Enclosed Circuit Breakers

Contents

Enclosed Circuit Breakers

Product Description

- 15–1200A
- Enclosed device used to open and close a circuit

Application Description

NEMA 1 General Purpose

Surface or Flush Mounting 15–1200A, 600 Vac, 500 Vdc

NEMA 1 enclosed breakers are designed for indoor use in commercial buildings, apartment buildings and other areas where a general purpose enclosure is applicable. The breaker is front operable and is capable of being padlocked in the OFF position. Ratings through 1200A are listed with Underwriters Laboratories as suitable for service entrance application. Both surface and flush mounted enclosures are available.

NEMA 1 General Purpose

NEMA 3R Rainproof Surface Mounting ①

Interchangeable Hubs (through 400A) 15–1200A, 600 Vac, 500 Vdc

This general purpose outdoor service center employs a circuit breaker inside a weatherproof sheet steel enclosure to serve as a main disconnect and protective device for feeder circuits. The breaker is front operable and is capable of being padlocked in the OFF position. Ratings through 1200A are listed by Underwriters Laboratories as suitable for service entrance application.

NEMA 3R Rainproof Surface Mounting

Note

① SFDN enclosed breakers do not have a door interlock to prevent door from being opened when breaker is "ON."

NEMA 4/4X, 5 Water and Dustproof

Stainless Steel—Type 304 Surface Mounting 15–1200A, 600 Vac, 500 Vdc

This enclosure meets NEMA 4/4X and 5 requirements for water and dustproof applications and has no knockouts or other openings. It is particularly well suited for use in dairies, borax mines, breweries, paper mills and other process industries. The operating handle can be padlocked in the OFF position, and is interlocked to prevent the door from opening when the breaker is ON. Ratings through 1200A are Underwriters Laboratories listed as suitable for service entrance application.

NEMA 4/4X Water and Dustproof

Cross-Reference

Enclosed Circuit Breaker Competitive Catalog Numbers

NEMA Rating	Catalog Number Eaton Enclosure	Eaton Breaker	Square D Enclosure	Square D Breaker	Siemens Enclosure	Siemens Breaker	General Electric Enclosure	General Electric Breaker
1 surface	**SGDN100**	**GHC3100**	EHB125NS	EHB34100	—	—	—	—
1 flush	**—**	**—**	EHB125NF	EHB34100	—	—	—	—
3R	**RGDN100**	**GHC3100**	EHB125NRB	EHB34100	—	—	—	—
12	**JGDN100**	**GHC3100**	—	—	—	—	—	—
4/4X	**WGDN100**	**GHC3100**	—	—	—	—	—	—
1 surface	**SFDN100**	**EHD3100L**	FA100S	FAL34100	E2N1S	ED43B100	TE100S	TED134100WL
1 flush	**FFDN100**	**EHD3100L**	FA100F	FAL34100	E2N1F	ED43B100	TE100F	TED134100WL
3R	**RFDN100**	**EHD3100L**	FA100RB	FAL34100	E2N3R	ED43B100	TE100R	TED134100WL
12/3R	**—**	**—**	FA100AWK	FAL34100	—	—	—	—
12	**JFDN100**	**EHD3100L**	—	—	E2N12	ED43B100	TE100J/SE100J	TED134100WL
4/4X	**WFDN100**	**EHD3100L**	FA100DS	FAL34100	ED6SS4	ED43B100	TE100CS/SE100CS	TED134100WL
7/9	**XFDN050**	**EHD3050L**	FA060X	FAL34060	EA	ED43B100	—	—
9	**—**	**—**	FA060Y	FAL34060	—	—	—	—
7/9	**XFDN225B** ①	**FD3225L**	FA100X	FAL34100	EB	ED43B100	—	—
9	**—**	**—**	FA100Y	FAL34100	—	—	—	—
1 surface	**SFDN225** ①	**FDB3150L**	—	—	E2N1S	ED43B125	TE150S	TED134150WL
1 flush	**FFDN225** ①	**FDB3150L**	—	—	E2N1F	ED43B125	TE150F	TED134150WL
3R	**RFDN225** ①	**FDB3150L**	—	—	E2N3R	ED43B125	TE150R	TED134150WL
12	**JFDN225** ①	**FDB3150L**	—	—	E2N12	ED43B125	—	—
4/4X	**WFDN225** ①	**FDB3150L**	—	—	ED6SS4	ED43B125	—	—
7/9	**XFDN225B** ①	**FDB3150L**	—	—	—	—	—	—
1 surface	**SFDN225** ①	**FD3225L**	—	—	—	—	—	—
1 flush	**FFDN225** ①	**FD3225L**	—	—	—	—	—	—
3R	**RFDN225** ①	**FD3225L**	—	—	—	—	—	—
12	**JFDN225** ①	**FD3225L**	—	—	—	—	—	—
4/4X	**WFDN225** ①	**FD3225L**	—	—	—	—	—	—
7/9	**XFDN225B** ①	**FD3225L**	—	—	—	—	—	—
1 surface	**SJDN250**	**JDB3250**	KA225S	KAL36250	F6N1S	FXD63B250	TF225S	TFJ236225WL
1 flush	**FJDN250**	**JDB3250**	KA225F	KAL36250	F6N1F	FXD63B250	TF225F	TFJ236225WL
3R	**RJDN250**	**JDB3250**	KA225RB	KAL36250	F6N3R	FXD63B250	TF225R	TFJ236225WL
12/3R	**—**	**JDB3250**	KA225AWK	KAL36250	—	—	—	—
12	**JJDN250**	**JDB3250**	—	—	F6N12	FXD63B250	TF225J/SF250J	TFJ236225WL
4/4X	**WJDN250**	**JDB3250**	KA225DS	KAL36250	FD6SS4	FXD63B250	TF225CS/SF250CS	TFJ236225WL
7/9	**XJDN250B**	**—**	KA225X	KAL36250	EC2	FXD63B250	—	—
9	**—**	**—**	KA225Y	KAL36250	—	—	—	—

