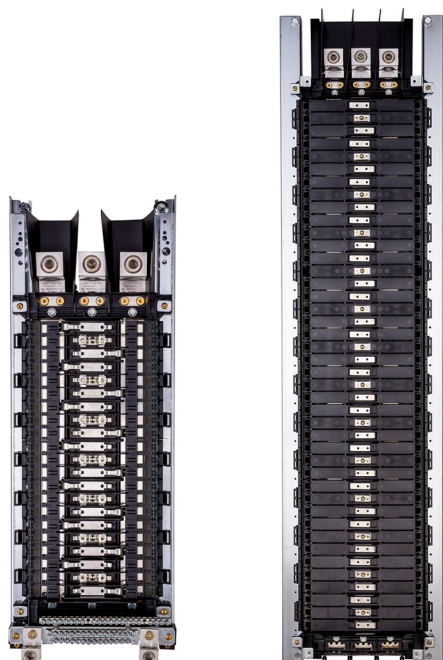


NF/NQ Panelboards OEM

Class 1600

Catalog

1600CT1901
R11/19



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NQ Panelboard Features and Benefits

Developed with customer input, Square D™ brand NQ panelboards are built to last, featuring innovations for ease of installation and durability. NQ panelboards are easy to assemble and available from stock in the widest variety of ready to install (RTI) configurations of any UL 67 Listed 240 Vac rated panelboard family.

- Four interior ratings—100 A, 225 A, 400 A, or 600 A
- Up to six circuit breaker counts—18, 30, 42, 54, 72, or 84
- A full complement of field installable accessories including:
 - feed-through and/or sub-feed lugs
 - sub-feed circuit breakers
 - copper or aluminum neutrals and grounds, including 200% neutrals
 - 6", 12", 18", or 24" rail and deadfront extension kits

Details of the NQ RTI Panelboard offer may be found in *Digest 178, Section 9*.

Benefits: Broadest range of interiors, circuit breakers, and accessories available RTI (from distributor stock). Reduced installation time and less errors during assembly, resulting in improved productivity and higher quality.

NQ Interiors

Main Lug Interiors (MLO)—cULus Listed up to 240 Vac, or 48 Vdc

OEM customers have two ways to order NQ main lug interiors:

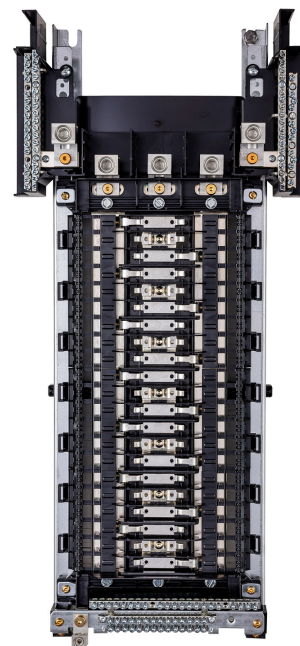
Order a main lug interior from *Digest 178, Section 9* (referencing the part number key below).

See *NQ OEM Main Lug Interior Examples, page 16* for OEM main lug only interior special offers.

Table 1 - NQ Main Lug Interior Part Numbering

NQ	4	42	L	2	C	GS	NL
							Blank = Standard or no neutral NL = 200% neutral (non-linear)
							14 = Fits in 14" wide enclosures Blank = Standard width interior (fits in 20" wide enclosures) G = isolated ground S = short rails
							C = copper Blank = aluminum
							Mains rating: 1 = 100 A 2 = 225 A 4 = 400 A 6 = 600 A
							Main: L = Lugs only B or M = Circuit breaker
							Circuit breaker counts: 18, 30, 24, 36, 42, 54, 66, 72, 84, 126
							Blank= Single-phase 4 = 3-phase 4-wire 3 = 3-phase 3-wire
Family: NQ, NF							

Figure 1 - NQM442L2CGSNL



NQ Interior Features:

- NQ panelboards accept plug-on and bolt-on circuit breakers, up to 150 A.
- Main lugs interiors are available for 1P 3W, 3P 4W, or 3P 3W AC systems
 - 3-phase high leg delta or corner grounded delta are available factory assembled
 - 1P 2W interiors are UL Listed for DC applications up to 48 Vac
- 100 A, 225 A, 400 A, or 600 A mains rating
 - 225 A to 400 A interiors are convertible to main circuit breaker by adding a main circuit breaker and adapter kit
- Available from stock with silver/tin copper or tin-plated aluminum bus.
 - Tin-plated or silver-plated copper bus is available as an option.
- Branch connector fingers are tin-plated copper; silver-plated branch connectors are optional.
 - Aluminum or copper bus up to 400 A
 - Copper only at 600 A
- For more details about NQ main lug interiors please review *Catalog 1640CT0801* or *Digest 178, Section 9* NQ main lug interiors.

