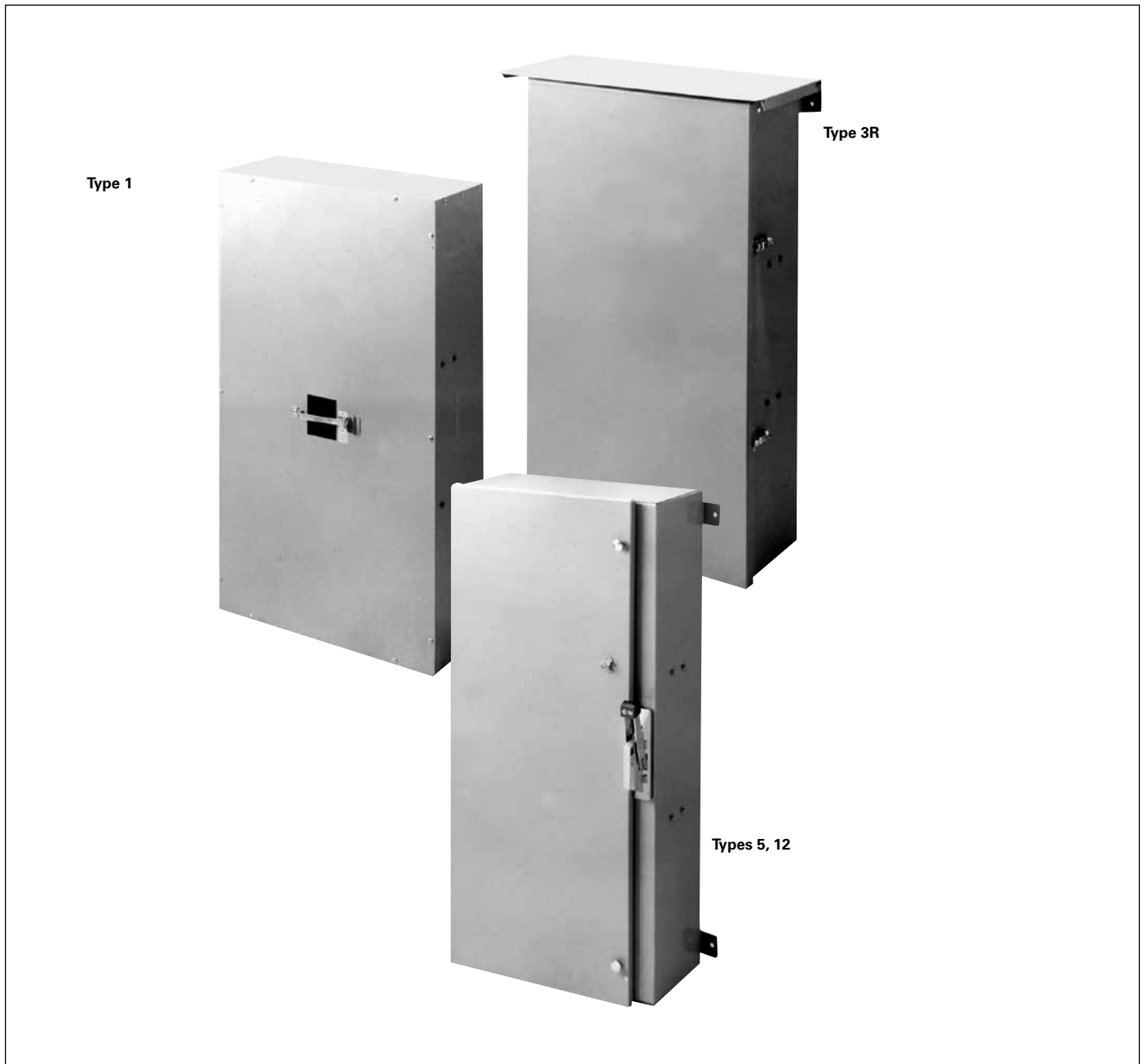


Enclosed Circuit Breakers

Enclosures

General



Type 1 — A general indoor, sheet-steel enclosure for use in normal atmospheres.