Note

① Maximum wire size 4/0.

Product Selection

1. Use the data on **Page V2-T1-129** to determine type of enclosure required.
2. Use the data on **Page V2-T1-123** and **V2-T1-124** to determine circuit breaker required.
3. **Pages V2-T1-125** through **V2-T1-131** include rough-in dimensional information.

Enclosure Only—Series C Breakers

Breaker Frame	Breaker Ampere Range	Enclosure NEMA Class	Catalog Number
Series C Breakers			
GHC, GD (two- and three-pole only) GHCGFEP (single-pole only)	15–100	1 surface	**SGDN100** ①
		3R	**RGDN100**
		12	**JGDN100**
		4/4X, 5 stainless steel	**WGDN100**
EHD, FD, FDB, HFD, ED, EDH, EDB, EDS, FDC, FDE, HFDE, HFDDC	15–100	1 surface	**SFDN100**
		1 flush	**FFDN100**
		3R	**RFDN100**
		12	**JFDN100**
		4/4X, 5 stainless steel	**WFDN100**
EHD, FD, FDB, EHD, FD, FDB	15–50	7/9 cast aluminum	**XFDN050B**
HFD, FDC, EHD, FD, FDB	60–225 ②	7/9 cast aluminum	**XFDN225B**
FD, FDB, HFD, ED, EDH, EDC, FDC (15–225 A) EDB, EDS, FDE, HFDE, FDCE, HFDDC	125–225	1 surface	**SFDN225**
		1 flush	**FFDN225**
		3R	**RFDN225**
		12	**JFDN225**
		4/4X, 5 stainless steel	**WFDN225**
JD, JDB, HJD, JDC	125–250	1 surface	**SJDN250**
		1 flush	**FJDN250**
		3R	**RJDN250**
		12	**JJDN250**
		4/4X, 5 stainless steel	**WJDN250**
JD, JDB, HJD, JDC	125–250	7/9 cast aluminum	**XJDN250B**
KD, KDB, HKD, KDC, DK HKDB ③, CKD, CHKD, KDB, HKDDC	125–400	1 surface	**SKDN400**
		1 flush	**FKDN400**
		3R	**RKDN400**
		12	**JKDN400**
		4/4X, 5 stainless steel	**WKDN400**

Enclosure Only—Series C Breakers, continued

Breaker Frame	Breaker Ampere Range	Enclosure NEMA Class	Catalog Number
Series C Breakers, continued			
KD, KDB, HKD, KDC, DK	125–400	7/9 cast aluminum	**XKDN400B**
LGE, LGS, LGH	250–600	1 surface	**SLG630**
		3R	**RLG630**
		12	**JLG630** ⑤
		4/4X, 5 stainless steel	**WLG630**
LD, LDB, HLD ④, HLDB, LDCB	300–600	1 surface	**SLDN600**
		3R	**RLDN600**
		12	**JLDN600**
		4/4X, 5 stainless steel	**WLDN600**
		7/9 cast aluminum	**XLDN600B**
LD, LDB, HLD	300–600	7/9 cast aluminum	**XMCN800B**
MDL, HMDL	400–800		
MDL, HMDL, ND, HND ④ MPS, MPH, HMDL, MDLB, HMDLDC, HMDLB, MDLPV Molded Case Switches (w/ WK suffix)— MDL, MDLB, HMDL, HLDLC, ND, HND, HMDLDC Molded Case Switches (w/ K suffix)— MPS Molded Case Switches (w/ SE suffix)— NGK	400–1200	1 surface	**SNDN1200**
		3R	**RNDN1200**
		12	**JNDN1200**
		4/4X, 5 stainless steel	**WNDN1200**
ND, HND	—	7/9 cast aluminum	**XNDN1200B**

