150E20	9918.00	(1) 2-600 Cu or (1) 2-500 Al
			250 A	DGL36250E20	5081.00	DJL36250E20	8478.00	DLL36250E20	9918.00	
			400 A	DGL36400E20	5081.00	DJL36400E20	8478.00	DLL36400E20	9918.00	
			600 A	DGL36600E20	8315.00	DJL36600E20	8865.00	DLL36600E20	13586.00	
	LSI	SR53UP-F■	150 A	DGL36150E53	6200.00	DJL36150E53	9597.00	DLL36150E53	11037.00	(1) 2-600 Cu or (1) 2-500 Al
			250 A	DGL36250E53	6200.00	DJL36250E53	9597.00	DLL36250E53	11037.00	
			400 A	DGL36400E53	6200.00	DJL36400E53	9597.00	DLL36400E53	11037.00	
			600 A	DGL36600E53	9429.00	DJL36600E53	9984.00	DLL36600E53	14705.00	
	LSIG	STR53UP-FT■	150 A	DGL36150E54	7527.00	DJL36150E54	10925.00	DLL36150E54	12365.00	(1) 2-600 Cu or (1) 2-500 Al
			250 A	DGL36250E54	7527.00	DJL36250E54	10925.00	DLL36250E54	12365.00	
			400 A	DGL36400E54	7527.00	DJL36400E54	10925.00	DLL36400E54	12365.00	
			600 A	DGL36600E54	10761.00	DJL36600E54	11312.00	DLL36600E54	16032.00	
Ammeter	LSI	STR53UP-FI■	150 A	DGL36150E58	7661.00	DJL36150E58	11058.00	DLL36150E58	12498.00	(1) 2-600 Cu or (1) 2-500 Al
			250 A	DGL36250E58	7661.00	DJL36250E58	11058.00	DLL36250E58	12498.00	
			400 A	DGL36400E58	7661.00	DJL36400E58	11058.00	DLL36400E58	12498.00	
			600 A	DGL36600E58	10895.00	DJL36600E58	11445.00	DLL36600E58	16166.00	
	LSIG	STR53UP-FTI■	150 A	DGL36150E59	8990.00	DJL36150E59	12387.00	DLL36150E59	13827.00	(1) 2-600 Cu or (1) 2-500 Al
			250 A	DGL36250E59	8990.00	DJL36250E59	12387.00	DLL36250E59	13827.00	
			400 A	DGL36400E59	8990.00	DJL36400E59	12387.00	DLL36400E59	13827.00	
			600 A	DGL36600E59	9434.00	DJL36600E59	12774.00	DLL36600E59	17495.00	

▲ D-frame circuit breakers 400 A and below are 100% rated. 600 A is standard (80%) rated only.
■ F = Fault indicator; T = Residual-type ground-fault protection; I = Ammeter
♦ Available with lugs (L) or bus (F) connections only.

Table 7.52: D-Frame 3P 600 A Circuit Breaker, Frame Only, and Field-Installable Trip Units

Basic Frame Only (600 Vac)*							Field Installable D-Frame Electronic Trip Unit				
Ampere Rating	G Interrupting		J Interrupting		L Interrupting		Long-time, Short-time and Instantaneous Protection				
	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Description	Factory Code	Trip Function	Cat. No.	\$ Price
150 A	DGL36150F40	2766.00	DJL36150F40	6164.00	DLL36150F40	7602.00	STR23SP	E20	LS	36940	2033.00
250 A	DGL36250F40	2766.00	DJL36250F40	6164.00	DLL36250F40	7602.00	STR53UP-F	E53	LSI	36942	3152.00
400 A	DGL36400F40	2766.00	DJL36400F40	6164.00	DLL36400F40	7602.00	STR53UP-FT	E54	LSIG	36943	4479.00
600 A	DGL36600F60	5904.00	DJL36600F60	6456.00	DLL36600F60	11177.00	STR53UP-FI	E58	LSI	36944	4613.00
							STR53UP-FTI	E59	LSIG	36945	5942.00

* Available with lugs (L) or bus (F) connections only.