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

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

5

MOLDED CASE
CIRCUIT BREAKERS

Enclosed Circuit Breakers

Enclosed Breaker Nomenclature

General

Sample Part Numbers:	E	3R	QJ	2	2	B	60	H	A	—
	I	II	III	IV	V	VI*	VII	VIII*	IX*	X*
	E	12	JXD	6	3	B*	200	H	—	—
	I	II	III	IV	V	VI*	VII	VIII*	IX*	X*
	E	1S	SHJD	6	9	—	400	NGTH	A	N
	I	II	III	IV	V	VI*	VII	VIII*	IX*	X*
I	Basemodel Start with E									
Placeholder Position Options										
II	May be replaced by 1S, 1F, 12, 3R or 4X									
III	May be replaced by BQ, BQH, HBQ									
	May be replaced by QJ, QJH, QH									
	May be replaced by ED, HED, HHED, CED									
	May be replaced by FD, FXD HFXD, HFD, HHFD, HHFXD, CFD									
	May be replaced by JD, JXD, HJD, HJXD, HHJD, HHJXD. CJD									
	May be replaced by FD, FXD JD, JXD, SJD, SHJD, SCJD									
	May be replaced by LD, LXD, HLD, HLXD. HHL, HHLCD, CLD, SLD, SHLD, SCLD									
	May be replaced by MD, MXD, HMD, HMXD, CMD, SMD, SHMD, SCMD									
	May be replaced by ND, NXD, HND, HNXD, CND, SND, SHND, SCND									
IV	May be replaced by 2, 4, 6									
V	May be replaced by 2, 3, 9									
VI*	May be replaced by B, M, S, L, A, H, * If option not present omitted									
VII	May be replaced by :									
	QJ	Frame	060,070,080, 090,100, 110, 125, 150, 175, 200, 225							
	ED		015, 020, 025, 030, 040, 045, 050, 060, 070, 080, 090, 100, 110, 125							
	FD		070, 080, 090, 100, 110, 125, 150, 175, 200, 225, 250							
	JD		200, 225, 250, 300, 350, 400							
	LD		300, 400, 450, 500, 600							
	MD		600, 700, 800							
	ND		900, 1000, 1200							
VIII*	May be replaced by A, AG, ANT, ANG, AH, AGH, ANTH, G, GH, NT, NTH, NGT, NGTH, if option+ not present position omitted									
IX*	A: Consist of breaker internal accessories and Neutral Sensor, + If option not present position omitted									
X*	N: Suitable for service entrance,+ If option not present position omitted									

The enclosed breakers are factory assembled. Each enclosed breakers assembly includes the selected type of enclosures, circuit breakers, standard lugs, and optional Neutral* assembly and accessories.

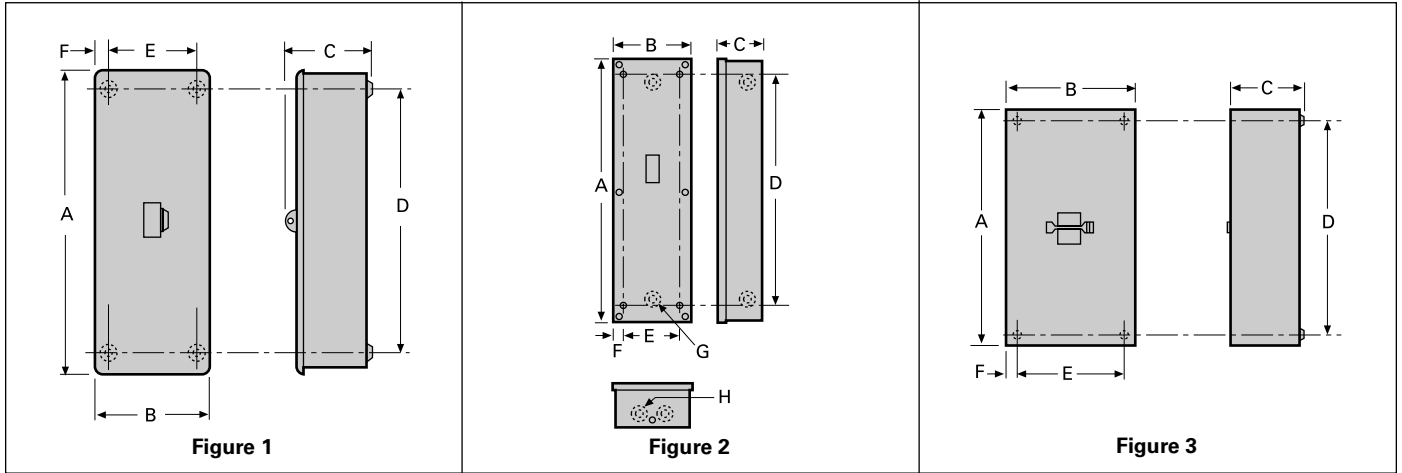
*except BQ, QJ and ED enclosures.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection/Dimensions

