

The PowerPact Advantage

- **Proven Performance:** Industry-leading circuit breaker innovation and protection for heavy-duty commercial and industrial applications.
- **Flexible:** Full range of molded case circuit breakers from 15 A to 3000 A, delivering the ratings, configurations, and operators for your unique applications.
- **Simple:** Common catalog numbers, standardized ratings, and a full range of field-installable accessories make product selection, installation and maintenance easier than ever.
- **Common Design Features:** Mounting holes, door trim, and handle accessories



Table 7.35: PowerPact Interrupting Ratings

Voltage	Interrupting Rating					
	B	D	G	J	K	L
240 Vac	10 kA	25 kA	65 kA	100 kA	65 kA	125 kA
480 Vac		18 kA	35 kA	65 kA	65 kA a	100 kA
600 Vac		14 kA	18 kA	25 kA	65 kA a	50 kA

a P-frame K interrupting is 50 kA at 480 and 600 Vac.

Table 7.36: Common Catalog Numbering System

Frame	Rating	Termination	Poles	Voltage	Amperage			Suffix Code		Suffix Code	
					1	5	0	A	B	S	A
H	G	L	3	6	1	5	0	A	B	S	A

110 Vac Shunt Trip
2A/2B Auxiliary Switch

Frame Designation	Interrupting Rating	Terminations
G 100A Frame	240 Vac 10 kA	A I-Line
H 150 A Frame	480 Vac 18 kA	L Lugs on Both Ends
J 250 A Frame	480 Vac 25 kA	F Bus Bar (No Lugs)
Q 250 A Frame	480 Vac 14 kA	M Lugs Line Side Only
D 600 A Frame	600 Vac 18 kA	P Lugs Load End Only
M 800 A Frame	600 Vac 35 kA	N Plug-in
P 1200 A Frame	600 Vac 65 kA	D Drawout
R 3000 A Frame	600 Vac 125 kA	S Rear Connected Studs

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7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

New!



HD and HG 2P



H-frame



J-frame

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

Table 7.37: H-frame 150 A and J-frame 250 A Thermal-magnetic Circuit Breakers (600 Vac, 250 Vdc) With Factory Sealed Trip Unit Suitable for Reverse Connection^a

