

PowerPact L-Frame 600A Circuit Breakers with Factory Sealed Electronic Trip Units Suitable for Reverse Connection

Electronic Trip Unit			D Interrupting		G Interrupting		J Interrupting ◆		L Interrupting ◆		R Interrupting ◆		Terminal
Type	Function	Trip Unit	Amps	Catalogue Number ■	Price	Catalogue Number ■	Price	Catalogue Number ■	Price	Catalogue Number ■	Price	Catalogue Number ■	
Micrologic Standard	LI	3.3★	250	LDA36250U31X		LGA36250U31X		LJA36250U31X		LLA36250U31X		LRA36250U31X	AL400L61K3▼
			400	LDA36400U31X		LGA36400U31X		LJA36400U31X		LLA36400U31X		LRA36400U31X	AL600LS52K3△
			600	LDA36600U31X		LGA36600U31X		LJA36600U31X		LLA36600U31X		LRA36600U31X	
Micrologic Standard	LSI	3.3S★	250	LDA36250U33X		LGA36250U33X		LJA36250U33X		LLA36250U33X		LRA36250U33X	AL400L61K3▼
			400	LDA36400U33X		LGA36400U33X		LJA36400U33X		LLA36400U33X		LRA36400U33X	AL600LS52K3△
			600	LDA36600U33X		LGA36600U33X		LJA36600U33X		LLA36600U33X		LRA36600U33X	
Micrologic Ammeter	LSI	5.3A	400	LDA36400U43X		LGA36400U43X		LJA36400U43X		LLA36400U43X		LRA36400U43X	
			600	LDA36600U43X		LGA36600U43X		LJA36600U43X		LLA36600U43X		LRA36600U43X	
Micrologic Energy	LSI	5.3E	400	LDA36400U53X		LGA36400U53X		LJA36400U53X		LLA36400U53X		LRA36400U53X	
			600	LDA36600U53X		LGA36600U53X		LJA36600U53X		LLA36600U53X		LRA36600U53X	AL600LS52K3△
Micrologic Ammeter	LSIG	6.3A	400	LDA36400U44X		LGA36400U44X		LJA36400U44X		LLA36400U44X		LRA36400U44X	
			600	LDA36600U44X		LGA36600U44X		LJA36600U44X		LLA36600U44X		LRA36600U44X	
Micrologic Energy	LSIG	6.3E	400	LDA36400U54X		LGA36400U54X		LJA36400U54X		LLA36400U54X		LRA36400U54X	
			600	LDA36600U54X		LGA36600U54X		LJA36600U54X		LLA36600U54X		LRA36600U54X	

- ◆ For 100% rated circuit breakers (250 A and 400 A only), add a "C" in the 9th character place (for example, LRA36400CU31X).
- ◆ Circuit breakers with J, L, and R interrupting ratings are CSA/UL certified as current limiting.
- ★ 3P circuit breakers with this trip unit can be used for 2P applications.
- ▼ AL400L61K3 terminal wire ranges are (1) 2 AWG–600 kcmil Cu or 1) 2 AWG–500 kcmil AL.
- △ AL600LS52K3 terminal wire range is (2) 2/0 AWG–500 kcmil Al/Cu.

Powerpact M -Frame 800A with ET1.0 Trip Unit (factory sealed, not field adjustable)

Ampere Rating	Adjustable Instantaneous Trip Range		G Interrupting 600Vac	J Interrupting 600Vac	Terminal Wire Range
	Low	High			
300	600	3000	MGA26300()	MJA26300()	
350	700	3500	MGA26350()	MJA26350()	
400	800	4000	MGA26400()	MJA26400()	
450	900	4500	MGA26450()	MJA26450()	AL800M23K
500	1000	5000	MGA26500()	MJA26500()	3-#3/0-500 kcmil
600	1200	6000	MGA26600()	MJA26600()	
700	1400	7000	MGA26700()	MJA26700()	
800	1600	8000	MGA26800()	MJA26800()	
300	600	3000	MGA36300	MJA36300	
350	700	3500	MGA36350	MJA36350	
400	800	4000	MGA36400	MJA36400	
450	900	4500	MGA36450	MJA36450	AL800M23K
500	1000	5000	MGA36500	MJA36500	3-#3/0-500 kcmil
600	1200	6000	MGA36600	MJA36600	
700	1400	7000	MGA36700	MJA36700	
800	1600	8000	MGA36800	MJA36800	

Interrupt Ratings (kA)

Voltage	G	J
240 V	65	100
480 V	35	65
600 V	18	25

- CSA/UL magnetic trip setting tolerances are ±10% from the nominal values shown.
- * Fill in parentheses with the following phase connection options: (2) for AC and (5) for CA.