Main Circuit Breaker Interiors (MB)—240 Vac, 48 Vdc

OEM customers have two ways to order a main circuit breaker interior panel:

- See *NQ Main Breaker OEM Interior Examples, page 18* for OEM main circuit breaker interior special offers
- Order a main lug interior, main circuit breaker adapter kit, and a circuit breaker

NQ	MB	2	HJ
Blank = Kit for standard 20" width interiors 14 = Kit for 14-inch-wide interiors			
Main circuit breaker frame types (PowerPact H, J, or Q)			
Interior mains rating (see <i>Main Lug Interiors (MLO)—cULus Listed up to 240 Vac, or 48 Vdc, page 6</i>)			
Main circuit breaker			
Family: NQ, NF			

Figure 2 - NQMB2HJ



- A main circuit breaker may be factory installed onto nearly all NQ interiors
- Main circuit breaker kits and interiors up to 400 A are available from stock (refer to *Digest 178, Section 9*).

Table 2 - NQ Panelboard Main/Sub-Feed Circuit Breakers

Installation Methods	Circuit Breaker Frame	Ampacity	Digest 178
Branch mounted on Interior	QOB/QOB-VH	15 to 150 A	See <i>Digest 178, Section 9</i>
Vertical Main ^{1 2} , Sub-feed ^{1 2}	HD, HG, HJ, HL, HR	15 to 150 A	See <i>Digest 178, Section 7</i>
Vertical Main ^{1 2} , Sub-feed ^{1 2}	JD, JG, JJ, JL, JR	150 to 225 A	See <i>Digest 178, Section 7</i>
Vertical Main ² , Sub-feed ²	QB, QD, QG, QJ	70 to 225 A	See <i>Digest 178, Section 7</i>
Vertical Main ^{3 4}	LA/LH	125 to 400 A	See <i>Digest 178, Section 7</i>
Vertical Main ^{1 25}	LD, LG, LJ, LL	125 to 600 A	See <i>Digest 178, Section 7</i>

For more information about 100 A, 225 A, 400 A, and 600 A main circuit breaker NQ panelboards please review *Catalog 1640CT0801*, See *Digest 178, Section 9*, PowerPact H, J, L *Catalog (0611CT1001)*, PowerPact Q-Frame *Catalog (0734CT0201)*, or LA, LH, Q4 *Catalog (0601CT9101)*.

1. , PowerPact H, J, L are available with LI or LSI electronic trip functions.
 2. Interrupting ratings for PowerPact circuit breakers (at 240 Vac): B = 10 kA; D = 25 kA; G = 65 kA; J = 100 kA; L = 125 kA; R = 200 kA (PowerPact H or J only).
 3. Interrupting ratings for LA/LH circuit breakers (at 240 Vac): LA = 35 kA; LH = 65 kA.
 4. Add a MB suffix to part numbers in this table to obtain the short handle needed to fit in standard depth MH enclosures.
 5. PowerPact L circuit breakers are available, factory installed only.

NQ Single-Row (Column-width) Interiors—240 Vac Bolt-On

NQ column-width panelboards (see Tables 9.84 - 9.85 (see Digest 178) are for AC applications up to 240 Vac. They meet Federal Specification W-P-115c, Type 1, Class 1, and are UL Listed. NQ column-width panelboard accept 10 A–60 A bolt-on, 1-, 2-, and 3-pole QOB branch circuit breakers. QOB-VH (60 A max.) and QHB (30 A max.) branch circuit breakers are also available as factory assembled.

- Mains ratings: 100 A, 225 A
- Branch circuit breakers: 60 A max. bolt-on

NQ	8	10	M	1	C	SB	HR
							Blank = Std. surf. mount HR = Hinged right HL = Hinged left (trim front)
							SB = split bus Blank = Standard bus
						Copper bus	
						Interior rating 1 = 100 A 2 = 225 A	
						L = Main lugs only B, M = Main circuit breaker (including back-fed)	
						Circuit count: 8 ⁶ , 10 ⁶ , 20, 30, or 42	
						Blank = 1-phase 3 = 3-phase 3-wire 4 = 3-phase 4-wire	
						8 = Column width (8.625")	
Family: NQ, NF							

Figure 3 - NQM810M1CSB8



NQ 14-inch-wide—Merchandised Interiors and Enclosures 240 Vac, or 48 Vdc max.