Enclosure Only—Series G Breakers

Breaker Frame	Breaker Ampere Range	Enclosure NEMA Class	Catalog Number
Series G Breakers			
LGE, LGS, LGH	250–600	1 surface	**SLG630** ⑥
		3R	**RLG630** ⑥
		12	**JLG630** ⑥
		4/4X, 5 st. steel	**WLG630** ⑥
NG, NGS, NGH	320–1200	1 surface	**SNDN1200**
		3R	**RNDN1200**
		12	**JNDN1200**
		4/4X, 5 st. steel	**WNDN1200**

Notes

① Suitable for use with single-pole breaker. Base mounting plate kit. QCCBP required.
② Maximum wire size: 4/0.
③ Not applicable for XKDN400B.
④ Short-circuit ratings are limited for high interrupting rated breakers. Refer to **Page V2-T1-123**.
⑤ Can be field converted to NEMA Type 3R.
⑥ Three- or four-pole.

Dimensions

Approximate Dimensions in Inches (mm)

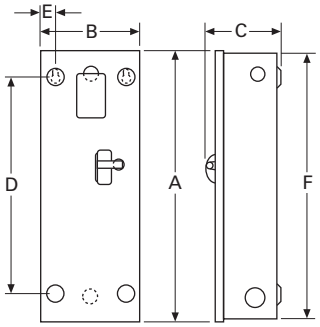
NEMA 1, 12, 3R

Note: Not to be used for construction purposes unless approved.

NEMA 1 Surface Mounted

Frame	Maximum Amperes	A	B	C	D	E	F	Approximate Weight in Lbs (kg)
G	100	17.50 (444.5)	8.56 (217.4)	6.28 (159.5)	13.03 (331.0)	1.20 (30.5)	17.19 (436.6)	12 (5)
F ①	100	19.13 (485.9)	9.13 (231.9) ③	5.20 (132.1)	17.00 (431.8)	N/A ④	18.81 (477.8)	13 (6)
Earth leakage	100	23.25 (590.6)	8.56 (217.4)	6.28 (159.5)	18.75 (476.3)	1.20 (30.5)	22.94 (582.7)	15 (7)
F ②	225	23.25 (590.6)	8.56 (217.4)	6.28 (159.5)	18.75 (476.3)	1.20 (30.5)	22.94 (582.7)	15 (7)
J	250	34.70 (881.4)	10.92 (277.4)	7.20 (182.9)	30.00 (762.0)	1.88 (47.8)	34.39 (873.5)	31 (14)
K ⑤	400	38.81 (985.8)	11.06 (280.9)	10.94 (277.9)	34.00 (863.6)	1.25 (31.8)	38.50 (977.9)	53 (24)
LG	600	51.06 (1296.9)	21.87 (555.5)	9.96 (253.0)	51.63 (1311.5)	1.94 (49.3)	50.13 (1273.3)	90 (41)
Earth leakage	600	51.06 (1296.9)	21.87 (555.5)	9.96 (253.0)	51.63 (1311.5)	1.94 (49.3)	50.13 (1273.3)	90 (41)
L	600	45.88 (1165.4)	14.31 (363.5)	12.38 (314.5)	46.56 (1182.6)	1.91 (48.5)	45.56 (1157.2)	81 (37)
M, N	1200	61.22 (1555.0)	21.44 (544.6)	15.41 (391.4)	61.84 (1570.7)	1.97 (50.0)	60.91 (1547.1)	178 (81)
M, N ⑥	400–1200	67.82 (1722.6)	21.41 (543.8)	15.53 (394.5)	69.32 (1760.7)	1.97 (50.0)	68.69 (1744.7)	128 (58)

NEMA 1 Surface Mounted



Notes

① SFDN100 Series "B" released 9/15/01.
② Maximum wire size: 4/0.
③ Total width, including door clip is 9.95 inches (253 mm).
④ Single centered mounting hole provided.
⑤ Maximum wire size: 500 kcmil.
⑥ 100% rated breakers.