Table 7.53: M-Frame 800 A, Basic Electronic Trip System Type ET 1.0▼ Factory-Sealed Trip Unit

Electronic Trip Unit Type	Trip Function	Sensor Rating	G Interrupting		J Interrupting		Terminal Wire Range (AWG/kcmil)
			Cat. No.	\$ Price	Cat. No.	\$ Price	
2P, 600 Vac 50/60 Hz							
Basic	Fixed Long-time, Adjustable Instantaneous Trip	300 A	MGL26300	5960.00	MJL26300	7829.00	(3) 3/0-500 Al/Cu
		350 A	MGL26350	5960.00	MJL26350	7829.00	
		400 A	MGL26400	5960.00	MJL26400	7829.00	
		450 A	MGL26450	5960.00	MJL26450	7829.00	
		500 A	MGL26500	5960.00	MJL26500	7829.00	
		600 A	MGL26600	5960.00	MJL26600	7829.00	
		700 A	MGL26700	7719.00	MJL26700	9657.00	
		800 A	MGL26800	7719.00	MJL26800	9657.00	
3P, 600 Vac 50/60 Hz							
Basic	Fixed Long-time, Adjustable Instantaneous Trip	300 A	MGL36300	7560.00	MJL36300	9456.00	(3) 3/0-500 Al/Cu
		350 A	MGL36350	7560.00	MJL36350	9456.00	
		400 A	MGL36400	7560.00	MJL36400	9456.00	
		450 A	MGL36450	7560.00	MJL36450	9456.00	
		500 A	MGL36500	7560.00	MJL36500	9456.00	
		600 A	MGL36600	7560.00	MJL36600	9456.00	
		700 A	MGL36700	9927.00	MJL36700	11882.00	
		800 A	MGL36800	9927.00	MJL36800	11882.00	

▼ The ET 1.0 trip unit cannot be field replaced or have the long-time trip point setting adjusted. It is considered an electronic equivalent of a thermal-magnetic circuit breaker.

Table 7.54: Termination Options

Frame	Termination Letter	Termination Option
D-Frame	F	No Lugs (Includes terminal nut kit on both ends)
	L	Lugs both ends
	M	Lugs ON end Terminal Nut Kit Off end
	P	Lugs OFF end Terminal Nut Kit On end
	N Δ	Plug-in
	D Δ	Drawout
	S Δ	Rear Connected
M-Frame	F	No Lugs
	L	Lugs both ends
	M	Lugs ON end Terminal Nut Kit Off end
	P	Lugs OFF end Terminal Nut Kit On end

For factory-installed termination, place termination letter in the third block of the circuit breaker catalog number.

M, G, L, 3, 6, 4, 0, 0, or D, G, L, 3, 6, 4, 0, 0, E, 2, 0
Termination Letter

Δ For N, D, and S pricing, add termination pricing to price. See page 7-42.

Table 7.55: D- and M-Frame Interrupting Ratings

Voltage	Interrupting Rating		
	G	J	L □
240 Vac	65 kA	100 kA	150 kA
480 Vac	35 kA	65 kA	100 kA
600 Vac	18 kA	25 kA	25 kA

□ L interrupting rating is not available in M-frame.