14-inch-wide NQ panelboards provide most the capabilities of standard width NQ interiors for applications where equipment space is limited. 14-inch-wide interiors accept bolt-on and plug-on branch circuit breakers up to 100 A. 3 Ph 4 W and 1 Ph 3 W interiors are available. See *Digest 178, Section 9* for more information.

6. Available only as a split bus special interior.

Branch Circuit Breakers (Bolt-On or Plug-On)

NQ circuit breaker panelboards accept almost all QO and QOB branch circuit breakers. Review *Catalog 0730CT9801* and *Digest 178, Section 9* for information on standard interrupting QOB 10,000 AIR bolt-on circuit breakers, high interrupting QOB-VH 22,000 AIR circuit breakers, very high interrupting QHB 65,000 AIR, and specialty circuit breakers.

Table 3 - QOB NQ Branch Circuit Breaker Part Numbering

QO	B	2	20	VH
				Blank = Standard 10 kA AIR ⁷ VH = 22 kA AIR
			Ampere Rating (10 A–150 A)	
		Number of poles (1, 2, or 3)		
	B = Bolt-on Blank = Plug-on			
Circuit breaker frame QO = Standard QH = 65 kA AIR				

7. Ampere Interrupting Rating

NQ Accessories and Options

A wide variety of "Ready to Install Accessories" are available from stock, and many "Factory Assembled Options" may be incorporated into custom OEM interiors.

View *Digest 178, Section 9* and *PowerPact H, J, L Catalog (0611CT1001)*, or *PowerPact Q-frame Catalog (0734CT0201)* for more information on sub-feed circuit breakers.

Sub-feed Circuit Breakers and Kits

(See *Digest 178, Section 9*)

- Single SFB (sub-feed circuit breakers) on 225 A or 400 A interiors
- Two SFB to 225 A (only for 400 A, 600 A interiors)
- Factory assembled only for 600 A interiors

Sub-feed Lugs

(See *Digest 178, Section 9*)

- 100 A to 400 A interiors, single or three phase
- Mechanical or compression, aluminum or copper

Feed-through Lugs

(See *Digest 178, Section 9*)

- 100 A to 600 A interiors, single or three phase
- Mechanical or compression, aluminum or copper
- 600 A available factory assembled only

NQ	SF	L	4

Circuit breaker frame:
 Blank = Lugs only
 Q = Q-frame main circuit breaker
 HJ = H/J-frame main circuit breaker

Mains rating = 1, 2, 4, or 6
 (see *NQ Main Lug Interior Part Numbering, page 6*)

L = Lugs
 B = Circuit breaker

SF = Sub-feed
 FT = Feed-through

Family: NQ, NF

Figure 4 - NQSFL4



NQ Lug, Neutral, Ground Bar, and Rail Extension Kits

A wide variety of lug kits, neutral bar assemblies, ground bar kits, and mounting rail extensions are available from stock to customize NQ panelboard interiors to fit OEM application needs.

NQ Neutrals (100% Aluminum standard)

(See Digest 178, Section 9)

- 200% (aluminum) neutral kit
- Copper 100% neutral kit
- Copper 200% neutral assembly (factory assembled only)

NQ Optional Lugs

(See Digest 178, Section 9)

Table 4 - NQ Lug Kit Part Numbering

NQ	AL	M	1
			Mains rating = 1, 2, 4, or 6 (see <i>NQ Main Lug Interior Part Numbering, page 6</i>)
			V = Compression lug kit M = Mechanical lug kit
			AL= aluminum; CU = copper
Family: NQ, NF			

Figure 5 - NQALM2



- Al compression lug kit
- Cu mechanical lug kit
- Cu compression kit

Ground Bars

(See Digest 178, Section 9)

Isolated Ground—*PKGTAB* kits may be added to the ground bar kits listed in *Ground Bar Kits*, page 12 below

Table 5 - Ground Bar Kits

Catalog Number	Terminal		Approx. Overall Length		Distance Between Mounting Holes		
	Number of Terminal	Quantity Available for Each Size		in.	mm	in.	mm
		Material	I/II				
<i>PK12GTA</i>	12	AL	12/0	4.700	119	3.125	79
<i>PK12GTACU</i>	12	CU	12/0	4.700	119	3.125	79
<i>PK18GTA</i>	18	AL	18/0	6.560	167	3.125	79
<i>PK18GTACU</i>	18	CU	18/0	6.560	167	3.125	79
<i>PK23GTA</i>	24	AL	23/1	9.125	232	3.125	79
<i>PK23GTACU</i>	24	CU	23/1	9.125	232	3.125	79
<i>PK27GTA</i>	27	AL	24/1	9.125	232	3.125	79
<i>PK27GTACU</i>	27	CU	27/0	9.125	232	3.125	79

