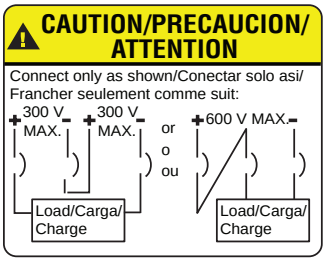
The CSA/UL Listed thermal-magnetic molded case circuit breakers shown below are specifically designed for use on ungrounded dc systems having a maximum short-circuit voltage of 500 Vdc or a maximum floating (unloaded) voltage of 600 Vdc. The circuit breakers are suitable for use only with UPS (uninterruptable power supplies) and ungrounded systems.

This two-level voltage rating allows these circuit breakers to be applied to battery sources having a short-circuit availability of 20,000 amperes for LH, and MH circuit breakers and 25,000 amperes for PAF circuit breakers at 500 Vdc.

LH and MH circuit breakers are provided with an adjustable magnetic trip that is readily accessible by means of a single adjustment on the face of the circuit breaker. PAF circuit breakers have a fixed magnetic trip range.

These circuit breakers are CSA/UL Listed for the interrupting ratings shown only if applied with three poles connected in series (series connection is external to circuit breaker). See diagram below.

NOTE: *Due to external series connection, I-Line™ circuit breakers are not available for this application.*



Source = 600 Vdc max. (floating)
500 Vdc max. (loaded)

DC Circuit Breaker Label

DC Molded Case Circuit Breakers

Ampere Rating	Circuit Breaker Cat. No.	Adjustable Magnetic Trip Range—DC Amperes▲		Interrupting Rating @ 500 Vdc	$ Price
		Low	High		
100 A	JGL37100D81	400	600	20 k AIR	
125 A	JGL37125D81	400	600		
150 A	JGL37150D81	400	600		
175 A	JGL37175D81	400	600		
200 A	JGL37200D82	500	850	20 k AIR	
225 A	JGL37225D82	500	850		
250 A	JGL37250D82	500	850		
250 A	LHL3625025DC	625	1250	20 k AIR	
300 A	LHL3630026DC	750	1500		
350 A	LHL3635029DC	875	1750		
400 A	LHL3640030DC	1000	2000		
450 A	MHL3645031DC	1125	2250	20 k AIR	
500 A	MHL3650032DC	1250	2500		
600 A	MHL3660033DC	1500	3000		
700 A	MHL3670035DC	1750	3500		
800 A	MHL3680036DC	2000	4000		
900 A	MHL3690039DC	2500	5000		
1000 A	MHL36100040DC	2500	5000		
1200 A	MHL36120040DC■	2500	5000	25 k AIR	
450 A	MHL3645031DCH	1125	2250	50 k AIR	
500 A	MHL3650032DCH	1250	2500		
600 A	MHL3660033DCH	1500	3000		
700 A	MHL3670035DCH	1750	3500		
800 A	MHL3680036DCH	2000	4000		
900 A	MHL3690039DCH	2500	5000		
1000 A	MHL36100040DCH	2500	5000		
1200 A	MHL36120040DCH■	2500	5000	50 k AIR	

▲ Magnetic trip tolerances are -20%/+30% from the nominal values shown.
■ Suitable for use only in a ventilated enclosure. Minimum enclosure dimensions are 38" h x 20" w x 7" d with a minimum of 300 square inches of ventilation near the top and bottom of the enclosure.

Ampere Rating	Circuit Breaker Cat. No.	Fixed Magnetic Trip Range—DC Amperes▲		Interrupting Rating @ 500 Vdc	$ Price
		Hold	Trip		
1200 A	PAF361200DC	1200	1620	25 k AIR	
1600 A	PAF361600DC	1600	2160		
2000 A	PAF362000DC	2000	2700		
2500 A	PCF362500DC	2500	3375	25 k AIR	

Accessories . . . . . Page DE3-39
Optional Lugs . . . . . Page DE3-42
Dimensions . . . . . Pages DE3-54 and DE3-55
Enclosures. . . . . Pages DE3-56–DE3-58