Automatic Molded Case Switches—600 Vac, 50/60 Hz

Ampere Rating	2-pole		3-pole		Withstand Rating ◇			Terminal Wire Range
	Catalogue Number □		Catalogue Number		240 Vac	480 Vac	600 Vac	
600 A	PJA26000S60()		PJA36000S60		100	65	25	3–3/0 through 500 kcmil Al or Cu
800 A	PJA26000S80()		PJA36000S80		100	65	25	
1000 A	PJA26000S10()		PJA36000S10		100	65	25	4–3/0 through 500 kcmil Al or Cu
1200 A	PJA26000S12()		PJA36000S12		100	65	25	

- ◇ The withstand rating is the fault current, at rated voltage, that the molded case switch will withstand without damage when protected by a circuit breaker with an equal ampere rating.
- Fill in parentheses with the following phase connection options: (2) for AC or (5) for CA.

PowerPact P- and R-frame Interrupt Ratings

Voltage	P-frame Interrupt Rating				R-frame Interrupt Rating			
	G	J	K	L	G	J	K	L
240 Vac	65 kA	100 kA	65 kA	125 kA	65 kA	100 kA	65 kA	125 kA
480 Vac	35 kA	65 kA	50 kA	100 kA	35 kA	65 kA	65 kA	100 kA
600 Vac	18 kA	25 kA	50 kA	---	18 kA	25 kA	65 kA	50 kA

Selection Information

Molded Case Circuit Breakers

Class 600, 612, 800

DE3 CIRCUIT BREAKERS

	PowerPact 800 A M-Frame		PowerPact 1200 A P-Frame				PowerPact 3000 A R-Frame				
Circuit Breaker Type	MG	MJ	PG	PJ	PK	PL	RG	RJ	RK	RL	
Number of Poles	2, 3	2, 3	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	
Current Range	300–800	300–800	100–1200	100–1200	100–1200	100–1200	240–3000	240–3000	240–3000	240–3000	
Interrupting Ratings											
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	65	100	65	100	65	125	65	100	65	125
	480Y/277 Vac	35	65	35	65	50	100	35	65	65	100
	480 Vac	35	65	35	65	50	100	35	65	65	100
	600Y/347 Vac	18	25	18	25	50	25	18	25	65	50
DC Ratings	250 Vdc	—	—	—	—	—	—	—	—	—	—
	500 Vdc▲	—	—	—	—	—	—	—	—	—	—
IEC (kA RMS) Icu/Ics■	240 Vac	50/25	65/35	50/25	65/35	50/25	125/65	50/25	65/35	85/65	125/65
	415 Vac	35/20	50/25	35/20	50/25	50/25	85/45	35/20	50/25	70/55	85/45
Special Ratings											
CCC	X	X	X	X	X	X	X	X	X	X	X
Fed. Specs W-C-375B/GEN	X	X	X	X	X	X	X	X	X	X	X
HACR (2P, 3P)	X	X	X	X	X	X	X	X	X	X	X
Connections/Terminations											
Unit Mount	X	X	X	X	X	X	X	X	X	X	X
I-Line™	X	X	X	X	X	X	X▼	X▼	X▼	X▼	X▼
Rear Connection	—	—	—	—	—	—	—	—	—	—	—
Drawout	—	—	X★	X★	X★	X★	—	—	—	—	—
Optional Lugs	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
Undervoltage Trip	X	X	X	X	X	X	X	X	X	X	X
Auxiliary Switches	X	X	X	X	X	X	X	X	X	X	X
Alarm Switch	X	X	X	X	X	X	X	X	X	X	X
Motor Operator	—	—	X★	X★	X★	X★	—	—	—	—	—
Handle Operators	—	—	X★	X★	X★	X★	—	—	—	—	—
Mechanical Interlocks (3P)	—	—	X	X	X	X	—	—	—	—	—
Handle Padlock Attachment	X	X	X	X	X	X	X	X	X	X	X
Cylinder Lock (3P)	—	—	—	—	—	—	—	—	—	—	—
Optional GF Protection	—	—	X	X	X	X	X	X	X	X	X
Trip System Type											
Thermal-magnetic	—	—	—	—	—	—	—	—	—	—	—
Instantaneous-only (MCP)	—	—	—	X	X	—	—	—	—	—	—
Molded Case Switch (Automatic)	—	—	X	X	X	X	X	X	X	X	X
Electronic	X	X	X	X	X	X	X	X	X	X	X
Enclosures (Pages DE3-56–DE3-58)											
General Purpose (NEMA 1)	X	X	X	X	X	X	—	—	—	—	—
Raintight (NEMA 3R)	X	X	X	X	X	X	—	—	—	—	—
Dust-tight (NEMA 12)	X	X	X	X	X	X	—	—	—	—	—
Watertight (NEMA 4, 4X, 5)	X	X	—	—	—	—	—	—	—	—	—
Explosion Proof (NEMA 7, 9)	—	—	—	—	—	—	—	—	—	—	—
Dimensions (3P Unit Mount)	Height—in. (mm)	12.80 (325)		16.20 (413)				15 (381)			
	Width—in. (mm)	8.30 (210)		8.30 (210)				16.50 (420)			
	Depth—in. (mm)	8.10 (205)		8.10 (205)				14.40 (366)			
Pages (Unit Mount)/(I-Line)	Page DE3-26/Section DE5		Page DE3-27, DE3-31, DE3-34/Section DE5				Page DE3-28, DE3-34/Section DE5				