Dimensions



Type 1

Fig. No.	Breaker Type	Number of Poles	Maximum Current Rating	Catalogue [®] Number	Weight Lb./Ship. Package	Dimensions (inches)						K.O. Dimensions	
						A	B	C	D	E	F	G	H
1	BQ, BQH, HBQ	3	100	EB3100S ^{①③⑦}	32	17 ^{1/8}	7 ^{1/8}	4 ^{3/4}	14 ^{1/16}	1 ^{5/16}	1 ^{5/16}	—	—
2	ED2, ED4, ED6, HED4, HED6	3		E2N1S ^②	8	16 ^{23/32}	7 ^{1/2}	5 ^{1/16}	13 ^{45/64}	5 ^{1/4}	1	7/8, 11/8, 13/8, 13/4, 2	
	ED4, ED6, HED4, HED6, CED6		CED6N1S ^{②⑥}	14	21 ^{15/32}	7 ^{19/32}	5 ^{7/64}	18 ^{1/4}					
3	FXD6, FD6, FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, CFD6	2-3	250	F6N1S ^③	33	381 ^{3/32}	11 ^{15/32}	5 ^{1/16}	33	8	13 ^{3/64}	11/8, 13/8, 13/4, 2, 21/2, 3	
	JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A), SXD6H	400	J6N1 ^③	120	40 ^{13/64}	22 ^{27/64}	10 ^{45/64}	18 ^{1/4}	2 ^{5/64}	—			
	LD6(A), LXD6(A), HLD6(A), HLXD6(A), HHL6, HHLXD6, SLD6(A), SHLD6(A), SCJD6, SCLD6, LXD6H	600	LD6N1 ^③	(L6N1) ^③	101					46	—		
MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6	1200	MND6 ^③	132	60	10	55 ^{7/8}	—						

5
MOLDED CASE
CIRCUIT BREAKERS

For inches / millimeters conversion, see Application Data section.

- ① Surface mounted, indoor. If flush mounting is required, replace suffix "S" in catalogue number with suffix "F". Also, if outdoor model required, use prefix "W" instead of "E".
- ② Does not include circuit breaker. Order circuit breaker separately.
- ③ Neutral not included. Order as separate item from table on next page.
- ④ Neutral included in enclosure.

- ⑤ Surface mounted, indoor. If outdoor model is required, use prefix "W" instead of "E". Not available in flush ("F") model.
- ⑥ Use for 110-125 ampere ED4, ED6, HED4 or HED6 circuit breakers.
- ⑦ Will not accept breaker with shunt trip.
- ⑧ Will not accept 2-pole GFCI or breaker with shunt trip.
- ⑨ Items cannot be ordered separately. See configuration.

Built to order. Consult sales office for factory lead time and prices.