Table 12: Powerpact® M-frame Catalog Numbering System★

Number Segment	Character	Description	M	G	A	3	6	800	6▲	AB■
Circuit Breaker Family	M									
Circuit Breaker Type (Interrupting Rating)	G	35 kA @ 480 Volts								
	J	65 kA @ 480 Volts								
Connection Type	A	I-Line®								
	F	No lugs (Bus Connection)								
	L	Lugs on both ends								
	M	Lugs on ON (I) end only								
	P	Lugs on OFF (O) end only								
Poles	2	2-pole								
	3	3-pole								
Voltage	6	600 Vac								
Continuous Current Rating (Amperes)	300									
	350									
	400									
	450									
	500									
	600									
	700									
	800									
I-Line Phasing	2-pole	1 = AB								
		2 = AC								
		3 = BA								
		4 = BC								
		5 = CA								
		6 = CB								
	3-pole	None = ABC								
		6 = CBA								
Accessory Suffix Codes★										

★ See *M-frame, P-frame, R-frame and NS630b–NS3200 Electronic Trip Circuit Breakers Catalog* for more information. Also, see Class 611, 612, 613, and 734 catalogs for other Powerpact and Masterpact® circuit breakers.

▲ May be collapsed if none.

■ May be collapsed if none. May be multiple options.

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800 / 1000 AMPERE FRAME

This section provides specific information on Square D® 800 / 1000 ampere frame thermal-magnetic molded case circuit breakers. For more information, see the Introduction in this catalog.

Description

Table 32: Description of 800 / 1000 Ampere Frame Circuit Breakers

Circuit Breaker	Description
MG/MJ	300-800 ampere, 600 Vac, 50/60 Hz, 2- and 3-pole
MA/MH	300-800 ampere, 600 Vac, 50/60 Hz, 250 Vdc, 2- and 3-pole
MAL/MHL	300-1200 ampere, 600 Vac, 50/60 Hz, 250 Vdc, 2- and 3-pole

Applications

MA / MH circuit breakers are used in industrial enclosures, panelboards, switchboards, busway plug-in units, combination starters and motor control centers.

Table 33: 800 / 1000 Ampere Frame Interrupting Ratings

Catalog Number Prefix		No. of Poles	Cont. Ampere Rating	UL Listed Interrupting Rating (kA)								Federal Specs. W-C-375B/GEN	IEC 60947-2 Icu/Ics (kA) AC Voltage
				AC Volts - RMS Symmetrical Amperes					DC Volts				
Unit Mount	I-Line®			120	240	480Y/ 277	480	600	125	250	500		415/240
MAL	—	2, 3	300–1000	42	42	30	30	22	14	14	—	21a	30/30
—	MA	2, 3	300–800	42	42	30	30	22	14	14	—	21a	30/30
MHL★	—	2, 3	300–1000	65	65	65	65	25	—	—	—	23a	65/33
—	MH★	2, 3	300–800	65	65	65	65	25	14	14	—	23a	65/33
LHL-DC▲	—	3	—	—	—	—	—	—	—	—	20	—	—

★ Separate UL rating available for 240 Vac and 480 Vac grounded B single phase systems. Breakers must be ordered with 5861 suffix. See *Supplemental Digest* for specific ratings.

▲ UL Listed 500 Vdc rating for use on ungrounded systems. Must be connected 3 poles in series. Consult your local Square D sales office for additional information 1-888-Square D.

Table 34: 800 Ampere Powerpact® M-frame Molded Case Circuit Breakers★

Catalog Number Prefix		No. of Poles	Cont. Ampere Rating	UL Listed Interrupting Rating (kA)								Federal Specs. W-C-375B/GEN	IEC 60947-2 Icu/Ics (kA) AC Voltage
				AC Volts - RMS Symmetrical Amperes					DC Volts				
Unit Mount	I-Line			120	240	480Y/ 277	480	600	125	250	500		415/240
MG	▲	2, 3	300–800	65	65	35	35	18	—	—	—	22a	35/17.5
MJ	▲	2, 3	300–800	100	100	65	65	25	—	—	—	23a	50/25

★ See Powerpact Class 611, 612, 613, and 734 catalogs for other Powerpact and Masterpact® circuit breakers.