D-Frame Circuit Breaker



M-Frame Circuit Breaker

	600 A L-Frame			PowerPact 800 A M-Frame		PowerPact 1200 A P-Frame				1000 A M-Frame				
														
Circuit Breaker Type	LX	LXI	LE	MG	MJ	PG	PJ	PK	PL	MA	MH	MX	ME	
Number of Poles	3	3	3	2, 3	2, 3	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3	2, 3	3	3	
Current Range	100–600	100–600	100–600	300–800	300–800	100–1200	100–1200	100–1200	100–1200	300–1200	300–1200	450–800	450–800	
Interrupting Ratings														
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	100	200	100	65	100	65	100	65	125	42	65	65	65
	480Y/277 Vac	65	200	65	35	65	35	65	50	100	30	65	65	65
	480 Vac	65	200	65	35	65	35	65	50	100	30	65	65	65
	600Y/347 Vac	35	100	35	18	25	18	25	50	25	22	25	25	25
DC Ratings	240 Vac	35	100	35	18	25	18	25	50	25	22	25	25	25
	250 Vdc	—	—	—	—	—	—	—	—	—	14	50	—	—
IEC (kA RMS) Icu/Ics	500 Vdc▲	—	—	—	—	—	—	—	—	—	—	20	—	—
	240 Vac	—	—	—	50/25	65/35	50/25	65/35	50/25	125/65	—	—	—	—
IEC 50/60 Hz	415 Vac	65/65△	—	65/65△	35/20	50/25	35/20	50/25	50/25	85/45	30/30	65/33	65/33	65/33
	For additional IEC ratings, see the Supplemental Digest.										For additional IEC ratings, see the Supplemental Digest.			
Special Ratings														
Fed. Specs W-C-375B/GEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HACR (2P, 3P)	—	—	—	—	X	X	X	X	X	X	X	X	—	—
Connections/Terminations														
Unit Mount	X	X	X	X	X	X	X	X	X	X	X	X	X	X
I-Line®	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rear Connection	—	—	—	—	—	—	—	—	—	—	X	X	—	—
Drawout	—	—	—	—	—	X▼	X▼	X▼	X▼	—	—	—	—	—
Optional Lugs	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accessories and Modifications														
Shunt Trip	X	X	X	X	X	X	X	X	X	X	X	X	X▼	X▼
Undervoltage Trip	X	X	X	X	X	X	X	X	X	X	X	X	X▼	X▼
Auxiliary Switches	X	X	X	X	X	X	X	X	X	X	X	X	X▼	X▼
Alarm Switch	X	X	X	X	X	X	X	X	X	X	X	X	X▼	X▼
Motor Operator	—	—	—	—	—	X▼	X▼	X▼	X▼	X	X	—	—	—
Handle Operators	—	—	—	—	—	X▼	X▼	X▼	X▼	X	X	X	X	X
Mechanical Interlocks (3P)	—	—	—	—	—	X	X	X	X	X★	X★	—	—	—
Handle Padlock Attachment	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cylinder Lock (3P)	—	—	—	X	X	—	—	—	—	X	X	—	—	—
Optional GF Protection	X▼	X▼	X▼	—	—	X	X	X	X	—	—	X▼	X▼	—
Trip System Type														
Thermal-magnetic	—	—	—	—	—	—	—	—	—	X	X	—	—	—
Instantaneous-only (MCP)	—	—	—	—	—	—	X	X	—	X	X	—	—	—
Molded Case Switch (Automatic)	—	—	—	—	—	X	X	X	X	—	X	—	—	—
Electronic	X	X	X	X	X	X	X	X	X	—	—	X	X	X
Enclosures (Pages 7-56–7-58)														
General Purpose (NEMA 1)	—	—	—	X	X	X	X	X	X	X	X	X	X	X
Raintight (NEMA 3R)	—	—	—	X	X	X	X	X	X	X	X	X	X	X
Dust-tight (NEMA 12)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Watertight (NEMA 4, 4X, 5)	—	—	—	X	X	—	—	—	—	X	X	X	X	X
Explosion Proof (NEMA 7, 9)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dimensions (3P Unit Mount)	Height—in. (mm)	11.86 (301)			12.80 (325)		16.20 (413)				14 (356)			
	Width—in. (mm)	7.5 (190)			8.30 (210)		8.30 (210)				9 (229)			
	Depth—in. (mm)	6.74 (171)			8.10 (205)		8.10 (205)				6.5 (165)			
Pages (Unit Mount)/(I-Line)	Page 7-52/9-28			Page 7-25/9-28		Page 7-26, 7-30, 7-33/9-29				Supplemental Digest Section 3				

Note: All circuit breakers on this chart are UL Listed and CSA Certified unless otherwise noted.

