

Enclosed Circuit Breakers

SPEEDFAX™ 2017



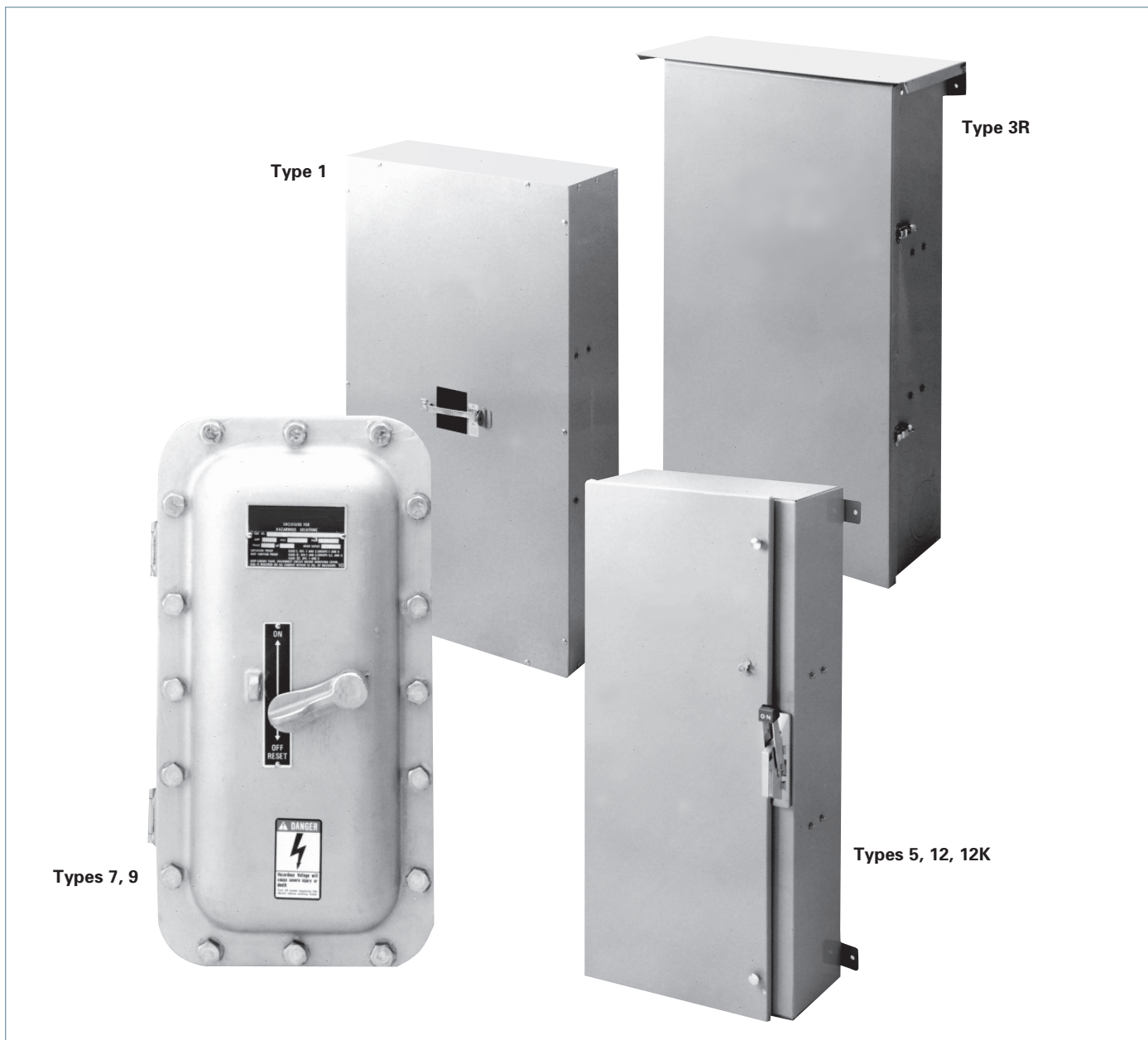
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SPEEDFAX.



Enclosed Circuit Breakers



Type 1

Type 3R

Types 7, 9

Types 5, 12, 12K

Type 1 — A general indoor, sheet-steel enclosure for use in normal atmospheres. Listed as service entrance equipment.

Type 3R — An outdoor, sheet-steel enclosure providing protection against driving rain, sleet or snow. Listed as service entrance equipment.

Types 7, 9 — Cast aluminum enclosure classified for explosion and fire hazard.

Only enclosure for use in hazardous location. Class I; Group D–Class II; Groups E, F, and G–Class III.

Types 4, 4X (not shown) — Stainless steel indoor or outdoor enclosure designed for use in areas where serious corrosion problems exist. They provide a degree of protection against windblown dust, rain, splashing water and hose-directed water. Meets NEMA Type 3, 4,

4X, 12 and 13 requirements and UL 508 Type 4 and 4X requirements.

Types 5, 12 — A special-industry, sheet-steel enclosure for use in atmospheres containing particles of lint, dust, dirt, sawdust and other foreign matter.

Type 12K — A semi-dusttight sheet-steel enclosure. Listed as service entrance equipment.

Enclosed Circuit Breakers

Complete Assemblies—Molded Case Circuit Breakers

Selection

Siemens Enclosed Circuit Breaker Complete Assemblies consist of a thermal magnetic molded case circuit breaker frame, trip unit, enclosure and standard line and load pressure wire connectors — assembled and shipped as one unit from the Siemens modification center. For service equipment or applications

requiring a solid neutral, neutrals must be priced and ordered separately except as noted.

To order, select the appropriate prefix from the table below and place it in front of the desired non-interchangeable trip or interchangeable trip circuit breaker catalog

number. For circuit breaker selection, refer to SpeedFax Section 7.

Note: Lead times are determined based on availability of components. Items marked with ■ in this section may contain components that are not normally stocked.

Catalog Numbering

Prefix	Enclosure Type	Example:	Catalog number E1SJD63B400 consists of:
E1S	Type 1 Surface		(1) JD63F400 frame
E1F	Type 1 Flush		(1) JD63T400 trip unit
E3R	Type 3R		(1) J6N1 enclosure
E12	Type 12		(6) TA2J6500 wire connectors
E4X	Type 4X Stainless Steel		
E46	Type 4X 316 Stainless Steel		

Selection by Enclosure Type

Circuit Breaker			Complete Assembly				Lug Catalog Number (included)	Neutrals
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface or Flush	Type 3R	Type 12	Type 4, 4X		Catalog Number
QR2	2, 3	100-250	✓	✓	✓	✓	TA1QR300	Included with enclosure
QRH2	2, 3	100-250	✓	✓	✓	✓	TA1QR300	
HQR2	2, 3	100-250	✓	✓	✓	✓	TA1QR300	
HQR2H	2, 3	100-250	✓	✓	✓	✓	TA1QR300	
NGG, HGG, LGG ^①	2, 3	15-30	✓	✓	✓	✓	3TC1Q1	N125GG included with enclosure
	2, 3	35-125	✓	✓	✓	✓	3TC1GG20	
3VA51 3VA52	2, 3	15-125 100-250	✓	✓	✓	✓	(order lugs separately)	N250X included with enclosure
3VA61 3VA62	2, 3	40-150 100-250	✓	✓	✓	✓	(order lugs separately)	
ED2	2	15-60	✓	✓	✓	✓	15-25A SA1E025	Catalog Number W53045 included with enclosure
	2	70-100	✓	✓	✓	✓		
	3	15-60	✓	✓	✓	✓		
	3	70-100	✓	✓	✓	✓		
ED4	2	15-60	✓	✓	✓	✓	30-60A Line LN1E100 Load LD1E060	
	2	70-100	✓	✓	✓	✓		
	2	110-125	✓	✓	✓	✓		
	3	15-60	✓	✓	✓	✓		
	3	70-100	✓	✓	✓	✓		
	3	110-125	✓	✓	✓	✓		
ED6	2	15-60	✓	✓	✓	✓	110-125A TA1E6125	
	2	70-100	✓	✓	✓	✓		
	3	15-60	✓	✓	✓	✓		
	3	70-100	✓	✓	✓	✓		
	3	110-125	✓	✓	✓	✓		
	3	110-125	✓	✓	✓	✓		