Table 6 - Wire Range

Size	Cu	Al
I	(1) #14 to #4 or (2) #14 or #12	(1) #12 to #4 or (2) #12 or #10
II	(1) #1 to 4/0	(1) #1 to 4/0

Rail Extensions

(See Digest 178, Section 9)

- *NQ6RDE*—6"
- *NQ12RDE*—12"
- *NQ18RDE*—18"
- *NQ24RDE*—24"

SurgeLoc SPD (Surge Protective Devices) Protection

Square D brand SurgeLogic™ SurgeLoc surge protective device (SPD) delivers specification grade performance for service entrance or critical branch panel applications. The SurgeLoc SPD product utilizes a high-energy suppression circuit that provides 6–10 modes of suppression from 80,000 to 240,000 peak amps of surge current rating per phase. More detailed information can be found in SurgeLoc Brochure *1300BR1302*.

- Available surge current ratings: 80 kA, 100 kA, 120 kA, 160 kA, 200 kA, 240 kA
- Voltage Systems:
 - 208Y/120 Vac, 3-phase, 4-wire
 - 120/240 Vac, 1-phase
 - 240/120 Vac, 3-phase, 3-wire (high leg delta)
- See *Digest 178, Section 9* for NQ SurgeLoc SPD part numbers

Factory Assembled Options and Interiors

Ready to install (RTI) interiors are also available factory assembled (with main, sub-feed, and/or branch circuit breakers, sub-feed or through feed lugs, and aluminum, copper, or 200% neutrals).

Some options are only available factory assembled (or as part of a custom OEM commercial reference):

- PowerPact L main circuit breaker (up to 600 A)
- PowerPact J 250 A main circuit breaker interior
- Feed-through lugs, sub-feed lugs, or sub-feed circuit breakers on 600 A interiors
- Name plates
- Lighting contactors
- Canadian service entrance barriers
- Boxes wider than 20" (26", 32")
- Stainless steel and fiberglass enclosures
- Power meters or circuit monitors

Some Interior Types are only Available Factory Assembled:

IP2X per 60529 Fingersafe

Factory-installed IP2X for NQ Lighting and Appliance Panelboards from Square D by Schneider Electric™ reduce the risk of electrical shock, when someone is working near energized components. IP2X barriers are designed to prevent people from accessing hazardous parts with a finger.

- Plastic barriers cover mains (lugs or circuit breaker), copper bus, and branch circuit breakers
 - IP2X per IEC 60529 on all ungrounded parts
- Supports 240 Vac maximum—3-phase, 3- and 4-wire systems
- Installs in most environments—NEMA 1, 2, 3R, 4/4X, 5, or 12 (up to 225 A)
 - NEMA 1 panelboards up to 400 A
- Available with main lugs, PowerPact Q-, H-, J-frame, and LA/LH main circuit breakers

To read more about Fingersafe IP2X per IEC 60529 Barriers for NQ Panelboards, refer to document *1640BR1701*.

Separated Distribution, Split Bus

Square D NF and NQ separated distribution and split bus panelboards come factory assembled with copper bus, with or without an integral main circuit breaker.

Separated distribution panelboards simplify the future installation of current transformers (CTs) for the metering of electrical power and energy as required by Section 130.5-B of California's 2019 Building Energy Efficiency Standards. Special lug pad adaptors allow field removal of cables, for easy field installation of a wide variety of solid core and split core CTs for electrical energy measurement, by load type.

Split Bus Panelboards enable two or three independent branch distribution sections to be fed from dedicated main circuit breakers, in a single enclosure.

Table 7 - Example NQ Split Bus Panelboards

Catalog Number	Main	Mains Amps	Main Pole Spaces	Split 1 Amps	Split 1 Pole Spaces	Split 2 Amps	Split 2 Pole Spaces	Bus Material	Dead-front	Rails Length (in./mm)	Neutral Assembly
NQ4301818S-M200C	QB	200	30	125	18	125	18	CU	Yes	57.9/1470	AL
NQ4301818S2C	MLO	225	30	125	18	125	18	CU	Yes	57.9/1470	AL

For more detailed info about Square D NQ separated distribution and split bus panelboards please review document: *1600HO1701*, Separated Distribution and Split Bus Panelboards.

Power Meters and Circuit Monitors (Mains and/or Branches)

PM5000 series and PM8000 series power meters are available for NQ or NF panelboards. Factory assembled power meters are mounted in a 7 inch wide extension on the side of the enclosure.

EM3550 series circuit monitors are also available for NQ panelboards. Addition of an EM3555 or EM3560 adds 6 inches to the length of the panel.