Enclosed Circuit Breakers

Enclosures — Type 1

Selection/Dimensions

Dimensions

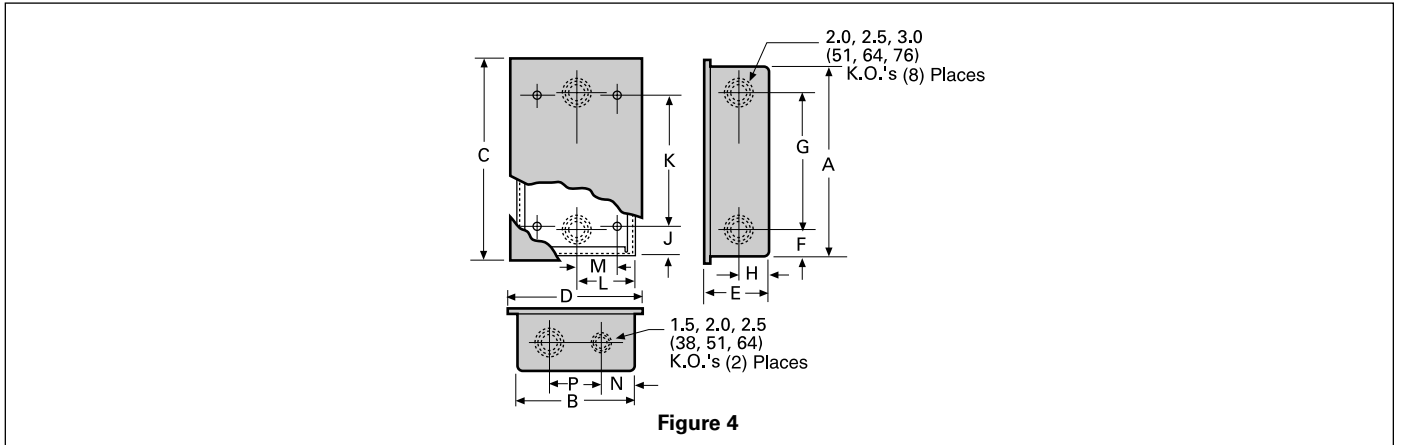


Figure 4

Fig. No.	Breaker Type	Number of Poles	Maximum Current Rating	Catalogue [®] Number	Weight Lb./Ship. Package	Dimensions (inches)												
						A	B	C	D	E	F	G	H	J	K	L	M	N
4	QJ2, QJH2, QH2-H, QJ, QJH	2-3	225	EB3225S EB3225F	15	27	10 ^{1/8}	27 28 ^{1/8}	10 ^{1/8} 11 ^{1/4}	5 ^{1/4}	21 ^{3/16}	21 ^{3/8}	2 ^{3/8}	3	20	5 ^{1/16}	2 ^{3/4}	4 ^{1/2}

5
MOLDED CASE
CIRCUIT BREAKERS

Neutrals

Enclosure Catalogue Number	Neutral Catalogue Number	Neutral Cable Capacity and Wire Range
E2N1(S)(F) CED6N1(S)(F)	W53045 [®]	(1 pc.) #14-2 Cu/Al Grd. Lug (1 pc.) #14-8 Cu/Al
F6N1(S)(F)	N250 (NFD)	(1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al
J6N1	W60992 (NJD)	(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
LD6N1	W60993 (NLD)	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
MND61	W63623 (NMND)	(8 pcs.) 250 kcmil-500 kcmil Cu/Al Grd. Lug (1 pc.) #6-300 kcmil Cu/Al

For inches / millimeters conversion, see Application Data section.

- ① Does not include circuit breaker. Order circuit breaker separately.
- ② Neutral included in enclosure.
- ③ Items cannot be ordered separately. See configuration.