✓ Available configuration
— Not available

① NEMA 4X Enclosure is non-metallic

Enclosed Circuit Breakers

Complete Assemblies—Molded Case Circuit Breakers

Selection

Selection by Enclosure Type

Circuit Breaker			Complete Assembly				Lug Catalog Number (included)	Neutrals
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface or Flush	Type 3R	Type 12	Type 4, 4X		Catalog Number
HED4	2	15-60	✓	✓	✓	✓	Refer to page 7-139	Catalog Number W53045 included with enclosure
	2	70-100	✓	✓	✓	✓		
	2■	110-125	✓	✓	✓	✓		
	3	15-60	✓	✓	✓	✓		
	3	70-100	✓	✓	✓	✓		
	3	110-125	✓	✓	✓	✓		
CED6	2■	15-100	✓	✓	✓	—	Refer to page 7-139	
	2■	110-125	✓	✓	✓	—		
	3	15-100	✓	✓	✓	—		
	3■	110-125	✓	✓	✓	—		
DG	2, 3	50-150	✓	✓	✓	✓	TA1DG30	Catalog Number N250X Included with enclosure
FG	2, 3	100-250	✓	✓	✓	✓	TAW1FG350	

Circuit Breaker			Complete Assembly				Lug Catalog Number (included)	Neutrals (not included)
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface or Flush	Type 3R	Type 12	Type 4, 4X		Catalog Number
FXD6, FD6	2■	70-225 250	✓ ✓	✓ ✓	✓ ✓	✓ ✓	TA1FD350A	N250 ®
	3	70-225 250	✓ ✓	✓ ✓	✓ ✓	✓ ✓		
HFD6, HFXD6	2■	70-225 250	✓ ✓	✓ ✓	✓ ✓	✓ ✓		
	3■	70-225 250	✓ ✓	✓ ✓	✓ ✓	✓ ✓		
CFD6	3■	70-225 250	✓ ✓	✓ ✓	✓ ✓	— —		
	JXD2	2■ 3	200-400 200-400	✓ ✓	✓ ✓	✓ ✓		
JXD6, JD6	2■ 3	200-400 200-400	✓ ✓	✓ ✓	✓ ✓	✓ ✓		
	HJD6, HJXD6	2■ 3	200-400 200-400	✓ ✓	✓ ✓	✓ ✓	✓ ✓	
HHJD6, HHJXD6		2■ 3■	200-400 200-400	✓ ✓	✓ ✓	✓ ✓	✓ ✓	
	CJD6	3■	200-400	✓	✓	✓	—	

■ Built to order. Allow 2-3 weeks for delivery.
 ✓ Available configuration
 — Not available

® Order catalog number **W60993** neutral for type 4, 4X enclosure or when a 200% neutral is required.

® For 200% neutral order catalog number **N2250**

Enclosed Circuit Breakers

Complete Assemblies—Molded Case Circuit Breakers

Selection

Selection by Enclosure Type

Circuit Breaker			Complete Assembly				Lug Catalog Number (included)	Neutrals (Not Included)
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface	Type 3R	Type 12	Type 4, 4X		Catalog Number
3VA53, 3VA54	2	200-600	✓	✓	✓	✓	(order lugs separately)	HN656ACB
3VA63, 3VA64	3	200-600	✓	✓	✓	✓		
LXD6, LD6	2■	450-600	✓	✓	✓	✓	TA2J6500	W60993 ^①
	3	450-600	✓	✓	✓	✓		
HLD6, HLXD6	2■	250-600	✓	✓	✓	✓		
	3	250-600	✓	✓	✓	✓		
HHLXD6 ^③	2■	450-600	✓	✓	✓	✓		
HHLD6	3■	450-600	✓	✓	✓	✓		
CLD6	3■	450-600	✓	✓	✓	—	TA3K500	W63623 ^②
LMXD6, LMD6	2■	500-800	✓	✓	✓	—		
	3■	500-800	✓	✓	✓	—		
HLMXD6 ^③	2■	500-800	✓	✓	✓	—		
HLM6	3■	500-800	✓	✓	✓	—		
MXD6, MD6	2■	500-800	✓	✓	✓	—		
	3■	500-800	✓	✓	✓	—		
HMXD6 ^③	2■	500-800	✓	✓	✓	—		
HMD6	3■	500-800	✓	✓	✓	—		
CMD6	3■	500-800	✓	✓	✓	—		

■ Built to order. Allow 2–3 weeks for delivery.

✓ Available configuration

— Not available

① For 200% neutral in Type 1, 3R & 12 enclosures use neutral catalog number **W63623**.② For applications requiring 600MCM neutral conductors (max. 3 in & 3 out) use neutral catalog number **W411239**.

③ HHLXD6, HLMXD6 and HMXD6 are only available with 3-pole breakers.

Enclosed Circuit Breakers

Complete Assemblies—Molded Case Circuit Breakers

Selection

Selection by Enclosure Type

Circuit Breaker			Complete Assembly				Lug Catalog Number (included)	Neutrals (Not Included)	
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface	Type 3R	Type 12	Type 4, 4X		Catalog Number	
NXD6	2■	900-1200	✓	✓	✓	—	TA3K500 for 800A 2TA4N8500 for 900-1200A 2-Pole 3TA4N8500 for 900-1200A 3-Pole	W63623 [®]	
	3	900-1200	✓	✓	✓	—			
ND6	2■	800	✓	✓	✓	—			
	2■	900-1200	✓	✓	✓	—			
3	3	800	✓	✓	✓	—			
	3	900-1200	✓	✓	✓	—			
HNXD6	3	900-1200	✓	✓	✓	—			
HND6	2■	800	✓	✓	✓	—			
	2■	900-1200	✓	✓	✓	—			
3	3	800	✓	✓	✓	—			
	3	900-1200	✓	✓	✓	—			
CND6	3■	900-1200	✓	✓	✓	—			
PXD6 ^①	3■	1200-1600	✓	—	—	—	TA5P600	N2000	
PD6 ^①	3■	1200-1600	✓	—	—	—			
HPXD6 ^①	3■	1200-1600	✓	—	—	—			
HPD6 ^①	3■	1200-1600	✓	—	—	—			
CPD6 ^①	3■	1200-1600	✓	—	—	—			
RXD6 ^①	3	1600-2000	✓	—	—	—			TC5R600
RD6 ^①	3■	1600-2000	✓	—	—	—			TC5R600
HRXD6 ^①	3■	1600-2000	✓	—	—	—			TC5R600
HRD6 ^①	3■	1600-2000	✓	—	—	—			TC5R600

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ENCLOSED
CIRCUIT BREAKERS

■ Built to order. Allow 2–3 weeks for delivery.
 ✓ Available configuration
 — Not available

① Not assembled — components shipped separately.
 Includes connect-all mounting assembly
 Catalog Number **MB9301**.