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

- ▲ Ungrounded UPS systems only. See page DE3-35.
- Dual CSA/UL and IEC ratings and CE markings on circuit breakers.
- ◆ Requires breaker with WB suffix
- ★ 65/50 kA Icu/Ics for 450–600 A ratings.
- ▼ 1000 A and 1200 A only.

Dimensions and Shipping Weights Molded Case Circuit Breakers

Figure 25

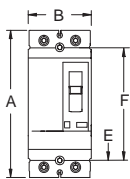


Figure 26

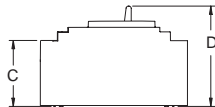
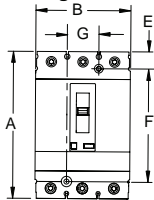


Figure 27

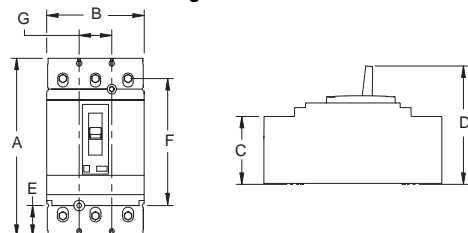


Figure 28

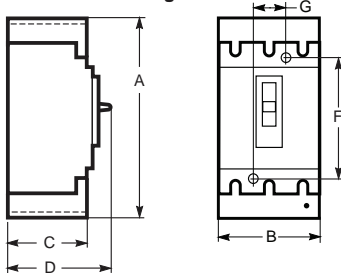


Figure 29

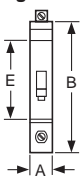


Figure 30

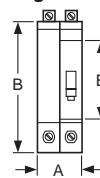


Figure 31

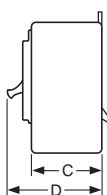
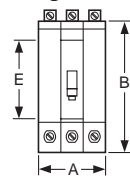


Figure 32

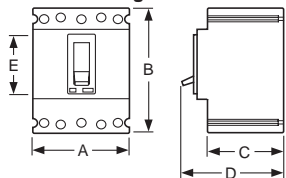


Figure 33

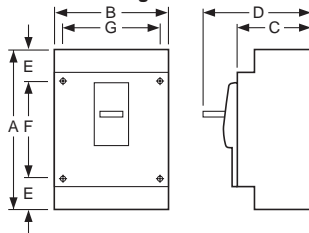
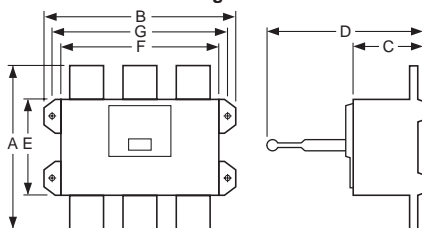