- ▲ Ungrounded UPS systems only. See page 7-34.
- ◆ UL PowerPact MG/MJ and PG/PJ/PK/PL are 60 Hz only.
- ◆ Dual UL and IEC ratings and CE markings on circuit breakers. For additional IEC ratings, see the Supplemental Digest.
- ★ Requires breaker with WB suffix
- ▼ Factory-installed option only.
- △ 65/50 kA Icu/Ics for 450–800 A ratings.

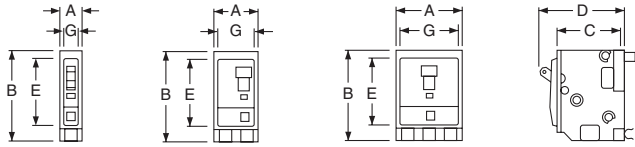


Figure 1 Figure 2 Figure 3 QO, QOB

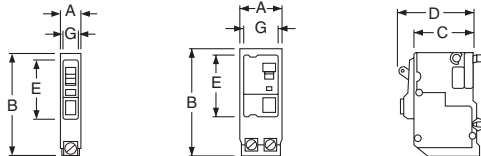


Figure 4 Figure 5 QO-GFI, QO-PL QO-EPD

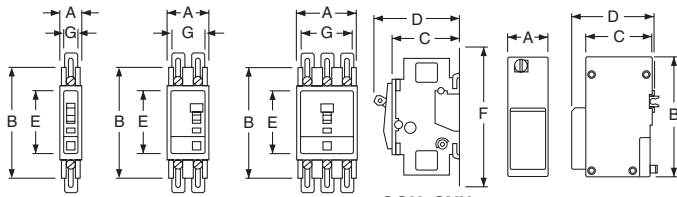


Figure 6 Figure 7 Figure 8 QOU, QYU Low Ampere Figure 9 QO-PLPS

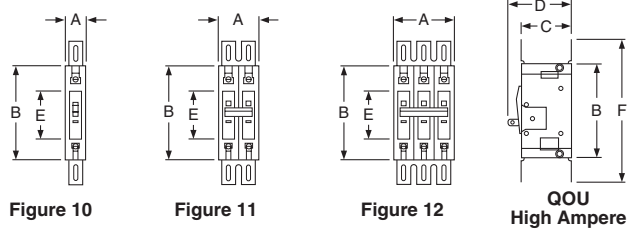


Figure 10 Figure 11 Figure 12 QOU High Ampere

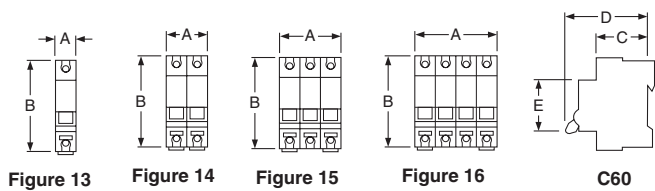


Figure 13 Figure 14 Figure 15 Figure 16 C60

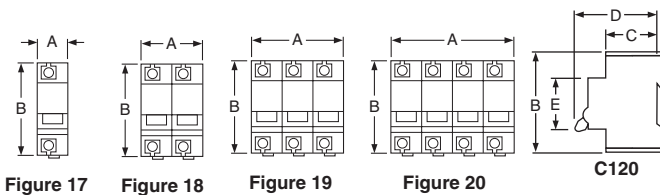


Figure 17 Figure 18 Figure 19 Figure 20 C120

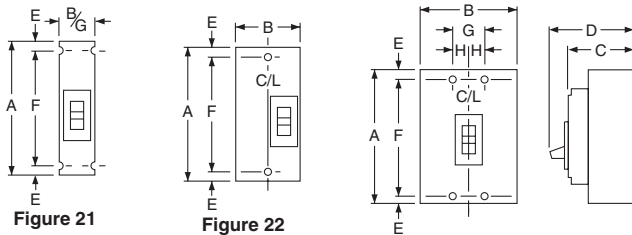


Figure 21 Figure 22 Figure 23

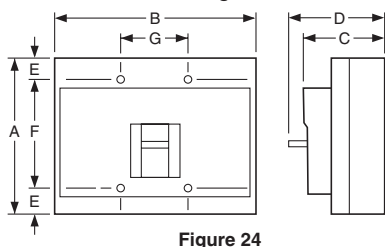


Figure 24

Table 7.140: QO®, QOU, Multi 9™ Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches						
			A	B	C	D	E	F	G
QO, QOB	1	1	0.75	3.00▲	2.31	2.91	2.25	—	0.59
	2	2	1.50	3.00▲	2.31	2.91	2.25	—	1.34
	3	3	2.25	3.00▲	2.31	2.91	2.25	—	2.09
QOB-VH 150 A QOB-VH 110–150 A	2	2	3.0	5.72	2.53	4.90	3.78	—	2.85
	3	3	4.50	5.72	2.53	4.90	3.78	—	4.35
QO-PL QO-GFI QO-EPD	1	4	0.75	4.12■	2.31	2.91	2.25	—	0.59
	2	5	1.50	4.12■	2.31	2.91	2.25	—	1.34