② For applications requiring 600MCM neutral conductors
 (max. 3 in & 3 out) use neutral catalog number
W411239.

Enclosed Circuit Breakers

Complete Assemblies—Molded Case Circuit Switches

Selection

Selection by Enclosure Type

Molded Case Switch			Enclosure Type				Lug Catalog Number (included)	Neutrals	
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface or Flush	Type 3R	Type 12	Type 4, 4X		Catalog Number	
QR	3	250	✓	✓	✓	✓	TA1QR300	Included with enclosure	
ED2	2■	100	✓	✓	✓	✓	Refer to page 7-139	Catalog Number W53045 included with enclosure	
	3	100	✓	✓	✓	✓			
ED4	2■	100	✓	✓	✓	✓	Refer to page 7-139		
		125	✓	✓	✓	✓			
	3	100	✓	✓	✓	✓			
ED6	2■	100	✓	✓	✓	✓	Refer to page 7-139		
		125	—	—	—	—			
	3	100	✓	✓	✓	✓			
CED6	2■	100	✓	✓	✓	—	Refer to page 7-139		
		125	✓	✓	✓	—			
	3■	100	✓	✓	✓	—			
DG	2	150	✓	✓	✓	✓	TA1DG30	Catalog Number N250X Included with enclosure	
	3	150	✓	✓	✓	✓			
FG	2	250	✓	✓	✓	✓	TAW1FG350		
	3	250	✓	✓	✓	✓			
3VA51	2	125	✓	✓	✓	✓	Order lugs separately		Catalog Number N250X Included with enclosure
	3	125	✓	✓	✓	✓			
3VA52	2	250	✓	✓	✓	✓	Order lugs separately		
	3	250	✓	✓	✓	✓			

Molded Case Switch			Enclosure Type					Lug Catalog Number (included)	Neutrals (not included)
Breaker Frame	Number of Poles	Ampere Rating	Type 1 Surface	Type 1 Flush	Type 3R	Type 12	Type 4, 4X		Catalog Number
FXD6	2	250	✓	✓	✓	✓	✓	TA1FD350A	N250 ^③
	3	250	✓	✓	✓	✓	✓		
CFD6	3■	250	✓	✓	✓	✓	—		
JXD2	2■	400	✓	—	✓	✓	✓	TA2J6500	W60992 ^②
	3	400	✓	—	✓	✓	✓		
JXD6	3	400	✓	—	✓	✓	✓	TA2J6500	W60992 ^②
CJD6	3■	400	✓	—	✓	✓	—	TA2J6500	W60992 ^②
3VA63, 3VA64	2	600	✓	✓	✓	✓	✓	(order lugs separately)	HN656ACB
	3	600	✓	✓	✓	✓	✓		
LXD6	3	600	✓	—	✓	✓	✓	TA2J6500	W60993 ^④
CLD6	3■	600	✓	—	✓	✓	—	TA2J6500	W60993 ^④
MXD6	3	800	✓	—	✓	✓	—	TA3K500	W63623 ^⑤
CMD6	3■	800	✓	—	—	✓	—		
NXD6	3	1200	✓	—	—	✓	—	3TA4N8500	W63623 ^⑤
CND6	3■	1200	✓	—	—	✓	—		
PXD6 ^①	3■	1600	✓	—	—	—	—	TA5P500	N2000
RXD6 ^①	3■	2000	✓	—	—	—	—	TC5R600	N2000

■ Built to order. Allow 2–3 weeks for delivery.

✓ Available configuration

— Not available

① Not assembled — components shipped separately.

Includes connect-all mounting assembly Catalog Number MB9301.

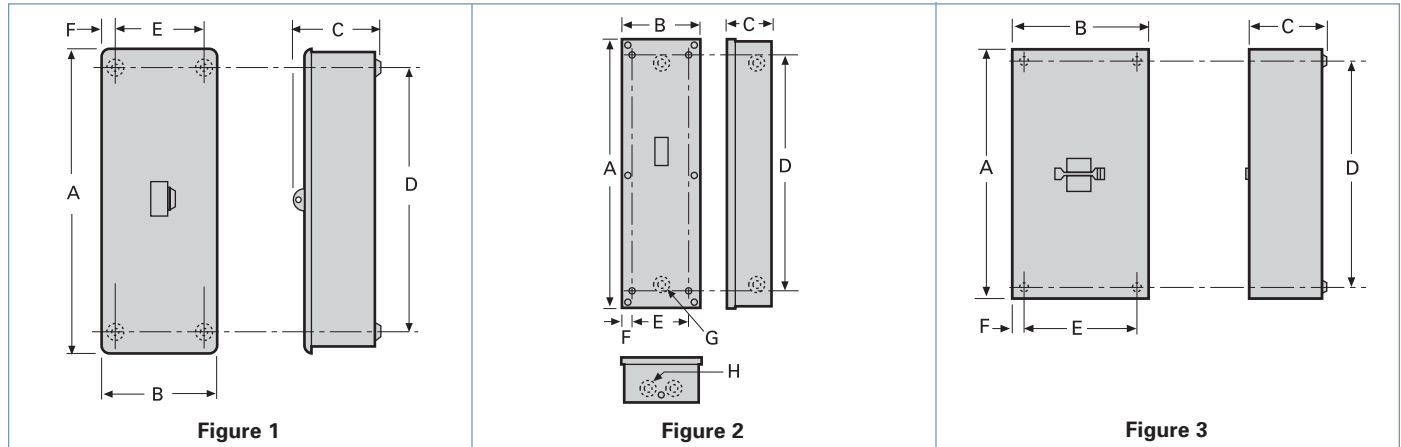
② Order Catalog Number **W60993** neutral for Type 4, 4X enclosure or when a 200% neutral is required.③ For 200% neutral order catalog number **N2250**④ For 200% neutral in Type 1, 3R & 12 enclosures use neutral catalog number **W63623**.⑤ For applications requiring 600 MCM neutral conductors (Max. 3 in and 3 out) use neutral catalog number **W411239**.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection

Dimensions



Type 1

Fig. No.	Breaker Frame	No. of Poles	Max. Current Rating	Catalog Number	Weight Lb./Ship. Package	Dimensions (inches)						K.O. Dimensions	
						A	B	C	D	E	F	G	H
1	QP, QPH, HQP	1,2	60	E0204ML1060S ^{①③⑦}	16	7.1	5.1	3.3	5.8	3.8	1.1	—	—
1	QP, QPH, HQP	3	100	E0303ML3100S ^{①③⑥}	8	17.1	7.1	4.2	14.1	4.5	1.3	—	—
1	BQ, BQH, HBQ	3	100	EB3100S ^{③⑥}	32	17.1	7.1	4.2	14.1	4.5	1.3	—	—
1	NGG, HGG, LGG	2, 3	125	GG0121FN GG0121SN	12	20.0	8.7	4.0	16.0	6.0	1.3	—	—
2	ED2, ED4, ED6, HED4	2, 3	100	E2N1S ^{③⑦} E2N1F ^{③⑦}	8 8	16.7 17.5	7.5 8.5	5.1 5.1	13.7 13.7	5.2 5.2	1 1	0.8, 1.1, 1.3	0.8, 1.1, 1.3
2	ED4, ED6, HED4, CED6	2, 3	125	CED6N1S ^{③⑦⑨} CED6N1F ^{③⑦⑨}	14 14	21.4 22.2	7.6 8.5	5.1 5.1	18.2 18.2	5.2 5.2	1 1	1.7, 2	1.7, 2
2	FD6, FXD6, HFD6, HFXD6, HHFD6, CFD6	2, 3	250	F6N1S2 ^② F6N1F2 ^②	33	38.4	11.4	5.1	33.0	8.0	1 1.5	1.1, 1.3, 1.7, 2.0, 2.5, 3.0	1.1, 1.3, 1.7, 2.0, 2.5, 3.0
3	JXD2, JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, SJD6, SHJD6	2, 3	400	J6N1 ^②	120	41.2	22.4	10.7	37.0	18.2	2.1	—	—
3	LD6, LXD6, HLD6, HLXD6, HHLXD6, HHLXD6, SLD6, SHLD6, SCJD6, SCLD6, CJD6, CLD6	2, 3	600	LD6N1 ^②	101	46.0	22.4	10.7	42.0	18.2	2.1	—	—
3	LMXD6, LMD6, HLMXD6, HLMD6	2, 3	800	LMD1 ^②	202	60.0	22.4	10.0	55.8	18.2	2.1	—	—
3	MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6	2-3	1200	MND61 ^②	202	60.0	22.4	10.0	55.8	18.2	2.1	—	—
—	PD6, PXD6, HPD6, HPXD6, CPD6, RD6, SPD6, SHPD6, RXD6, HRD6, HRXD6	3	2000	PRD6N1	350	90.0	32.0	28.0	—	—	—	—	—