Current Rating @ 40°C	Fixed AC Magnetic Trip		Cat. No.bc	Interrupting Rating (2nd Letter of Catalog Number)								Terminal Wire Range
				D		G		J		L		
	Hold	Trip		\$ Price								
			80% Rated	100% Rated	80% Rated	100% Rated	80% Rated	100% Rated	80% Rated	100% Rated		
H-frame, 150A 2P, 600 Vac 50/60 Hz, 250 Vdc												
15 A	350 A	750 A	H()L26015(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	AL150HD 14-3/0 AWG Al or Cu
20 A	350 A	750 A	H()L26020(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
25 A	350 A	750 A	H()L26025(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
30 A	350 A	750 A	H()L26030(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
35 A	400 A	850 A	H()L26035(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
40 A	400 A	850 A	H()L26040(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
45 A	400 A	850 A	H()L26045(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
50 A	400 A	850 A	H()L26050(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
60 A	800 A	1450 A	H()L26060(C)	580.00	696.00	846.00	1015.00	1039.00	1247.00	1576.00	1891.00	
70 A	800 A	1450 A	H()L26070(C)	708.00	849.00	998.00	1198.00	1147.00	1377.00	1742.00	2091.00	
80 A	800 A	1450 A	H()L26080(C)	708.00	849.00	998.00	1198.00	1147.00	1377.00	1742.00	2091.00	
90 A	800 A	1450 A	H()L26090(C)	708.00	849.00	998.00	1198.00	1147.00	1377.00	1742.00	2091.00	
100 A	900 A	1700 A	H()L26100(C)	708.00	849.00	998.00	1198.00	1147.00	1377.00	1742.00	2091.00	
110 A	900 A	1700 A	H()L26110(C)	1381.00	1657.00	2039.00	2447.00	2966.00	3559.00	3689.00	4427.00	
125 A	900 A	1700 A	H()L26125(C)	1381.00	1657.00	2039.00	2447.00	2966.00	3559.00	3689.00	4427.00	
150 A	900 A	1700 A	H()L26150(C)	1381.00	1657.00	2039.00	2447.00	2966.00	3559.00	3689.00	4427.00	
H-frame 150A 3P, 600 Vac 50/60 Hz, 250 Vdc												
15 A	350 A	750 A	H()L36015(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	AL150HD 14-3/0 AWG Al or Cu
20 A	350 A	750 A	H()L36020(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
25 A	350 A	750 A	H()L36025(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
30 A	350 A	750 A	H()L36030(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
35 A	400 A	850 A	H()L36035(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
40 A	400 A	850 A	H()L36040(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
45 A	400 A	850 A	H()L36045(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
50 A	400 A	850 A	H()L36050(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
60 A	800 A	1450 A	H()L36060(C)	725.00	870.00	995.00	1194.00	1299.00	1559.00	1899.00	2279.00	
70 A	800 A	1450 A	H()L36070(C)	885.00	1061.00	1134.00	1361.00	1399.00	1679.00	2099.00	2519.00	
80 A	800 A	1450 A	H()L36080(C)	885.00	1061.00	1134.00	1361.00	1399.00	1679.00	2099.00	2519.00	
90 A	800 A	1450 A	H()L36090(C)	885.00	1061.00	1134.00	1361.00	1399.00	1679.00	2099.00	2519.00	
100 A	900 A	1700 A	H()L36100(C)	885.00	1061.00	1134.00	1361.00	1399.00	1679.00	2099.00	2519.00	
110 A	900 A	1700 A	H()L36110(C)	1733.00	2080.00	2399.00	2879.00	3449.00	4139.00	4499.00	5399.00	
125 A	900 A	1700 A	H()L36125(C)	1733.00	2080.00	2399.00	2879.00	3449.00	4139.00	4499.00	5399.00	
150 A	900 A	1700 A	H()L36150(C)	1733.00	2080.00	2399.00	2879.00	3449.00	4139.00	4499.00	5399.00	
J-frame 250A 2P, 600 Vac 50/60 Hz, 250 Vdc												
150 A	750 A	1500 A	J()L26150(C)	1450.00	1740.00	2141.00	2569.00	3114.00	3737.00	3874.00	4648.00	AL175JD 4-4/0 AWG Al or Cu
175 A	875 A	1750 A	J()L26175(C)	1450.00	1740.00	2141.00	2569.00	3114.00	3737.00	3874.00	4648.00	
200 A	1000 A	2000 A	J()L26200(C)	1450.00	1740.00	2141.00	2569.00	3114.00	3737.00	3874.00	4648.00	
225 A	1125 A	2250 A	J()L26225(C)	1450.00	1740.00	2141.00	2569.00	3114.00	3737.00	3874.00	4648.00	
250 A	1250 A	2500 A	J()L26250(C)	1992.00	2390.00	2834.00	3401.00	4150.00	4979.00	4796.00	5755.00	
J-frame 250A 3P, 600 Vac 50/60 Hz, 250 Vdc												
150 A	750 A	1500 A	J()L36150(C)	1820.00	2184.00	2519.00	3023.00	3621.00	4346.00	4724.00	5669.00	AL175JD 4-4/0 AWG Al or Cu
175 A	875 A	1750 A	J()L36175(C)	1820.00	2184.00	2519.00	3023.00	3621.00	4346.00	4724.00	5669.00	
200 A	1000 A	2000 A	J()L36200(C)	1820.00	2184.00	2519.00	3023.00	3621.00	4346.00	4724.00	5669.00	
225 A	1125 A	2250 A	J()L36225(C)	1820.00	2184.00	2519.00	3023.00	3621.00	4346.00	4724.00	5669.00	
250 A	1250 A	2500 A	J()L36250(C)	2499.00	2999.00	3334.00	4001.00	4825.00	5790.00	5995.00	7194.00	

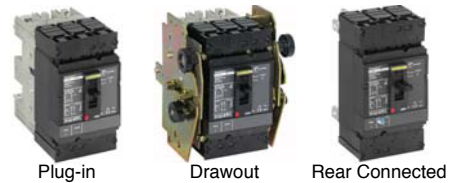
a See page 7-23 for circuit breakers with field interchangeable trip units.
b To complete catalog number, replace the blank with the appropriate rating (D, G, J, L).
c For 100% rated circuit breakers add a "C" in the 9th character place (for example, HDL26015C or JDL26150C).

Table 7.38: H- and J-frame Termination Options

Termination Letter
A - I-Line (See Section 9)
F = No Lugs (includes terminal nut kit on both ends) ^d
L = Lugs both ends
M = Lugs ON end Terminal Nut Kit OFF end
P = Lugs OFF end Terminal Nut Kit ON end
N = Plug-in e
D = Drawout e
S = Rear Connected e

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

H₁G₁L₃6100₀
Termination Letter



d Add TS suffix for circuit breaker without terminal nut kit.
e For N and D pricing, add termination pricing on page 7-41 to price. For S pricing, add termination pricing on page 7-37 to price.