	3	5	2.25	4.12■	2.31	2.91	2.25	—	2.09
QOU QYU Low Ampere	1	6	0.75	4.05♦	2.38	2.98	2.25	5.00★	0.62
	2	7	1.50	4.05♦	2.38	2.98	2.25	5.00★	1.37
	3	8	2.25	4.05★	2.38	2.98	2.25	5.00△	2.12
QOU High Ampere	1	10	0.75	4.45	2.37	2.96	2.25	6.78	—
	2	11	1.50	4.45	2.37	2.96	2.25	6.78	—
	3	12	2.25	4.45	2.37	2.96	2.25	6.78	—
Multi 9™ C60N	1	13	0.71	3.19	1.73	2.76	1.77	—	—
	2	14	1.42	3.19	1.73	2.76	1.77	—	—
	3	15	2.13	3.19	1.73	2.76	1.77	—	—
	4	16	2.84	3.19	1.73	2.76	1.77	—	—
QO-PLPS Power Supply	2	9	1.45	4.35	2.42	3.11	—	—	—

- ▲ 35–70 A is 3.12 in; 80–100 A 2P and 70–100 A 3P are 3.50 in.
- QO-PL is 4.55 in.
- ♦ 80–100 A 1P and 80–125 A 2P are 4.45 in
- ★ 80–100 A 1P and 80–125 A 2P are 6.78 in.
- ▼ 70–100 A 4.45 in.
- △ 70–100 A is 6.78 in.

Table 7.141: QB, QD, QG, QJ, Q4, FA, FI, KA, KC, KI, LA, LC, LI, LE, LX, LXI, MA Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches							
			A	B	C	D	E	F	G	H
QB, QD, QG, QJ	2	22	6.47	3.00	3.02	3.93	□	4.25	—	—
	3	23	6.47	4.50	3.02	3.93	□	4.25	1.50	0.75
FAL, FHL	1	21	6.00	1.50	3.16	4.13	0.44	5.13	1.50	—
	2	22	6.00	3.00	3.16	4.13	0.44	5.13	—	—
	3	23	6.00	4.50	3.16	4.13	0.44	5.13	1.50	0.75
FIL, KAL, KCL, KHL, KIL	2 & 3	23	8.00	4.50	3.66	4.75	0.44	7.13	1.50	0.75
Q4L, LAL, LHL	2 & 3	23	11.00	6.00	4.06	5.84	0.88	9.25	2.00	1.00
LIL, LEL, LXL, LXIL, LCL	2 & 3	24	11.86	7.50	5.48	6.74	0.55	10.75	2.50	—
MAL, MHL	2 & 3	23	14.00	9.00	4.53	6.50	1.66	10.69	3.00	1.50

□ Dimensions E are 1.59 in at ON end and 0.63 in at OFF end.