▲ See the Introduction section, Powerpact M-frame Catalog Numbering System, for available information.

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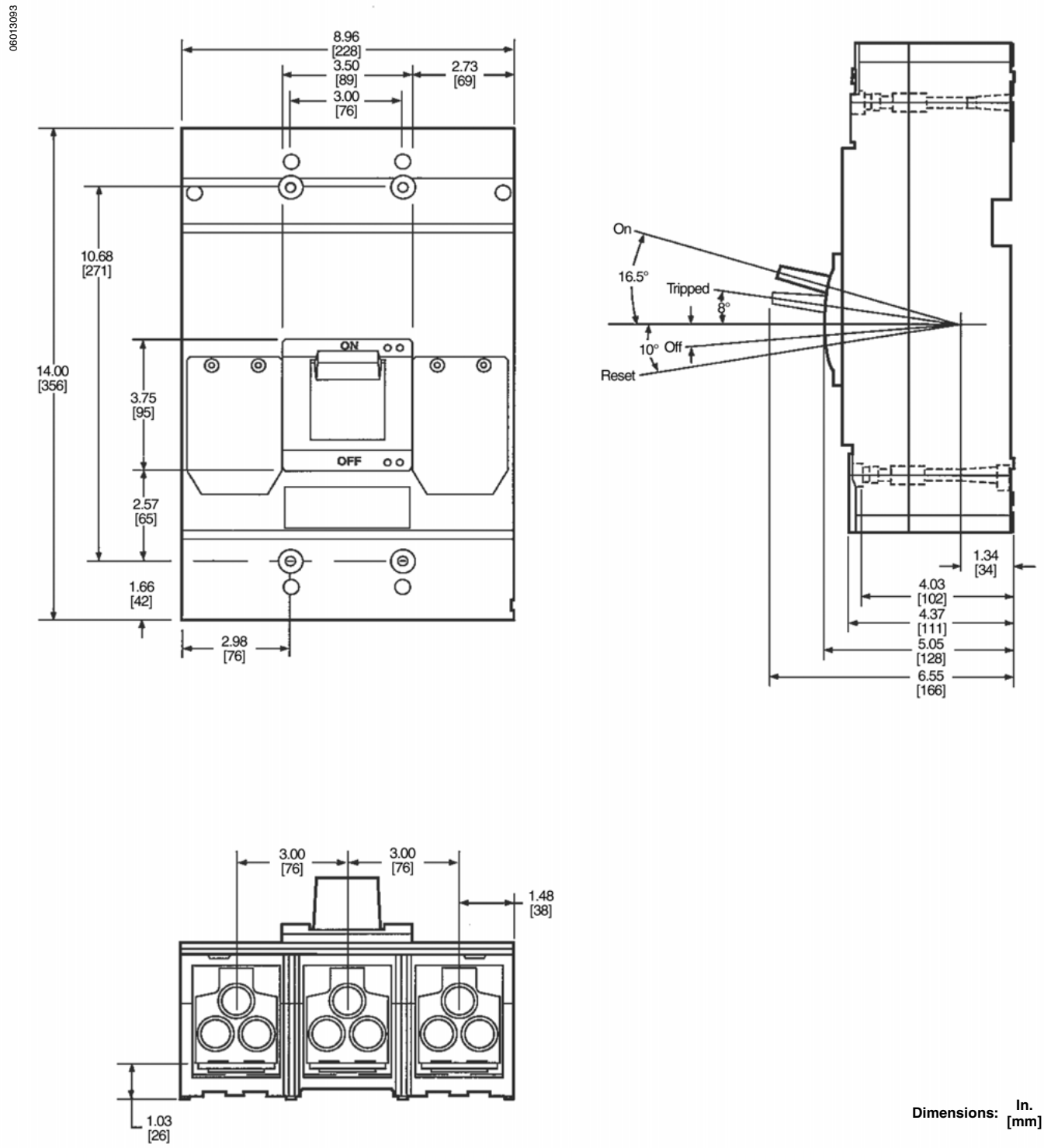
Dimensions

Figure 16: MAL, MHL 800 / 1000 Ampere Frame



Dimensions: In. [mm]

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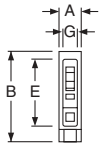


Figure 1

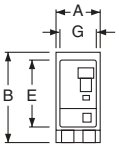


Figure 2

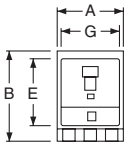
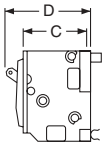
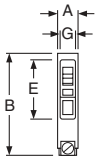


Figure 3



QO, QOB



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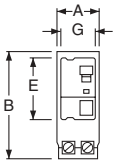
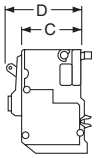
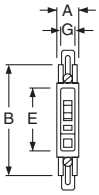


Figure 5



QO-GFI
QO-PL
QO-EPD



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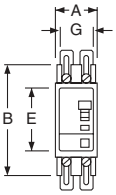

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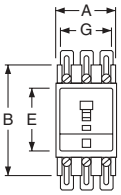

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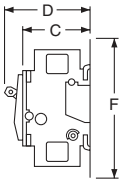


QOU, QYU
Low Ampere

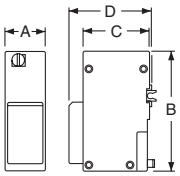


Figure 9
QO-PLPS

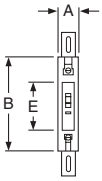
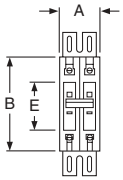


Figure 10



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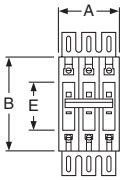
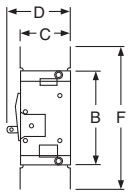
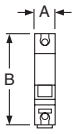


Figure 12



QOU
High Ampere



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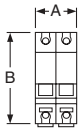

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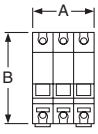

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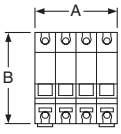
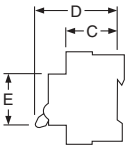


Figure 16



C60

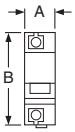
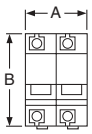


Figure 17



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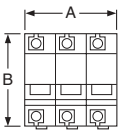

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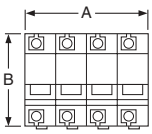

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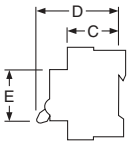
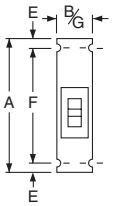


NC100



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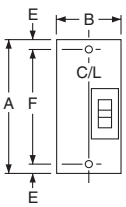


Figure 22

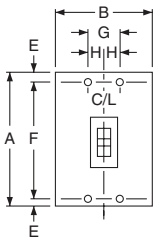
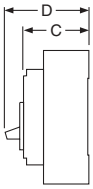


Figure 23



QO®, QOU, EH Circuit Breakers

Circuit Breaker Catalog No. Prefix	No. 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	. . .	. . .
Multi 9 NC100	1	17	1.06	3.19	1.73	2.76	1.77	. . .	. . .
	2	18	2.13	3.19	1.73	2.76	1.77	. . .	. . .
	3	19	3.19	3.19	1.73	2.76	1.77	. . .	. . .
	4	20	4.25	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 2-pole and 70–100 A 3-pole are 3.50 in.
■ QO-PL is 4.55 in.
♦ 80–100 A 1-pole and 80–125 A 2-pole are 4.45 in.
★ 70–100 A 4.45 in.
▼ 80–100 A 1-pole and 80–125 A 2-pole are 6.78 in.
△ 70–100 A is 6.78 in.

QB, QD, QG, QJ, Q4, FA, FI, KA, KI, LA, MA, ME and MX Circuit Breakers

Circuit Breaker Catalog No. Prefix	No. 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,FCL◊	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, KHL, KCL, 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
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.
◊ FCL 2-pole circuit breaker dimension B is 4.50 as in Fig. 23.

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