PowerLogic branch circuit power monitoring (BCPM) current transformer strips and power modules panelboards may be integrated into NQ or NF panelboards.

Please refer to Power System Catalog *3000CT1701* for more information about power meters and circuit monitors.

NQ OEM Special Offers

Original Equipment Manufacturers (OEM) may purchase interior configurations that lack features required for UL 67 Listing. The OEM becomes responsible for UL 67 Listing when choosing these options.)

- No dead front
- No neutral
- No lugs
- Short rails

NQM	42	L	4	C	CF
					CF = Center fed G = Isolated ground S = Short rail CE = European conformity FT = Feed-through NL = Non-linear (200% neutral)
					C = copper blank = aluminum
					Mains rating (see <i>NQ Main Lug Interior Part Numbering, page 6</i>)
					L = Lug only B = Circuit breaker
					Circuit breaker counts
Family: NQ, OEM					

Table 8 - NQ OEM Main Lug Interior Examples

Pole Spaces	Amps	Catalog Number	Main Lugs	Bus ⁸	Rails Type ⁹	Dead Front	Rails Length ¹⁰		Neutral Assembly
							in.	mm	
1P2W									
18	100	<i>NQM18L1C</i>	N/A	CU	Z	N/A	12.88	327	N/A
24	100	<i>NQM24L1C</i>	Yes	CU	C	N/A	13.65	347	N/A
36	100	<i>NQM36L1C</i>	Yes	CU	C	N/A	20.40	518	N/A
24	225	<i>NQM24L2C</i>	Yes	CU	C	N/A	13.99	355	N/A
30	225	<i>NQM30L2C</i>	N/A	CU	Z	N/A	15.88	403	N/A
36	225	<i>NQM36L2C</i>	Yes	CU	C	N/A	20.74	527	N/A
42	400	<i>NQM42L4CCF</i> <small>¹¹</small>	Yes	CU	Z	N/A	24.506- 22	622	N/A
54	600	<i>NQM54L6C</i>	Yes	CU	Z	Yes	22.55	573	N/A
1P3W									
42	400	<i>NQM42L4CFT2</i> <small>¹²</small>	Yes	CU	Z	Yes	33.88	861	AL ¹³
3P3W									
30	100	<i>NQM430L1C</i>	N/A	CU	Z	N/A	15.88	403	N/A
42	225	<i>NQM342L2CGS</i> <small>¹⁴</small>	Yes	CU	C	N/A	26.03	661	N/A
54	225	<i>NQM354L2CS</i>	PS ¹⁵	CU	C	Yes	26.25	667	N/A

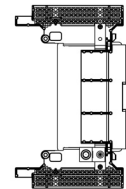
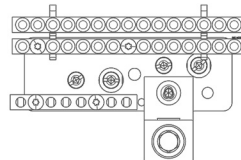
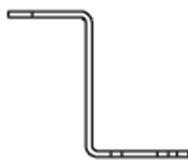
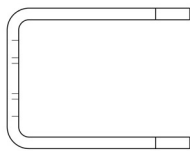
8. Bus: AL = aluminum; CU = copper.
 9. Rail type: C = C-shaped rail, page 17; Z = Z-shaped rail, page 17.
 10. Mounting hole spacing is 1" (25 mm) shorter than rails length.
 11. Center feed bus.
 12. Comes with 225 A feed-through lug.
 13. NQOB neutral: *NQOB*, page 17; AL neutral: *AL Neutral*, page 17.
 14. Isolated ground, short rails.
 15. PS: preserved space for lugs.

Table 8 - NQ OEM Main Lug Interior Examples (Continued)