Figure 34



HD, HG, HJ, HL, HR, JD, JG, JJ, JL, JR, LG, LJ, LL, and LR Circuit Breakers

Circuit Breaker Cat. No. Prefix	No. of Poles	Fig. No.	Dimensions — Inches						
			A	B	C	D	E	F	G
HD, HG, HJ*, HL*, HR	2	25	6.40	2.74	2.87	4.36	0.74	4.92	—
JD*, JG*, JJ*, JL*, JR	3	26	6.40	4.12	2.87	4.36	0.74	4.92	1.38
JD*, JG*, JJ*, JL*, JR	3	27	7.52	4.12	2.87	5.00	1.30	4.92	1.38
LG, LJ, LL, LR	3	28	13.38	5.51	3.75	6.61	2.22	8.93	1.77

* - The HJ, HL and the J-Frame 2P breakers are 3P modules

ED, EG and EJ Circuit Breakers

Circuit Breaker Catalogue No. Prefix	No. of Poles	Fig. No.	Dimensions — Inches				
			A	B	C	D	E
ED, EG, EJ	1	29	0.98	5.66	3.09	4.05	3.32
	2	30	1.96	5.66	3.09	4.05	3.32
	3	30	2.94	5.66	3.09	4.05	3.32
GJ	3	32	3.54	4.72	2.76	3.94	2.20

MG, MJ, PG, PJ, PL, RG, RJ and RL Circuit Breakers

Circuit Breaker Cat. No. Prefix	No. of Poles	Fig. No.	Dimensions — Inches						
			A	B	C	D	E	F	G
MG, MJ (800 A and below)	2, 3	33	12.86	8.27	5.77	8.05	2.49	7.87	7.83
PG, PJ, PK, PL (1000–1200 A)	2, 3	33	16.16	8.27	5.77	8.05	4.19	7.87	7.83
RG, RJ, RL	2, 3	34	16.24	16.54	6.63	14.49	8.73	14.25	15.35

Shipping Weights▲

Frame Size	Approx. Shipping Weight (Lbs.)	Frame Size	Approx. Shipping Weight (Lbs.)
HD, HG, HJ, HL 2P	4	JD, JG, JJ, JL, JR	5
HD, HG, HJ, HL, HR 3P	5	LD, LG, LJ, LL, LR	14
ED, EG, EJ 1P	2	MG, MJ	29
ED, EG, EJ 2P	3	PG, PJ, PK, PL	32
ED, EG, EJ 3P	4	RG, RJ, RK, RL (Without RLTB)	52

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

PowerPact® M-, P- and R-Frame, and Compact® NS630b–NS3200 Circuit Breakers PowerPact® M-Frame Molded Case Circuit Breakers

Catalog Numbers

Table 33: UL/IEC Rated, Unit-Mount, Manually-Operated, Standard-Rated Electronic Trip Circuit Breakers with Non-Interchangeable 1.0 Electronic Trip (Fixed Long-Time and Adjustable Instantaneous Trip Settings)

Type	Poles	Current Rating							
		300 A	350 A	400 A	450 A	500 A	600 A	700	800
MG	2	MGL26300	MGL26350	MGL26400	MGL26450	MGL26500	MGL26600	MGL26700	MGL26800
MJ	2	MJL26300	MJL26350	MJL26400	MJL26450	MJL26500	MJL26600	MJL26700	MJL26800
MG	3	MGL36300	MGL36350	MGL36400	MGL36450	MGL36500	MGL36600	MGL36700	MGL36800
MJ	3	MJL36300	MJL36350	MJL36400	MJL36450	MJL36500	MJL36600	MJL36700	MJL36800

Table 34: UL/IEC Rated, I-Line®, Manually-Operated, Standard-Rated Electronic Trip Circuit Breakers with Non-Interchangeable 1.0 Electronic Trip (Fixed Long-Time and Adjustable Instantaneous Trip Settings)

Type	Poles	Current Rating							
		300 A	350 A	400 A	450 A	500 A	600 A	700	800
MG ¹	2	MGA263002	MGA263502	MGA264002	MGA264502	MGA265002	MGA266002	MGA267002	MGA268002
MJ ¹	2	MJA263002	MJA263502	MJA264002	MJA264502	MJA265002	MJA266002	MJA267002	MJA268002
MG ²	3	MGA36300	MGA36350	MGA36400	MGA36450	MGA36500	MGA36600	MGA36700	MGA36800
MJ ²	3	MJA36300	MJA36350	MJA36400	MJA36450	MJA36500	MJA36600	MJA36700	MJA36800

¹ Suffix 2 is for AC phasing (standard offer), or use 5 for CA phasing (option).

² No suffix is for ABC phasing (standard offer), or use 6 for CBA phasing (option).