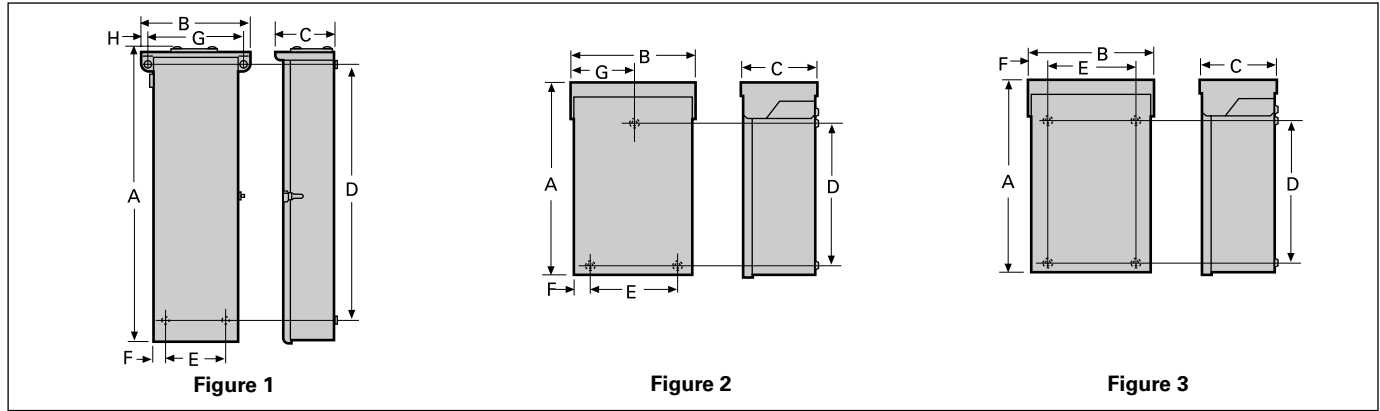
Built to order. Consult sales office for factory lead time and prices.

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection/Dimensions

Dimensions



Type 3R

Fig. No.	Breaker Type	Number of Poles	Maximum Current Rating	Catalogue [®] Number	Weight Lb./Ship. Package	Dimensions (inches)							
						A	B	C	D	E	F	G	H
2	BQ, BQH, HBQ	3	50 100	WB3100 ^②	9	17 ^{1/8}	7 ^{3/8}	4 ^{5/16}	14 ^{1/8}	4 ^{1/2}	1 ^{1/8}	3 ^{11/16}	—
5	ED2, ED4, ED6, HED4, HED6 CED6	2-3	100 125	E2N3R [®] CED6N3R [®]	12 16	17 ^{9/16} 22 ^{21/64}	7 ^{1/4}	5 ^{1/4}	12 ^{39/64} 17 ^{3/8}	5 ^{1/4}	1	3	—
1	FXD6, FD6, FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, CFD6		250	F6N3R [®]	45	38 ^{1/8}	14 ^{1/16}	7 ^{3/4}	33 ^{9/32}	8	13/16	13 ^{1/2}	13/16
	JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A), SXD6H		400	J6N3R [®]	126	40 ^{63/64}	26 ^{3/4}	11 ^{23/32}	40 ^{3/4}	18 ^{1/4}	2 ^{1/8}	24 ^{1/2}	1 ^{1/8}
	LD6(A), LXD6(A), LXD6H, HLD6(A), HLXD6(A), HHL6(A), CLD6, SCJD6(A), SLD6(A), SHLD6(A)		600	LD6N3R [®]	127	45 ^{63/64}							
	MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6		1200	MND63 [®]	210	61 ^{9/64}	57 ^{17/32}	24 ^{5/8}	1 ^{1/16}				

5
MOLDED CASE
CIRCUIT BREAKERS

For inches / millimeters conversion, see Application Data section.

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 Items cannot be ordered separately. See configuration.