Pole Spaces	Amps	Catalog Number	Main Lugs	Bus ¹⁶	Rails Type ¹⁷	Dead Front	Rails Length ¹⁸		Neutral Assembly
							in.	mm	
72	225	NQM372L2CS	PS	CU	C	N/A	33.00	838	N/A
84	225	NQM383L2CS	PS	CU	C	N/A	37.50	953	N/A
42	400	NQM383L2CS	PS	CU	Z	N/A	24.50	622	N/A
42	400	NQM342L4CGS	Yes	CU	C	N/A	26.03	661	N/A
54	400	NQM354L4CSCE	PS	CU	C	N/A	26.25	667	N/A
72	400	NQM372L4CSCE	PS	CU	C	N/A	33.00	838	N/A
84	400	NQM384L4CSCE	PS	CU	C	N/A	37.50	953	N/A
18	600	NQM324L6C	N/A	CU	C	N/A	14.00	356	N/A
30	600	NQM330L6C	N/A	CU	C	N/A	16.25	413	N/A
42	600	NQM342L6C	N/A	CU	C	N/A	20.75	527	N/A
54	600	NQM354L6CS	N/A	CU	C	Yes	25.25	641	N/A
54	600	NQM454L6C	PS	CU	Z	Yes	23.41	595	N/A
72	600	NQM372L6CS	N/A	CU	C	Yes	32.00	813	N/A
84	600	NQM384L6CS	PS	CU	C	N/A	37.50	953	N/A
126	600	NQM3126L6CS	N/A	CU	C	Yes	54.78	1391	N/A
3P4W									
18	100	NQM418L1C	Yes	CU	Z	N/A	17.25	438	NQOB Neutral ¹⁹
18	225	NQM418L2C	Yes	CU	Z	N/A	17.25	438	NQOB Neutral
42	225	NQM442L2CGSNL	Yes	CU	C	N/A	27.00	686	200% Neutral
48	225	NQM430SB18L2C ₂₀	Yes	CU	Z	Yes	40.44	1027	AL
42	400	NQM442L4CGSNL	Yes	CU	C	N/A	27.00	686	AL
18	600	NQM318L6C	N/A	CU	C	N/A	11.75	298	N/A
42	225	NQM442L2CDR ₂₁	Yes	CU	Z	Yes	33.64	854	AL

NOTE: CAD models available upon request for most OEM interiors

Figure 6 - C-shaped rail Figure 7 - Z-shaped rail Figure 8 - NQOB Neutral Figure 9 - AL Neutral



16. Bus: AL = aluminum; CU = copper.
 17. Rail type: C = C-shaped rail, page 17; Z = Z-shaped rail, page 17.
 18. Mounting hole spacing is 1" (25 mm) shorter than rails length.
 19. NQOB neutral: NQOB Neutral, page 17; AL neutral:AL Neutral, page 17 .
 20. 30/18 split bus interior.
 21. Density Rated (1000 A/in2 bus).

Table 9 - NQ Main Breaker OEM Interior Examples

Pole Spaces	Amps	Catalog Number	Main Circuit Breaker	Bus	Rails Type	Dead Front	Rails Length		Neutral Assembly
							in.	mm	
3P3W									
24	225	<i>NQM324M2CS</i>	Back-fed QOB	CU	C	N/A	14.00	356	N/A
30	225	<i>NQM330M2CS</i>	Back-fed QOB	CU	C	N/A	16.25	413	N/A
42	225	<i>NQM342M2CS</i>	<i>QBL32225</i>	CU	C	N/A	33.93	862	N/A
3P4W									
42	225	<i>NQM442M2CSQB</i> <small>22</small>	<i>QDL32225</i>	CU	C	N/A	33.93	862	AL
42	225	<i>NQM442M2SQD</i> <small>23</small>	<i>QDL32225</i>	CU	C	N/A	33.93	862	AL

22. QB suffix: QB main circuit breaker installed onto interior.

23. QD suffix: QD main circuit breaker installed onto interior.

NQ/NF Enclosures and Trims (Covers)

Enclosures (MH): Standard construction is galvanized steel with removable endwalls. Standard depth and width NEMA 1 boxes are provided with knockouts in one end and the other is blank. They are also available with knockouts or blank endwalls on both ends. For more information on NQ and NF enclosures, refer to catalog 1640CT0801.

NEMA Type 1 Enclosures

- Standard boxes: 20" width x 5.75" depth
 - Lengths from 26" to 92" in 6 inch increments
 - Available with blank end walls (BE)
 - 6", 12" extensions available for top/bottom
 - 3", 6" extensions available for left/right side
- Deep (D9) boxes: 20" width x 8.75" depth
 - Lengths from 26" to 92" in 6 inch increments (blank end walls only)

NEMA Type 2 Enclosures

- Drip hoods available for Type 1

NEMA Type 3R, 5, 12 Enclosures

- Standard Weatherproof 21" width x 6.5" depth
 - Lengths from 26" to 86" in 6 inch increments

NEMA Type 4/4X Stainless Steel (type 304 or type 316) and Fiberglass Enclosures are Available Factory Assembled

Table 10 - NEMA 1 NQ / NF Enclosure Part Numbering

MH	26	BE
	Height (in.)	Endwall knockouts (NEMA 1 Std. 5.75" depth): Blank = Knockout on 1 endwall 1 endwall blank BE = Both ends blank D9 = 8.75" deep option WP = Weatherproof (NEMA 3R/5/12)

MH = Metal House

Type 4/4X Stainless Steel (type 304 or type 316) or Fiberglass Enclosures are only available Factory Assembled.