Interrupting Ratings

Table 35: Interrupting Ratings

Mounting	Circuit Breaker	Interrupting Ratings						
		UL/CSA/NMX			IEC 60947-2			
		240 Vac	480 Vac	600 Vac	240 Vac		380/415 Vac	
				Icu	Ics	Icu	Ics	
Individually-Mounted	MG	65 kA	35 kA	18 kA	50 kA	25 kA	35 kA	20 kA
	MJ	100 kA	65 kA	25 kA	65 kA	35 kA	50 kA	25 kA
I-Line	MG	65 kA	35 kA	18 kA	50 kA	25 kA	35 kA	20 kA
	MJ	100 kA	65 kA	25 kA	65 kA	35 kA	50 kA	25 kA

Termination Information

Unit-mount circuit breakers have mechanical lugs standard on both ends. I-Line circuit breakers have lugs standard on the O/OFF end. These lugs accept aluminum or copper wire. See Table 82 on page 79 for more lug options.

Accessories

Accessories are available either factory- or field-installed. They can be installed in accessory compartments behind the circuit breaker accessory cover. See Table 60 on page 66 for available accessories.



M-Frame Unit-Mount



M-Frame I-Line

I-LINE Moulded Case Circuit Breakers

16A to 160A

Circuit breakers have a factory set thermal trip and instantaneous magnetic trip release.
Please refer to accessories table for electrical auxiliaries, page 8-9.

**Catalogue Number			Current Rating A	Terminal Capacity mm ²	Instantaneous Trip Setting A	Maximum Earth Fault Loop Impedance Zs OHMS at 240V AC	
Single Pole	Double Pole	Triple Pole				5 Seconds	0.4 Seconds

Short Circuit Capacity 25kA - 1 / 2 / 3 Module Ways Occupied in I-LINE Panelboard

SFA1016	SFA2016	SFA3016	16	2.5-25	400	2.46	0.60
SFA1020	SFA2020	SFA3020	20	2.5-25	400	1.97	0.60
SFA1032	SFA2032	SFA3032	32	2.5-25	480	1.17	0.50
SFA1040	SFA2040	SFA3040	40	2.5-50	600	0.94	0.40
SFA1050	SFA2050	SFA3050	50	2.5-50	600	0.75	0.40
SFA1063	SFA2063	SFA3063	63	2.5-50	1000	0.60	0.24
SFA1080	SFA2080	SFA3080	80	2.5-50	1200	0.47	0.20
SFA1100	SFA2100	SFA3100	100	2.5-50	1200	0.38	0.20
-	-	SFA3125	125	50-95	1440	0.30	0.17
-	-	SFA3160	160	50-95	1440	0.23	0.17



SFA1080

Short Circuit Capacity 65kA - 3 Modules Ways Occupied in I-LINE Panelboard

-	-	SFH3016	16	2.5-6	400	2.46	0.60
-	-	SFH3020	20	2.5-6	400	1.97	0.60
-	-	SFH3032	32	2.5-6	480	1.17	0.50
-	-	SFH3040	40	2.5-50	600	0.94	0.40
-	-	SFH3050	50	2.5-50	600	0.75	0.40
-	-	SFH3063	63	2.5-50	1000	0.60	0.24
-	-	SFH3080	80	2.5-50	1200	0.47	0.20
-	-	SFH3100	100	2.5-50	1200	0.38	0.20



SFA3040

Short Circuit Capacity 150kA - 3 Modules Ways Occupied in I-LINE Panelboard

-	-	SFI3020	20	2.5-25	400	1.20	0.60
-	-	SFI3032	32	2.5-25	480	0.75	0.50
-	-	SFI3040	40	2.5-50	600	0.65	0.40
-	-	SFI3050	50	2.5-50	600	0.55	0.40
-	-	SFI3063	63	2.5-50	1000	0.42	0.24
-	-	SFI3080	80	2.5-50	1200	0.34	0.20
-	-	SFI3100	100	2.5-50	1200	0.28	0.20

** Catalogue numbers for circuit breakers of single and double pole construction require the addition of a suffix corresponding to the phase connection details.

- Suffix A supply red phase.
- Suffix B supply yellow phase.
- Suffix C supply blue phase.
- Suffix AB supply red-yellow phase.
- Suffix BC supply yellow-blue phase.
- Suffix AC supply red-blue phase.

Example SFA1080B supply yellow phase connection.

Example SFA2080AB supply red-yellow phase connection.