Enclosed Circuit Breakers

Enclosures — Type 3R

Selection/Dimensions

Dimensions

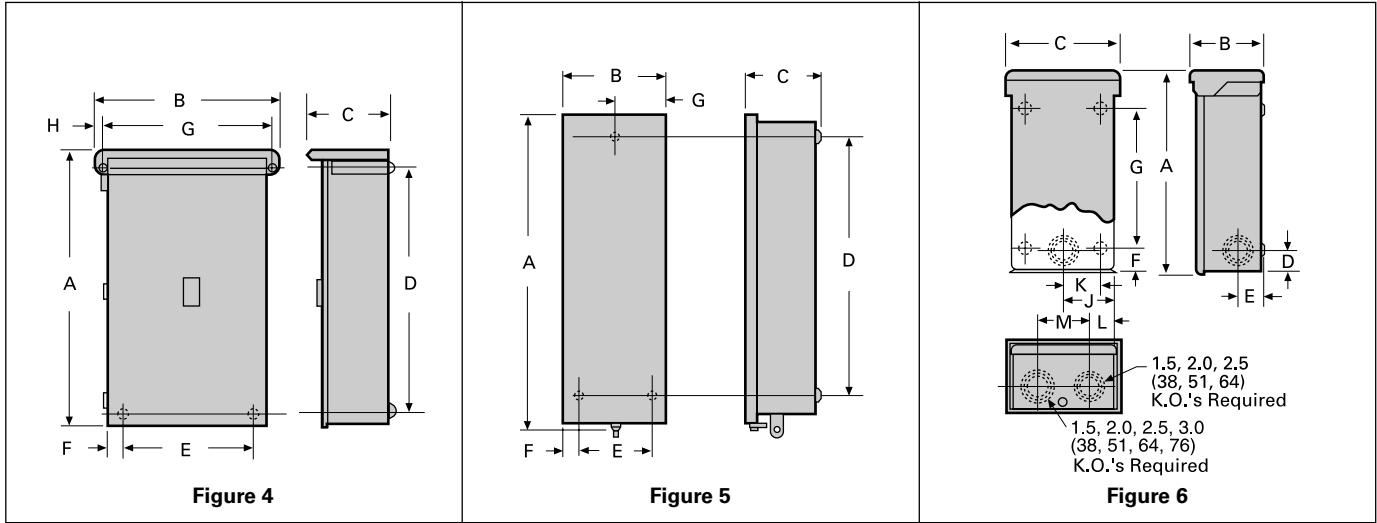


Fig. No.	Breaker Type	Number of Poles	Maximum Current Rating	Catalogue [®] Number	Weight Lb./Ship. Package	Dimensions (inches)										
						A	B	C	D	E	F	G	H	J	K	L
6	QJ2, QJH2, QJ2-H, QJ, QJH	2 3	225	WB2225 WB3225	17	27	5 5 ^{5/8}	7 ^{11/16} 10 ^{3/8}	2 ^{1/4}	2	2 ^{7/8}	20	4 ^{1/8}	3 ^{5/8} 5 ^{1/8}	2 ^{3/4}	— 4 ^{1/2}

Neutrals

Enclosure Catalogue Number	Neutral Catalogue Number	Neutral Cable Capacity and Wire Range
E2N3R [Ⓢ] CED6N3R [Ⓢ]	W53045 [Ⓢ]	(1 pc.) #14–2 Cu/Al Grd. Lug (1 pc.) #14–8 Cu/Al
F6N3R [Ⓢ]	N250	(1 pc.) #6–350 kcmil Grd. Lug (1 pc.) #14–2/0 Cu/Al
JD6N3R [Ⓢ]	W60992	(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
LD6N3R [Ⓢ]	W60993	(2 pcs.) #1/0–600 kcmil Grd. Lug (1 pc.) #6–250 kcmil Cu/Al
MND63 [Ⓢ]	W63623	(8 pcs.) 250 kcmil–500 kcmil Cu/Al Grd. Lug (1 pc.) #6–300 kcmil Cu/Al

Hubs — see page 5-82

For inches / millimeters conversion, see Application Data section.

Ⓢ Does not include circuit breaker. Order circuit breaker separately.

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

Ⓢ Neutral included in enclosure.

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

Ⓢ Items cannot be ordered separately. See configuration.