For inches / millimeters conversion, see Application Data section.
All above enclosures are suitable for use as service entrance devices
■ Built to order. Allow 2-3 weeks for delivery.

①Surface mounted, indoor. If flush mounting is required, replace suffix "S" in catalog number with suffix "F". Also, if outdoor model required, use prefix "W" instead of "E".
②Neutral not included. Order as separate item from table on next page.
③Neutral included in enclosure.
④Surface mounted, indoor. If outdoor model is required, use prefix "W" instead of "E". Not available in flush ("F") model.

⑤Use for 110-125 ampere ED4, ED6, or HED4 circuit breakers.
⑥Will not accept breaker with shunt trip.
⑦Will not accept 2-pole GFP or breaker with shunt trip.
⑧Includes 100% rated breakers.
⑨Enclosure will accept shunt trip and other internal accessories except GFP.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection

Dimensions

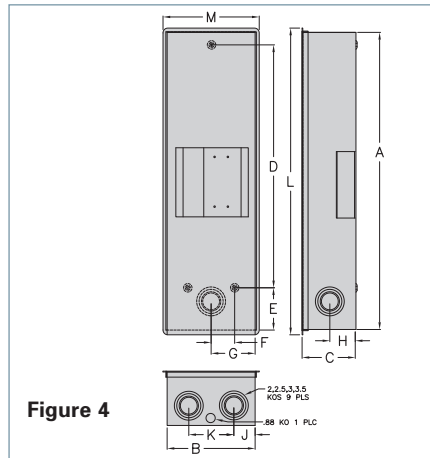


Figure 4

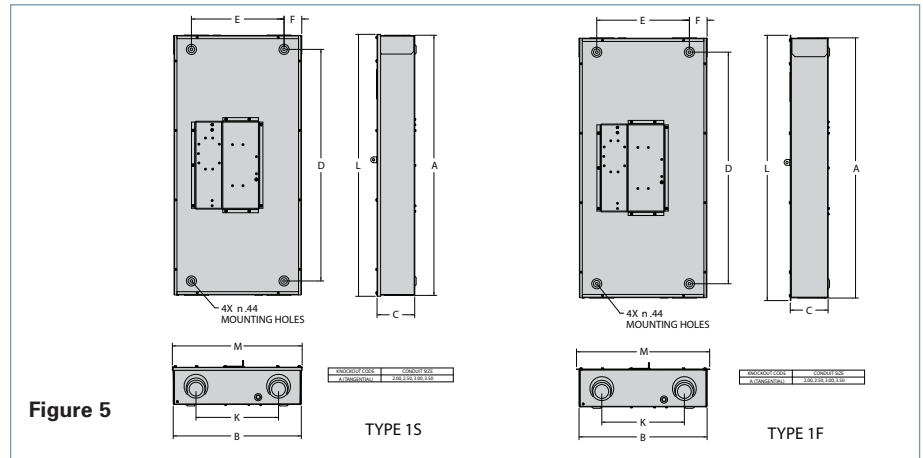


Figure 5

Figure Number	Breaker Frame	No. of Poles	Max. Current Rating	Catalog Number	Weight Lb./Ship. Package	Dimensions (inches)													
						A	B	C	D	E	F	G	H	J	K	L	M	N	P
4	QR2, QR2H, HQR2, HQR2H	2-3	250	QR2N1S ^① QR2N1F ^②	40	31.4	9.1	5.6	25.3	6.1	2.4	4.6	2.2	2.1	4.9	32.2	9.6	—	—
4	3VA51	2,3	125	3VAE125N1S ^③ 3VAE125N1F ^④	40	18.5	6.9	4.5	15.5	1.5	2.3	3.4	1.8	1.9	3.0	19.6	7.3	—	—
4	3VA52, 3VA61, 3VA62	2,3	250	3VAE250N1S ^③ 3VAE250N1F ^④	40	31.2	9.6	5.7	25.3	4.2	2.4	4.8	2.8	2.4	4.8	32.3	9.6	—	—
4	DG, FG	2-3	250	FG6N1S ^⑤ FG6N1F ^⑥	40	31.4	9.1	5.6	25.3	6.1	2.4	4.6	2.2	2.1	4.9	32.2	9.6	—	—
5	3VA53, 3VA63, 3VA54, 3VA64	2-3	600	3VAE6001S ^⑦ 3VAE6001F	68	44 ¹⁵ / ₁₆	22 ⁷ / ₁₆	6 ³ / ₁₆	40	16	3 ¹ / ₁₆	—	—	—	—	—	—	—	—

Neutrals

Neutral Catalog No.	Enclosure Catalog Number	Neutral Cable Capacity and Wire Range
N250X	QR2N1(S)(F) FG6N1(S)(F) 3VAE125N1(S)(F) 3VAE250N1(S)(F)	6 AWG – 350 kcmil Cu/Al Grd. Lug 14 AWG – 1/0 AWG Cu/Al
N125GG	GG0121SN/FN	(1 pc.) #14-2/0 Cu/Al, (1 pc.) #1-300 kcmil Cu/Al Grd. Lug (1 pc.) #12 - #4 Cu/Al (3 pcs.) #12 - #10 Cu/Al
W53045	E2N1(S)(F) CED6N1(S)(F) ^④	(1 pc.) #14-2 Cu/Al Grd. Lug (1 pc.) #14-8 Cu/Al
N250	F6N1(S)(F)	(1 pc.) #6-350 kcmil Cu/Al Grd. Lug (1 pc.) #14-2/0 Cu/Al
HN656ACB	3VAE6001S 3VAE6001F	1/0 - 600 kcmil Cu/Al Grd. Lug #6 - 300 kcmil Cu/Al
W60992	J6N1	(1 pc.) #1/0-750 kcmil Cu/Al or (2 pcs.) #1/0-300 kcmil Cu/Al Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
W60993	LD6N1	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
W63623	LMD1 MND61	(4 pcs.) 250 kcmil-500 kcmil Cu/Al ^⑤ Grd. Lug (1 pc.) #6-300 kcmil Cu/Al
N2000	PRD6N1	(6 pcs.) #3/0-750 kcmil Cu/Al Grd. Lug (2 pcs.) #3/0-750 Cu/Al

200% Neutrals (For Type 1, 3R, 4/4X and 12 Enclosures)

Neutral Catalog No.	Enclosure Catalog Number	Neutral Cable Capacity and Wire Range
N2250	F6N1(S)(F) ^⑥	(2 pcs.) #4-350 kcmil Cu/Al Grd. Lug (1 pc.) #14-2/0 Cu/Al
N2250X	QR2N1(S)(F) FG6N1(S)(F) 3VAE125N1(S)(F) 3VAE250N1(S)(F)	6 AWG – 350 kcmil Cu/Al Grd. Lug 6 AWG – 2/0 AWG Cu/Al
W60993	J6N1 ^⑦	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
W63623	LD6N1 ^⑧	(4 pcs.) 250 kcmil-500 kcmil Cu/Al Grd. Lug (1 pc.) #6-300 kcmil Cu/Al
HN678ACB	3VAE6001S 3VAE6001F	1/0 - 600 kcmil Cu/Al Grd. Lug #6 - 300 kcmil Cu/Al

For inches / millimeters conversion, see Application Data section.