NEMA Type 1 Trim Fronts (Covers)

- Flush or surface mounted (NEMA Type 2 are surface mount only)
- Mono-Flat™ trim fronts on 100 A–225 A interiors mount to the deadfront with trim screws. Both trim screws and door hinges are concealed.
- Mono-Flat trim fronts for 400 A–600 A interiors are vented and mount to the enclosure with trim screws. Door hinges are concealed.
- Hinged trim fronts
 - 100 A–225 A interiors mount to the deadfront and to the enclosure with trim screws
 - For 400 A–600 A interiors are vented and mount to the enclosure with trim screws

Table 11 - NEMA 1 Trim Fronts (Covers)—Mono-Flat / Hinged Part Numbering

NC	26	V	S	HR	WMD
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> WMD = Welded metal directory holder Blank = Plastic directory card pouch </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> HR = Hinged (right) front Blank = Mono-flat front </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> F = flush mount "S" = surface mount </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> V = Vented trim Blank = standard </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Nominal Height (In.) Surface / Flush trim fronts are 0.12" / 1.52" taller than nominal </div>					
NC: NEMA cover					

NF Panelboard Features and Benefits

A broad range of NF panelboard kits are available ready to install (RTI) from stock to address common electrical distribution needs up to 600Y/347 Vac. Details of the NF RTI Panelboard offer may be found in Tables 9.46 - 9.48 and Tables 9.75 - 9.81 of Digest 178. Custom OEM solutions are also available to meet repetitive needs for unique panelboard configurations.

NF Interiors

Main Lug Interiors

(Refer to Digest 178, Section 9)

Single-phase and three-phase interiors from 125 A–800 A are available factory assembled, or setup for repetitive OEM sale. RTI interiors are available for 3-phase, 4-wire applications from 125 A–600 A.

- Accept EDB, EGB, or EJB bolt-on (125 A max.) branch circuit breakers (100 A max. at 600/347 Vac).
- 125 A and 250 A interiors are suitable for use as cULus service entrance with branch mounted EDB, EGB, or EJB circuit breakers.
- 125 A–400 A main lug interiors are available in aluminum or copper and are convertible to main circuit breaker interiors by adding a main circuit breaker adapter kit and a main circuit breaker.
- Copper bus is standard on 600 A and 800 A interiors
 - 800 A interiors require deep enclosures

Main Circuit Breaker Interiors

Single-phase and three-phase main circuit breaker interiors up to 600 A are available factory assembled or setup for repetitive OEM sale. Main lug RTI interiors accept main circuit breakers and main circuit breaker kits.

Refer to NF catalog 1670CT0701 and Digest 178, Section 9 for more information on NF main circuit breaker panelboards.

Table 12 - NF Interior Part Numbering

NF	4	42	L	2	C
					C = copper Blank = aluminum
					Mains rating: 1 = 125 A 2 = 250 A 4 = 400 A 6 = 600 A 8 = 800 A
					Main type: L = lugs M = circuit breaker
					Circuit breaker counts: 30, 42, 54, 66, 84
					Blank = Single-phase 4 = 3-phase 4-wire 3 = 3-phase 3-wire
Family: NQ, NF					

NF Single-Row (Column-width) Interiors

NF column-width panelboards (see *Digest 178, Section 9*) support AC applications up to 600Y/347 Vac. They meet Federal Specification W-P-115c, Type 1, Class 1, and are UL Listed. NF column-width panelboard accept 10 A–60 A bolt-on 1-, 2-, and 3-EDB, EGB, or EJB branch circuit breakers.

- Mains ratings: 125 A, or 225 A
- Branch circuit breakers: 60 A max. bolt-on

Table 13 - NF Column Width Interior Part Numbering

NF	8	4	42	M	2	J	D	C
								C = copper
							Main circuit breaker interruption rating (See <i>Digest 178, Section 9</i>)	
						Main circuit breaker: PowerPact H or J		
					Interior rating: 1 = 125 A 2 = 225 A			
				Main: L = lug; B, M = circuit breaker				
			Circuit Counts: 30 or 42					
		Blank = 1-phase 3 = 3-phase 3-wire 4 = 3-phase 4-wire						
	8 = Column-width panelboard							
Family: NQ, NF								

Figure 10 - NF8442M2J2DC



Branch Circuit Breakers

E-frame circuit breakers are available in 1P, 2P, 3P, and 1P EPD type. Ampere ratings start at 15 A and go up to 125 A (100 A at 600 Vac). Optional factory-installed electrical accessories include: 120 Vac shunt trip, 1A/1B auxiliary switch, and normally open alarm switch.