Table 7.39: H- and J-frame Interrupting Ratings

Voltage	Interrupting Rating			
	D	G	J	L
240 Vac	25 kA	65 kA	100 kA	125 kA
480 Vac	18 kA	35 kA	65 kA	100 kA
600 Vac	14 kA	18 kA	25 kA	50 kA

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New!

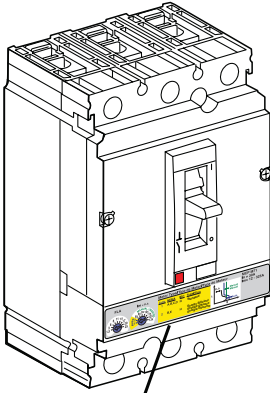
Table 7.64: Application of PowerPact® H-frame and J-frame Electronic Motor Circuit Protectors (MCP)

Horsepower Rating of Induction-type Squirrel-cage and Wound-rotor Motors 3Ø 60 Hz					NEC Full Load Amperes	PowerPact H-frame and J-frame Electronic MCP		
Starter Size	200 Vac	230 Vac	480 Vac	575 Vac				
00	1/2	1/2	1/2	1/2	0.9 A	HJL36030M71 and HLL36030M71 1/2–10 hp		
			3/4	3/4	1.1 A			
			1	1	1.3 A			
			1-1/2	1-1/2	1.7 A			
			2	2	2.1 A			
			1-1/2	1-1/2	2.2 A			
	3/4	3/4	3/4	1	1			2.4 A
				1-1/2	1-1/2			2.5 A
				2	2			2.7 A
				3	3			3 A
				3	3			3.2 A
				5	5			3.4 A
1	1	1	1	1	3.7 A			
			1-1/2	1-1/2	3.9 A			
			2	2	4.2 A			
			3	3	4.8 A			
			3	3	4.8 A			
			5	5	6 A			
0	2	2	1-1/2	1-1/2	6.1 A			
			2	2	6.8 A			
			3	3	6.9 A			
			5	5	7.6 A			
			7-1/2	7-1/2	7.8 A			
			10	10	9 A			
1	3	3	7-1/2	7-1/2	9.6 A			
			10	10	11 A			
			15	15	14 A			
			20	20	15.2 A			
			25	25	17 A			
			30	30	17.5 A			
2	5	5	15	15	21 A			
			20	20	22 A			
			25	25	25.3 A			
			30	30	27 A			
			40	40	28 A			
			50	50	32 A			
3	7-1/2	7-1/2	20	20	32.2 A			
			25	25	34 A			
			30	30	40 A			
			40	40	41 A			
			50	50	42 A			
			60	60	48.3 A			
4	10	10	30	30	52 A			
			40	40	54 A			
			50	50	62 A			
			60	60	65 A			
			75	75	68 A			
			100	100	77 A			
5	15	15	40	40	78.2 A			
			50	50	80 A			
			60	60	92 A			
			75	75	96 A			
			100	100	99 A			
			125	125	104 A			
0	20	20	50	50	120 A			
			60	60	124 A			
			75	75	125 A			
			100	100	130 A			
			125	125	144 A			
			150	150	150 A			
1	25	25	60	60	154 A			
			75	75	156 A			
			100	100	177.1 A			
			125	125	180 A			
			150	150	192 A			
			200	200	221 A			
2	30	30	75	75	240 A			
			100	100	248 A			
			125	125				
			150	150				
			200	200				
			250	250				

Shaded area is not covered by J-frame electronic motor circuit protector.

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

New!