①Surface mounted, indoor. If flush mounting is required, replace suffix "S" in catalog number with suffix "F". Also, if outdoor model required, use prefix "W" instead of "E".

②Neutral not included. Order as separate item from table on next page.

③Surface mounted, indoor. If outdoor model is required, use prefix "W" instead of "E". Not available in flush ("F") model.

④Use for 110-125 ampere ED4, ED6, or HED4 circuit breakers.

⑤Will not accept breaker with shunt trip.

⑥Also for use with Type 3R, 12, 12K & 4X enclosures (Catalog numbers F6N3R, F6N12, F6N12K & FD6SS4).

⑦Also for use with Type 3R, 12 & 4X enclosures (Catalog numbers J6N3R, J6N12, & LD6SS4).

⑧Also for use with Types 3R and 12 enclosures (Catalog numbers LD6N3R & LD6N12).

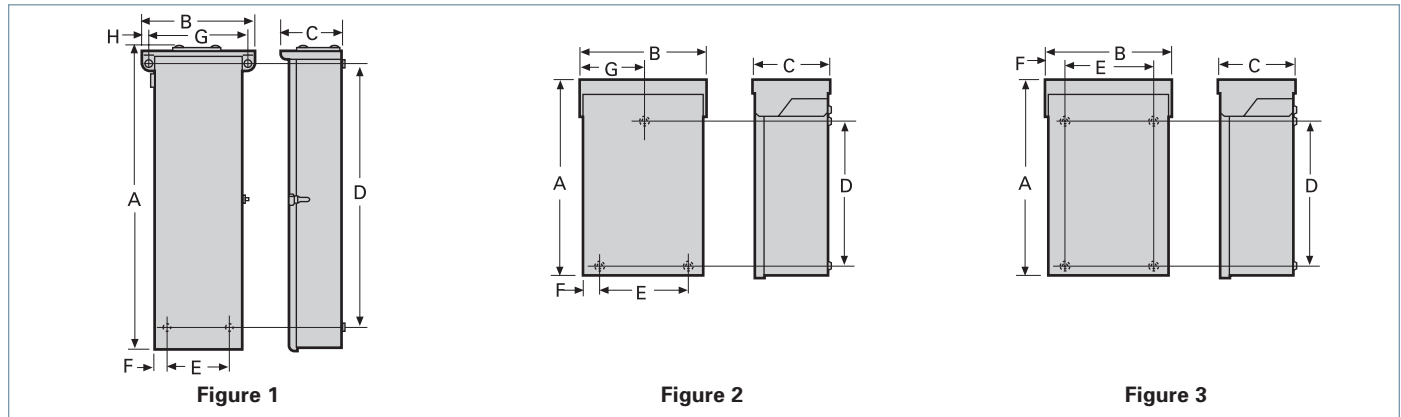
⑨For 600 MCM neutral cable (3) in, (3) out (#4-600 kcmil Cu/Al) use catalog number W411239

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection

Dimensions



Type 3R

Figure Number	Breaker Frame	No. of Poles	Max. Current Rating	Catalog Number	Weight Lb./Ship. Package	Dimensions (inches)							
						A	B	C	D	E	F	G	H
2	QP, QPH	1, 2	60	W0204ML1060 ^⑤	28	8.1	5.1	4.3	—	—	—	—	—
2	QPP, QPPH, HQPP	1-4	225	W0406ML1225CU ^④	24	23.1	10.5	4.3	20.0	7.5	1.9	5.2	—
2	HQP, QPH, HQP	3	100	W0303ML3100 ^④	9	17.1	7.3	4.3	14.1	4.5	1.1	3.7	—
2	BQ, BQH, HBQ	3	100	WB3100 ^④	9	17.1	7.3	4.3	14.1	4.5	1.1	3.7	—
2	NGG, HGG, LGG	2, 3	125	GG0123RN	15	19.7	9.0	5.0	16.6	6.0	1.2	4.5	—
5	ED2, ED4, ED6, HED4, HED6	2, 3	100	E2N3R ^③	12	17.6	7.2	5.2	12.6	5.2	1.0	3.0	—
5	ED2, ED4, ED6, CED6	2, 3	125	CED6N3R ^③	16	22.3	7.2	5.2	17.3	5.2	1.0	3.0	—
1	FD6, FXD6, HFD6, HFXD6, HHFD6, HHFXD6, CFD6	2, 3	250	F6N3R ^②	45	38.1	14.1	7.7	33.3	8.0	0.8	123.5	0.8
1	JXD2, JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, SJD6, SHJD6 ^⑥	2, 3	400	J6N3R ^②	126	41.0	26.7	11.7	35.7	18.2	2.1	24.5	1.1
1	LD6, LXD6, LXD6H, HLD6, HLXD6, HHL6, HHLXD6, CJD6, CLD6, SCJD6, SLD6, SHLD6 ^⑥	2, 3	600	LD6N3R ^②	137	46.0	26.7	11.7	40.7	18.2	2.1	24.5	1.1
4	LMXD6, LMD6, HLMXD6, HLMD6	2, 3	800	LMD3R ^②	210	61.1	26.7	11.7	57.5	18.2	2.1	24.5	1.1
1	MD6, MXD6, HMD6, HMXD6, CMD6, SMD6, SHMD6, SCMD6, ND6, NXD6, HND6, HNXD6, CND6, SND6, SHND6, SCND6 ^⑥	2, 3	1200	MND63 ^②	210	61.1	26.7	11.7	57.5	18.2	2.1	24.5	1.1

For inches / millimeters conversion, see Application Data section.

Note: All above enclosures are suitable for use as service entrance equipment.

① Does not include circuit breaker.

Order circuit breaker separately.

② Neutral not included. Order as separate item from table on next page.

③ Neutral included in enclosure.

④ Will not accept breaker with shunt trip.

⑤ Will not accept 2 pole GFP or breaker with shunt trip.

⑥ Includes 100% rated breakers.