Table 7.142: Shipping Weights◇

Frame Size	Approx. Shipping Weight (Lbs.)	Frame Size	Approx. Shipping Weight (Lbs.)
FAL, FHL 1P	2	KIL	9
FAL, FHL 2P	3	LAL, LHL	15
FAL, FHL 3P	5	LEL, LIL, LXL, LXIL, LCL	25
FIL	8	Q4L	15
QB, QD, QG, QJ	4	MAL, MHL	34
KAL, KHL	7		

◇ All weights are for 3P circuit breakers unless otherwise noted.

INTRODUCTION

CLASS IV

Exchange of permanent trip circuit breakers (KA, LA, MA or NA) furnished in lieu of circuit breakers specified with interchangeable trip. These circuit breakers can be identified by a label stating that they are subject to this exchange policy.

Allowance

A replacement circuit breaker within the same frame size, but of a different trip rating than that exchanged, is furnished at the lowest recognized competitive list price for a trip unit of the same frame size and trip rating minus the regular discount. This exchange arrangement requires that the replaced circuit breaker be returned to Square D.

CATALOG NUMBERS

Square D circuit breakers are ordered by a catalog number that includes the breaker family, description, poles, voltage rating, amperage rating and suffix.

Figure 5 shows a catalog number broken down by components. For example, FAL36050V2100, a typical catalog number, can be broken down as follows:

- FA 100A frame circuit breaker
- L Circuit breaker with lugs on both ends
- 3 Number of poles
- 6 Voltage rating
- 050 Continuous current amperage rating (handle rating)
- V and 2100 V indicates the Visi-Blade feature and the 2100 indicates a factory installed contact alarm. These two components are the suffix.

TYPICAL CATALOG NUMBER:

	FA	L	3	6	050	V	2100
BREAKER FAMILY							
FY - 30 Amp. Frame	NOTE: "A" is replaced by letter "H" for High Interrupting						
FA - 100 Amp. Frame	"A" is replaced by letter "C" for Extra High Interrupting						
KA - 250 Amp. Frame	"A" is replaced by letter "I" for Current Limiting. (FA, KA, LA circuit breakers only)						
LA - 400 Amp. Frame							
MA - 1000 Amp. Frame							
NA - 1200 Amp. Frame							
DESCRIPTION							
NO LETTER - (I-LINE®) Plug-On Breaker							
B - (I-LINE) Bolt-On Breaker (400 ampere frame maximum)							
F - Terminal Pads Only (No Lugs)							
L - Lugs on Both Ends (Merchandised — Universal Breaker)							
P - Lugs OFF End Only							
R - Plug-On Breaker (I-LINE Type DO with Plug-On Line & Load Connectors)							
POLES							
1 - 1-Pole							
2 - 2-Pole							
3 - 3-Pole							
VOLTAGE RATING							
2 - 240Vac							
4 - 480Vac							
6 - 600Vac							
AMPERE RATING							
015 - 090 - 15-90 Ampere Rating							
100 - 900 - 100-900 Ampere Rating							
1000 - 1200 - 1000-1200 Ampere Rating							
000 or 0000 - Molded Case Switch							
000X or 000XX - Molded Case Switch							
SUFFIX							
The suffix indicates a special feature of the circuit breaker.							
A, B, C - indicates I-LINE® Phase Connections							
V - indicates Visi-Blade							
M - indicates Automatic Molded Case Switch							
XXM - indicates Instantaneous Trip only (MAG-GARD®) (i.e., 18M is 300-1100A adjustable trip range)							
XXT - indicates adjustable magnetic trip with responsive thermal (mining breakers)							
G - indicates Ground Fault Shunt Trip accessory							
XXXX - i.e., 2100 indicates a factory installed accessory							

FIGURE 5
CATALOG NUMBERING SYSTEM FOR THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKERS