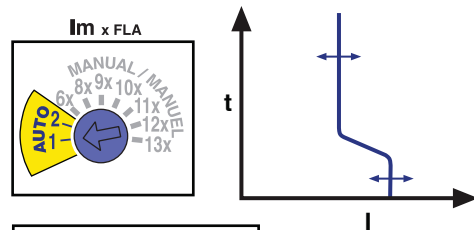


FLA Im x FLA Motor Type/Tipo de Motor/Type de Moteur MCP M71
 In = 30A Ims = 12-325A

Auto	NEMA	IEC	Type/Tipo
1	A,B,C,D	N	Standard
2	B,E	H	Energy Efficient Energie Efficace Energia Efficente

MANUAL / MANU
 AUTO / AUTO
 6x, 8x, 9x, 10x, 11x, 12x, 13x

FLA Manual / Manuel / Auto



Auto	NEMA	IEC	Type/Tipo
1	A,B,C,D	N	Standard
2	B,E	H	Energy Efficient Energie Efficace Energia Efficente

PowerPact H- and J-frame electronic Motor Circuit Protectors (MCP) are magnetic-only instantaneous-trip circuit breakers. They are designed to offer short circuit protection and are National Electrical Code (NEC) compliant when installed as part of a combination controller having motor overload protection. MCP circuit breakers accept the same accessories and terminals as the equivalent thermal-magnetic circuit breakers.

Determine the hp rating from the nameplate of the motor. Select a MCP with an ampere rating recommended for the hp and voltage involved. When using the automatic settings the MCP microprocessor automatically adjusts the trip settings for both current and time to align with the start-up characteristic for the motor type, whether it is a standard or energy-efficient motor. This includes a dampening means to accommodate a transient motor in-rush current without nuisance tripping of the circuit breaker.

Table 7.60: H- and J-frame Electronic Motor Circuit Protectors (MCP)

Frame	Current	Full Load Amperes Range	Adjustable Instantaneous Trip Range	Suffix	J Interrupting (See SCCR Table Below)		L Interrupting (See SCCR Table Below)	
					Cat. No.	\$ Price	Cat. No.	\$ Price
H-frame	30 A	1.5-25 A	9-325 A	M71	HJL36030M71	—	HLL36030M71	—
	50 A	14-42 A	84-546 A	M72	HJL36050M72	—	HLL36050M72	—
	100 A	30-80 A	180-1040 A	M73	HJL36100M73	—	HLL36100M73	—
	150 A	58-130 A	348-1690 A	M74	HJL36150M74	—	HLL36150M74	—
J-frame	250 A	114-217 A	684-2500 A	M75	JLL36250M75	—	JLL36250M75	—

Table 7.61: Maximum Rating or Setting of Motor Protective Devices^a

Type of Motor	Percentage of Full-load Current		
	Setting	Not to Exceed ^b	
A, B, C, D	Standard	800%	1300%
B, E	Energy Efficient	1100%	1700%

- ^a Based on 2005 NEC Table 430.52.
- ^b See NEC Exception No. 1 to Table 430.52. The NEC 1300% maximum setting may be inadequate for instantaneous trip circuit breakers to withstand current surges typical of the magnetization current of autotransformer type reduced voltage starters, or open transition wye-delta starters during transfer from "start" to "run," constant hp multi-speed motors, and motors labeled "high efficiency."

Table 7.62: MCP Selection by HP Ratings^c of Induction-type Squirrel-Cage and Wound-rotor Motors^d

	3Ø 60 Hz Voltages ^e				Full-Load Amperes	Suffix
	200 Vac	230 Vac	460 Vac	575 Vac		
.5-5	.5-7.5	.75-15	1-20	1.5-25	M71	
5-10	5-15	10-30	15-40	14-42	M72	
10-25	15-30	25-60	30-75	30-80	M73	
20-40	25-50	50-100	60-125	58-130	M74	
40-60	50-75	100-150	125-200	114-217	M75	

- ^c Based on 2005 NEC Table 430.250.
- ^d Per NEC 430.3, part-winding motors should select two circuit breakers, each at not more than one-half the allowable trip setting for the horsepower rating. The two circuit breakers should operate simultaneously as a disconnecting means per NEC 430.103.
- ^e Listed voltages are rated motor voltages. Corresponding system voltages are 200 Vac, 220-240 Vac, 440-480 Vac and 550-600 Vac. Select wire and circuit breakers based on horsepower rather than nameplate full-load current per NEC 430.6 (A) for general motor applications.

Short Circuit Current Rating (SCCR)

Tested to meet NEC and UL508A requirements for short circuit current ratings as part of an approved combination controller.

Table 7.63: Short Circuit Current Ratings (SCCR)

Contactor/Starter	J Interrupting			L Interrupting		
	200-240 Vac	480 Vac	600 Vac	200-240 Vac	480 Vac	600 Vac
Tesys D-line and F-line	100 kA	65 kA	25 kA	125 kA	100 kA	50 kA
NEMA Type S	100 kA	65 kA	25 kA	125 kA	100 kA	50 kA

See www.us.schneider-electric.com for specific ratings and combination ID numbers.

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