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection / Dimension

Dimensions

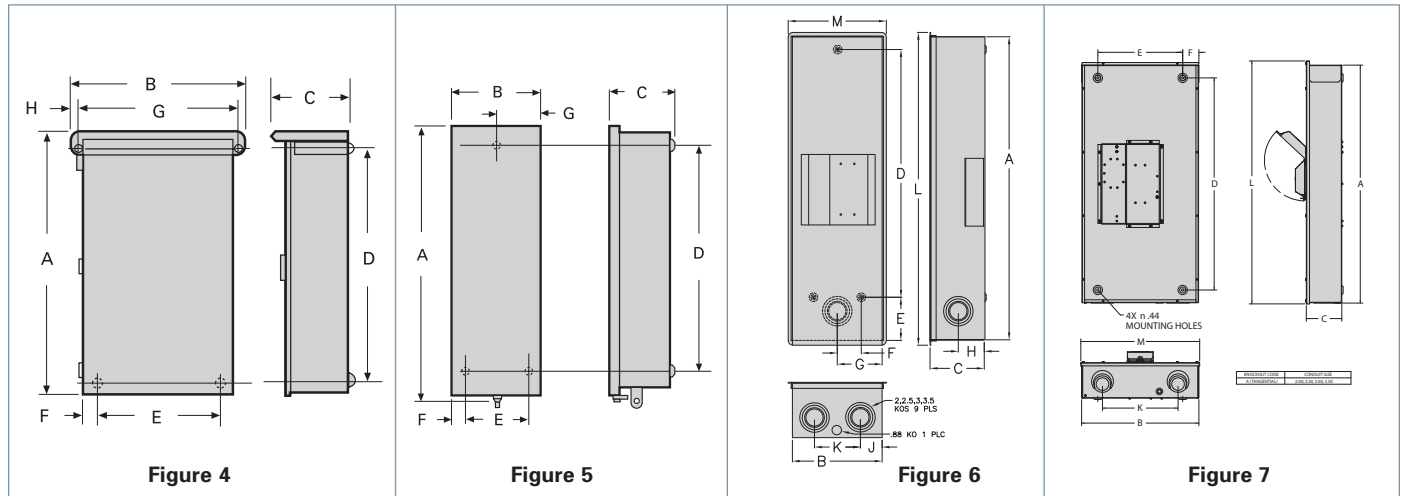


Figure Number	Breaker Frame	No. of Poles	Max. Current Rating	Catalog Number	Weight Lb./Ship. Package	Dimensions (inches)											KO Dim.		
						A	B	C	D	E	F	G	H	J	K	L	M	G	H
6	QR2, QR2H, HQR2, HQR2H	2-3	250	QR2N3R3	40	31.4	9.1	5.6	25.3	6.1	2.4	4.6	2.2	2.1	4.9	32.2	9.6	—	—
6	3VA51	2,3	125	3VAE125N3R	40	18.5	6.9	4.5	15.5	1.5	2.3	3.4	1.8	1.9	3.0	19.4	7.3	—	—
6	3VA52, 3VA61, 3VA62	2,3	250	3VAE250N3R	40	31.2	9.6	5.7	25.3	4.2	2.4	4.8	2.8	2.4	4.8	32.3	9.6	—	—
6	DG, FG	2-3	250	FG6N3R ^②	40	31.4	9.1	5.6	25.3	6.1	2.4	4.6	2.2	2.1	4.9	32.2	9.6	—	—
7	3VA53, 3VA54, 3VA63, 3VA64	2-3	600	3VAE6003R	68	44.9	22.1	6.7	40	16	3.1	—	—	—	—	—	—	—	—

Neutrals^④

Neutral Catalog Number	Enclosure Catalog Number	Neutral Cable Capacity and Wire Range
N125GG	GG0123RN	(1 PC.) #14-2/0 Cu/Al, (1 pc.) #1-300 kcmil Cu/Al Grd. Lug (1 pc.) #12 - #4 Cu/Al (3 pcs.) #12 - #10 Cu/Al
N250X	QR2N3R3 FG6N3R 3VAE125N3R 3VAE250N3R	6 AWG - 350 kcmil Cu/Al Gnd. Lug 14 AWG - 1/0 AWG Cu/Al
W53045 ^②	E2N3R CED6N3R ^③	(1 pc.) #14-2 Cu/Al Grd. Lug (1 pc.) #14-8 Cu/Al
N250 ^④	F6N3R	(1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al
W60992 ^②	J6N3R	(1 pc.) #1/0-750 kcmil Cu/Al or (2 pcs.) #1/0-300 kcmil Cu/A Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
HN656ACB	3VAE6003R	1/0 - 600 kcmil Cu/Al Grd. Lug #6 - 300 kcmil Cu/Al
W60993 ^②	LD6N3R	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
W63623	LMD3R MND63	(4 pcs.) 250 kcmil-500 kcmil Cu/Al ^⑤ Grd. Lug (1 pc.) #6-300 kcmil Cu/Al

Hubs — see page 6-14.

For inches / millimeters conversion, see Application Data section.

①Neutral not included. Order as separate item from table on next page.

②Neutral included in enclosure.

③Use CED enclosure for all ED-frame 110-125 ampere units.

④200% neutrals are also available. See listing on page 6-9.

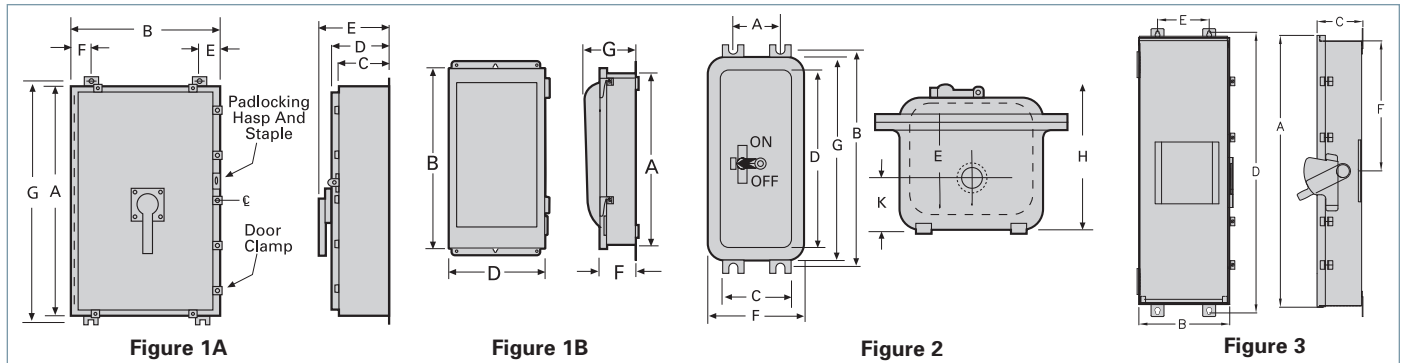
⑤For applications requiring 600MCM neutral conductors (3) in, (3) out (#4-600 kcmil Cu/Al) use neutral catalog number W41123.

Enclosed Circuit Breakers

Enclosures — Types 4, 4X, 7, and 9

Selection / Dimensions

Dimensions



Types 4 and 4X

Breaker Frame	See Fig.	No. of Poles	Max. Current Rating	Catalog Number ^①	Weight Lb./Ship Package	Dimensions (inches)						
						A	B	C	D	E	F	G
NGG, HGG, LGG ^②	1A	2-3	125	GG0124XN		19.25	17.25	9.5	—	3.63	3.63	18.75
QR2, QR2H, HQR2, HQR2H	3	2-3	250	QR2N4X, QR2N4X316 ^③	42	32.1	10.4	5.7	35.4	6.0	16.0	—
ED2, ED4, ED6, HED4 ^④	1A	3	125	ED6SS4 ^⑤	44	20.0	16.0	6.0	7.16	9.75	3.0	—
3VA51	3	2,3	125	3VAE125N4X	18.6	19.4	7.7	5.7	19.5	5.0	9.3	—
				3VAE125N4X316 ^③	18.6	19.4	7.7	5.7	19.5	5.0	9.3	—
3VA52, 3VA61, 3VA62	3	2,3	250	3VAE250N4X	22.3	32.2	10.2	5.8	32.9	6.0	18.0	—
				3VAE250N4X316 ^③	22.3	32.2	10.2	5.8	32.9	6.0	18.0	—
DG, FG	3	2-3	250	FG6N4X, FG6N4X316 ^③	42	32.1	10.4	5.7	35.4	6.0	16.0	—
FXD6, FD6, ^⑥ HFD6, FXD6, FD6	1A	2-3	250	FD6SS4 ^⑦	106	36	24	8	9.16	11.75	3	—
JXD2, JXD6, JD6, ^⑧ HJD6, HJXD6, HHJD6, HHJXD6, SJD6, SHJD6, LXD6, LD6, HLD6, HLXD6, HHLXD6, HHLXD6, SLD6, SHLD6	1A	2-3	600	LD6SS4 ^⑨	145	42.0	30.0	10.0	11.16	13.75	3	—
3VA53, 3VA54, 3VA63, 3VA64	3	2-3	600	3VA6004X, 3VA6004X316	80	48 ^{1/8}	22 ^{1/8}	7 ^{1/8}	47 ^{1/16}	16	22 ^{1/4}	—

Neutrals

Neutral Catalog Number	Enclosure Catalog Number ^②	Neutral Cable Capacity and Wire Range
N125GG4X	GG0124XN	#14-4 Cu / #12-2 Al
W53045 ^③	ED6SS4	(1 pc.) #14-2 Cu/Al Grd. Lug (1 pc.) #14-8 Cu/Al
N250X	QR2N4X, QR2N4X316, FG6N4X, FG6N4X316, 3VAE125N4X, 3VAE125N4X316, 3VAE250N4X, 3VAE250N4X316	6 AWG – 350 kcmil CU / AL Grd. Lug 14 AWG – 1/0 AWG CU / AL
N250 ^{④⑤}	FD6SS4	(1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al
W60993 ^{④⑤}	LD6SS4	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
HN656ACB	3VAE6004X 3VAE6004X316	1/0 - 600 kcmil Cu/Al Grd. Lug #6 - 300 kcmil Cu/Al

Figure 2 Types 7 and 9^⑥

Breaker Frame	No. of Poles	Maximum Current Rating	Catalog No. ^{④⑤}	Weight Lb./Ship. Package	Dimensions (inches)									Knockouts	
					Mounting			Inside			Outside			Conduit Size	
					A	B	C	D	E	F	G	H	K	Std.	Max
ED2, ED4,		15-60	EA ■	27	5.5	13.1	5.9	10.7	5.4	9.4	14.2	6.6	1.6	1.2	1.2
ED6, HED4	2-3	70-100	EB ■	32	6.0	18.0	6.5	16.0	5.6	9.8	19.3	6.7	2.0	2.0	2.0
CED6	2-3	100	N/A												
FXD6, FD6, HFD6, HFXD6, CFD6	2-3	250	EC2 ■	85	10.2	22.6	11.7	20.0	6.5	15.3	23.8	8.2	2.7	2.5	2.0
JXD2, JXD6, JD6, SJD6, HJD6, HJXD6, HHJD6, HHJXD6, SHJD6	2-3	200-350	EC4 ■	85	10.2	22.6	11.7	20.0	6.5	15.3	23.8	8.2	2.7	2.5	3.0
LXD6, LD6, SLD6, HLD6, HLXD6, HHLXD6, HHLXD6, SHLD6	2-3	600	ED6 ■	190	11.8	40.7	13.3	37.8	7.8	18.1	46.6	9.8	3.6	4.0	4.0

For inches / millimeters conversion, see Application Data selection.
Note: Above enclosures are suitable for use as service entrance equipment.

■ Built to order. Allow 2-3 weeks for delivery.

① Does not include circuit breaker.

Order circuit breaker separately.

② Enclosures shipped with handle and breaker hardware packaged within enclosure.

③ Neutral included.

④ Neutral not included. Order as separate item.

⑤ Breather and drain option is by SPECIAL ORDER only — add \$70.00 to list price.

⑥ For 400A max. 4/4x applications which require a 200% Neutral. See listing on page 6-9.

⑦ Suitable for use as Service Entrance device.

⑧ Includes 100% rated breakers.

⑨ Non-metallic enclosure.

⑩ 304 Stainless Steel enclosures.

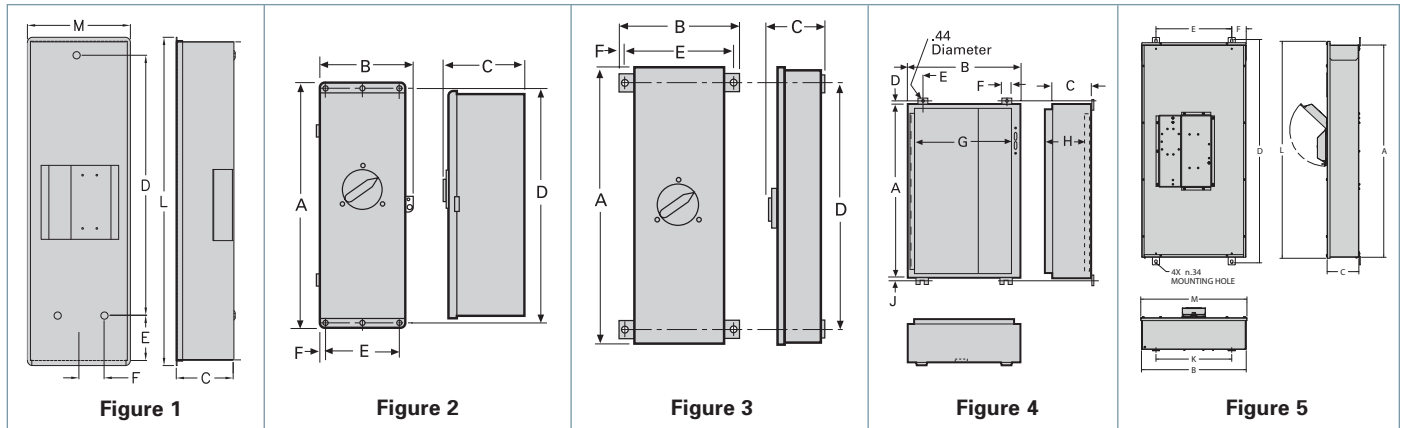
⑪ 316 Stainless Steel enclosures.

Enclosed Circuit Breakers

Enclosures — Types 5, 12 and 12K

Selection / Dimensions

Dimensions



Types 5, 12 and 12K

Figure Number	Breaker Frame	No. of Poles	Max. Current Rating	Catalog Number ^②	Weight Lb./Ship. Package	Dimensions (inches)											
						A	B	C	D	E	F	G	H	J	K	L	M
1	QR2, QR2H, HQR2, HQR2H	2-3	250	QR2N12	40	31.4	—	5.6	25.3	6.1	2.4	—	—	—	—	32.2	9.6
1	3VA51	2-3	125	3VAE125N12	40	18.5	—	4.5	15.5	1.5	2.3	—	—	—	—	19.6	7.3
1	3VA52, 3VA61, 3VA62	2-3	250	3VAE250N12	40	31.2	—	5.7	25.3	4.2	2.4	—	—	—	—	32.3	9.6
1	DG, FG	2-3	250	FG6N12	40	31.4	—	5.6	25.3	6.1	2.4	—	—	—	—	32.2	9.6
2	ED2, ED4, ED6, HED4	2-3	100	E2N12 ^{①④}	12	18.6	8.3	7.1	18	6.1	0.5						
2	CED6, ED2, ED4, ED6	2-3	125	CED6N12 ^{①④■}	16	23.4	8.3	7.1	22.4	6.1	0.5						
2	FXD6, FD6, FXD6, FD6, HFD6, CFD6	2-3	250	F6N12 ^{①③}	40	38.6	14.5	8.1	34.0	13.0	0.7						
3	JXD2, JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, SJD6, SHJD6	2-3	400	J6N12	104	41.5	21.6	11.9	37.2	20.4	0.6						
5	3VA53, 3VA54, 3VA63, 3VA64	2-3	600	3VAE60012	68	44.8	22.1	7.0	47.2	16.0	3.1				16.0	45.8	22.4
3	LD6, LXD6, HLD6, HLXD6, HHLXD6, HHLXD6, SLD6, SHLD6, CJD6, CLD6, SCJD6, SCLD6	2-3	600	LD6N12 [■]	104	46.5	21.6	11.9	42.2	20.4	0.6						
4	LMXD6, LMD6, HLMXD6, HLMD6	2-3	800	LMD12 [■]	220	60.0	37.4	10.0	0.4	3.0	2.0						
4	MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6	2-3	1200	MND612 ^{③■}	220	60.0	37.4	10.0	0.4	3.0	2.0						

Neutrals

Neutral Catalog No.	Enclosure Catalog No. ^②	Neutral Cable Capacity and Wire Range
W53045 ^④	E2N12	(1 pc.) #14-2 Cu/Al
	CED6N12 ^⑤	
N250 X	QR2N12 FG6N12 3VAE125N12 3VAE250N12	6 AWG – 350 kcmil CU / AL Grd. Lug 14 AWG -1/0 AWG CU / AL
N250 ^{③⑥}	F6N12	(1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al

Neutrals (cont.)

Neutral Catalog No.	Enclosure Catalog No. ^②	Neutral Cable Capacity and Wire Range
W60992 ^{③⑥}	J6N12	(1 pc.) #1/0-750 kcmil Cu/Al or (2 pc.) #1/0-300 kcmil Cu/Al Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
HN656ACB	3VAE60012	1/0 - 600 kcmil Cu/Al Grd. Lug #6 - 300 kcmil Cu/Al
W60993 ^{③⑥}	LMD612 MND612	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
W63623 ^③	LD6SS4	(4 pcs.) 250 kcmil-500 kcmil Cu/Al Grd. Lug (1 pc.) #6-300 kcmil Cu/Al

For inches/millimeters conversion, see Application Data section.
 ■ Built to order. Allow 2-3 weeks for delivery.
 Note: All above enclosures are suitable for use as service entrance devices.

①Catalog Number is for Type 12. If Type 12K with knockouts is required, add suffix "K" to catalog number.
 ②Does not include circuit breaker.
 Order circuit breaker separately.
 ③Neutral not included. Order as separate item.
 ④Neutral included in enclosure.

⑤Use CED enclosure for all ED-frame 110-125 ampere units.
 ⑥200% neutrals are also available. See listing on page 6-9.
 ⑦For 600 MCM neutral cable (3 in., (3) out (#4-600 kcmil Cu/Al) use catalog number W411239
 ⑧Includes 100% rated breakers.

Enclosed Circuit Breakers

Knockouts & Wire Bending Space

Breaker Frame	Conduit Range Per Knockout Outside Dimensions (inches)	Types 1, 12 and 12K				Type 3R				Maximum Cable Sizes Recommended (Cu/Al) for Type 1, 3R, 4, 4X, 12 & 12K Enclosures ^{⑤⑥}
		Number of Knockouts Per Panel (Type 4, 4X, 12 have no KO's)								
		Top	Bottom	Side	Back	Bottom	Side	Back	Maximum Hub Size (inches) Type 3R	
QP, QPH, HQP 15–125	½, ¾, 1, 1¼, 1½	4	4	4	4	3	1	1	2	7½" high encl. #6 ^③
BQ, BOH, HBP 70–100	¾, 1, 1¼	1	1	2	2	8	1	3	2	④
QPP, QPPH, HQPP 125–225	½, ¾, 1, 1¼, 1½, 2, 2½	—	—	—	—	4	1	1	2½	250 kcmil
QR	1½, 2, 2½, 3	—	—	2	2	—	1	1	3	④
NGG	¾, 1, 1¼, 1½, 2, 2½	—	—	—	—	—	—	—	—	
ED2, ED4, ED6, HED4 3VA51, 3VA52, 3VA61, 3VA62	½, 1½, 1¾, 1¾, 2	2	2	2	2	2	1	1	2	④
CED6	½, 1½, 1¾, 1¾, 2	2 ^①	2 ^①	—	—	2	—	—	2	④(CFD6 only 300 kcmil)
	¾, 1½, 1¾, 1¾, 2, 2½	2	2	2 ^②	2 ^②	—	1	1		
FXD6, FD6, HFXD6, FD6 HFD6, CFD6	1½, 1¾, 1¾, 2, 2½, 3	1	1	2 ^②	2 ^②	1	1	—	4	④
		1	1	—	—	1	—	—		
JXD2, JXD6, JD6, HJD6, HJXD6, HHJD6, HHJXD6, SJD6, SHJD6	1½, 2, 2½, 3, 3½, 4	1	1	2	4	—	—	—	4	(2) 600 kcmil
LXD6, LD6, HLXD6, HLD6, HHLXD6, HHLXD6, SLD6, SHLD6	1½, 2, 2½, 3, 3½, 4	1	1	2	4	—	—	—	4	(2) 600 kcmil
LMXD6, LMD6 HLMXD6, HMLD6	—	—	—	—	—	—	—	—	4	(3) 600 kcmil
MD6, SMD6, HMD6 ND6, SND6, HND6	—	—	—	4¼ – 4¾	4¼ – 4¾	—	—	—	4	(3) 600 kcmil or (4) 500 kcmil

6

Hubs (Type 3R)

Breaker Frame	Conduit Size (inches)	Catalog Number
QP, QPH, HQP, BQ, BOH, HBO, NGG, HGG, LGG	¾	ECHS075
	1	ECHS100
	1¼	ECHS125
	1½	ECHS150
	2	ECHS200
QPP, QPPH, HQPP, QR2, QRH2, QR2H, HOR2H	1¼	ECHS125
	1½	ECHS150
	2	ECHS200
ED2, ED4, ED6, HED4, HED6, HHED6, CED6, DG, 3VA51	2½	ECHS250
	¾	ECHR075
	1	ECHR100
	1¼	ECHR125
FXD6, FD6, HFD6, HFXD6, CFD6, FG, 3VA52, JXD2, JD6, JXD6, HJD6, HJXD6, LD6, LXD6, HLD6, HLXD6(A) 3VA53, 3VA54, 3VA62, 3VA63, 3VA64	1½	ECHR150
	2	ECHR200
	2	ECHV200
	2½	ECHV250
	3	ECHV300
	3½	ECHV350
	4	ECHV400



For inches / millimeters conversion, see Application Data section.

①Type 12K only.

②Type 12K enclosure has no knockouts this location.

③17½" high enclosure provides sufficient wire bending space for all available CB lugs.

④Sufficient wire bending space is provided for all available mechanical type CB lugs.

⑤The use of cables larger than those listed below may violate NEC & UL wire bending space requirements.

⑥The use of compression type connectors will violate NEC and UL wire bending space requirements.