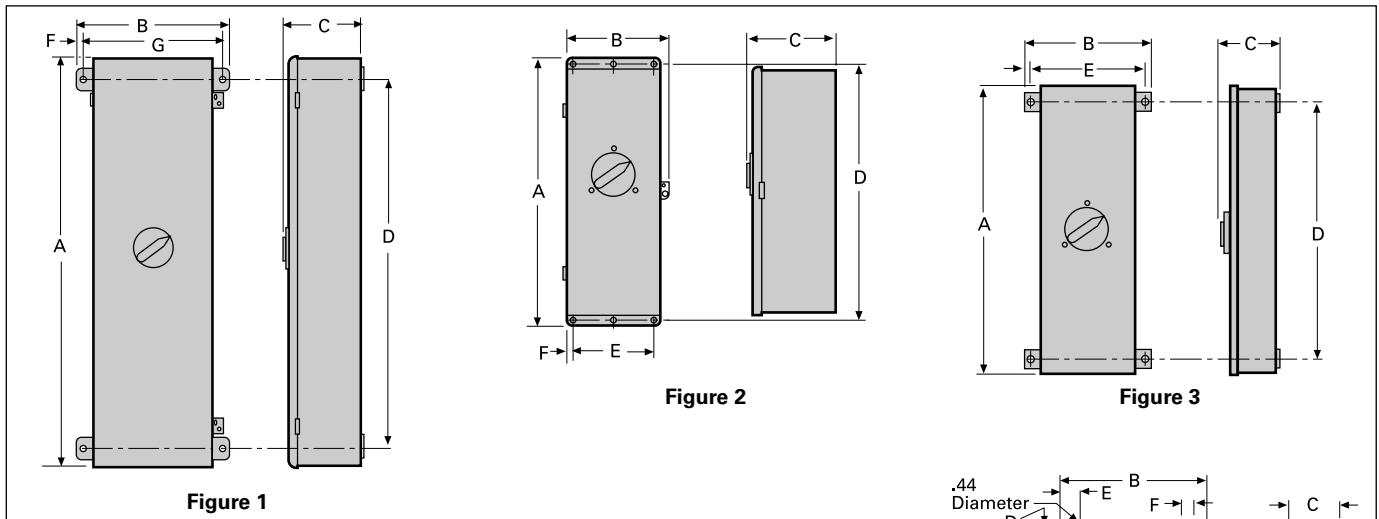
Enclosed Circuit Breakers

Enclosures — Type 12

Selection/Dimensions

Fig. No.	Breaker Type	Number of Poles	Maximum Current Rating	Catalogue ^① Number	Weight Lb./Ship. Package	Dimensions (inches)					
						A	B	C	D	E	F
2	ED2, ED4, ED6, HED4, HED6	2-3	100	E2N12^②	12	18 ^{5/8}	8 ^{11/32}	7 ^{1/16}	18	6 ^{1/16}	1/2
5	CED6		125	CE6N12^③	16	22 ^{5/8}			22		5/8
1	FXD6, FD6, FXD6-A, FD6-A, HFD6, CFD6		250	F6N12^②	40	38 ^{19/32}	14 ^{29/64}	8 ^{1/8}	34	13	22/32
	JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A)	400	J6N12^②	104	40	25 ^{35/64}	11 ^{7/8}	36	25 ^{35/64}	—	
	LD6(A), LXD6(A), HLD6(A), HLXD6(A), HHL6, HHLXD6, SLD6(A), SHLD6(A), CJD6, CLD6, SCJD6(A), SCLD6(A)	600	LD6N12^② (L6N12)					45		41	—
	MD6, MXD6, SMD6, HMD6, HMXD6, SHMD6, ND6, NXD6, SND6, HND6, HNXD6, SHND6, CMD6, SCMD6, CND6, SCND6	1200	MND612^②	220	60	37 ^{3/8}	10	5/8	3	2	

Dimensions



Neutrals

Enclosure Catalogue Number	Neutral Catalogue Number	Neutral Cable Capacity and Wire Range
E2N12^②	W53045^③	(1 pc.) #14-2 Cu/Al
CE6N12^④		(1 pc.) #14-2 Cu/Al
F6N12^②	N250^②	(1 pc.) #6-350 kcmil Grd. Lug (1 pc.) #14-2/0 Cu/Al
J6N12^②	W60992^②	(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
L6N12^②	W60993^②	(2 pcs.) #1/0-600 kcmil Grd. Lug (1 pc.) #6-250 kcmil Cu/Al
MND612^②	W63623^②	(8 pcs.) 250 kcmil-500 kcmil Cu/Al Grd. Lug (1 pc.) #6-300 kcmil Cu/Al

For inches / millimeters conversion, see Application Data section.

- ① Does not include circuit breaker. Order circuit breaker separately.
- ② Neutral not included. Order as separate item.

- ③ Neutral included in enclosure.
- ④ Use CED enclosure for all ED-frame 110-125 ampere units.
- ⑤ Items cannot be ordered separately. See configuration.

Enclosed Circuit Breakers

Selection/Dimensions

Knockouts & Wire Bending Space

Breaker Type	Conduit Range Per Knockout Outside Dimensions (inches)	Types 1, 12				Type 3R			Maximum Cable Sizes Recommended (Cu/Al) for Type 1, 3R, 4, 4X, 12 & 12K Enclosures ^{③④}	
		Number of Knockouts Per Panel (type 12 have no KO's)								
		Top	Bottom	Side	Back	Bottom	Side	Back		Maximum Hub Size (inches) Type 3R
BQ, BQH, HBQ 70-100A	3/4, 1, 1 1/4	1	1	2	2	8	1	3	2	②
QJ	1 1/2, 2, 2 1/2, 3	2	2	2	2	2	1	1	2 1/2	②
ED2, ED4, ED6, HED4	7/8, 1 1/8, 1 3/8, 1 3/4, 2	2	2	2	2	2	1	1	2	②
CED6	7/8, 1 1/8, 1 3/8, 1 3/4, 2 7/8, 1 1/8, 1 3/8, 1 3/4, 2, 2 1/2	— 2	— 2	— 2	— 2	2 —	— 1	— 1	2	(CFD6 only 300 kcmil) ^③
FXD6, FD6, FXD6-A, FD6-A, HFD6, CFD6	1 1/8, 1 3/8, 1 3/4, 2, 2 1/2, 3	1 1	1 1	2 —	2 —	1 1	1 —	— —	4	②
JXD2(A), JXD6(A), JD6(A), HJD6(A), HJXD6(A), HHJD6, HHJXD6, SJD6(A), SHJD6(A)	1 1/2, 2, 2 1/2, 3, 3 1/2, 4	1	1	2	4	—	—	—	4	(2) 500 kcmil
LXD6(A), LD6(A), HLXD6(A), HLD6(A), HHLXD6, HHLXD6, SLD6(A), SHLD6(A)	1 1/2, 2, 2 1/2, 3, 3 1/2, 4	1	1	2	4	—	—	—	4	(2) 500 kcmil
MD6, SMD6, HMD6, ND6, SND6, HND6	—	—	—	—	—	—	—	—	4	(3) 600 kcmil or (4) 500 kcmil

Hubs (Type 3R)

Breaker Type	Conduit Size (inches)	Catalogue Number
BQ, BQH, HBQ, ED2, ED4, ED6, HED4, HED6, CED6	3/4 1 1/4 1 1/2 2	ECHR075 ECHR100 ECHR125 ECHR150 ECHR200
QJ2, QJH2, QJ2-H	1 1/4 1 1/2 2 2 1/2	ECHS125 ECHS150 ECHS200 ECHS250
FXD6-A, FD6-A, HFD6, HFXD6, CFD6, JXD2(A), JD6(A), JXD6(A), HJD6(A), HJXD6(A), LD6(A), LXD6(A), HLD6(A), HLXD6(A)	2 1/2 3 3 1/2 4	ECHV250 ECHV300 ECHV350 ECHV400



For inches / millimeters conversion, see Application Data section.

- ① 17 1/8" high enclosure provides sufficient wire bending space for all available CB lugs.
- ② Sufficient wire bending space is provided for all available mechanical type CB lugs.

- ③ The use of cables larger than those listed below may violate NEC & CSA wire bending space requirements.
- ④ The use of compression type connectors will violate NEC and CSA wire bending space requirements.