E-frame, Thermal-magnetic

(See *Digest 178, Section 9*)

- 1-pole, 277 Vac (347 Vac for Canada)
- 2-pole, 480Y/277 Vac (600Y/347 Vac for Canada)
- 3-pole, 480Y/277 Vac (600Y/347 Vac for Canada)
- Equipment protection devices (EPDs), 1-pole, 277 Vac, thermal-magnetic with 30 mA ground-fault protection

Table 14 - E-frame NF Branch Circuit Breaker Part Numbering

E	D	B	1	4	15
Frame type			Amperage rating		
			Voltage rating: 4 = 480Y/277 Vac 6 ²⁴ = 600Y/347 Vac		
			Number of poles: 1, 2, or 3		
			Bolt-on construction		
		Breaking capacity code: D, G, or J			

24. Please view E-Frame Circuit Breakers website to select 600Y/347 Vac circuit breaker references.

NF Main/Sub-Feed Breakers and Kits

View *Digest 178, Section 7* and PowerPact H, J, L or LA, LH, Q4 catalogs for more information on the molded case circuit breakers qualified for use as main or sub-feed circuit breakers in NF Panelboards.

Ready to install (RTI) kits are available to simplify the addition of a main circuit breaker or sub-feed circuit breaker to most main lug NF panelboards with main lugs only.

Main Circuit Breakers and Kits

(See Digest 178, Section 9)

- RTI to 400 A (LA/LH frame)
 - Branch mounted to 125 A (ExB)
 - Electronic trip to 250 A (H, J Frame)
- Factory assembled (FA) to 600 A
 - Electronic trip available (PowerPact H, J, L frame)

Sub-feed Circuit Breakers and Kits

(See Digest 178, Section 9)

- Single Sub-Feed Circuit Breaker (SFB)
- Two SFB (to 250 A) only for 400 A
- Factory assembled only for 600 A

Table 15 - NF Main and Sub-Feed Circuit Breaker Kits Part Numbering

NF	400	SFB	H
			H, or J = Circuit breaker frame
		Blank = Main circuit breaker SFB = Sub-feed circuit breaker	
	Ampacity rating: 150, 250, 400, 600		
N = Main circuit breaker kit NF = Sub-Feed Circuit Breaker kit			

NF Lug, Neutrals, Ground Bar, and Rail Extensions Kits

A wide variety of Ready to Install Accessories are available from stock, and many Factory Assembled Options may be incorporated into custom OEM interiors.

Sub-feed Lugs

(See Digest 178, Section 9)

- 100 A–800 A to 400 A RTI (FA to 800 A)

Feed-through Lugs

(See Digest 178, Section 9)

- 100 A–800 A to 400 A RTI (FA to 800 A)

NF Neutrals (100% Aluminum Standard)

(See Digest 178, Section 9)

- 200% neutral kit
- Copper 100% neutral kit
- Copper 200% neutral factory assembled

NF Optional Lugs

(See Digest 178, Section 9)

- AL mechanical lug kits
- AL compression lug kits
- CU mechanical lug kits
- CU compression lug kits

Ground Bars

- Isolated Ground—*PKGTAB* kits may be added to isolate ground bars

Table 16 - Ground Bar Kits

Catalog Number	Terminal		Approx. Overall Length		Distance Between Mounting Holes		
	Number of Terminal	Quantity Available for Each Size		in.	mm	in.	mm
		Material	I/II				
<i>PK12GTA</i>	12	AL	12/0	4.700	119	3.125	79
<i>PK12GTACU</i>	12	CU	12/0	4.700	119	3.125	79
<i>PK18GTA</i>	18	AL	18/0	6.560	167	3.125	79
<i>PK18GTACU</i>	18	CU	18/0	6.560	167	3.125	79
<i>PK23GTA</i>	24	AL	23/1	9.125	232	3.125	79
<i>PK23GTACU</i>	24	CU	23/1	9.125	232	3.125	79
<i>PK27GTA</i>	27	AL	24/1	9.125	232	3.125	79
<i>PK27GTACU</i>	27	CU	27/0	9.125	232	3.125	79

Table 17 - Wire Range

Size	Cu	Al
I	(1) #14 to #4 or (2) #14 or #12	(1) #12 to #4 or (2) #12 or #10
II	(1) #1 to 4/0	(1) #1 to 4/0

6", 12", 18", 24" Rail Extensions

(See *Digest 178, Section 9*)

- *NF6RDE*—6"
- *NF12RDE*—12"
- *NF18RDE*—18"
- *NF24RDE* – 24"

Table 18 - NF Compression Lug Kit Part Numbering

NF	AL	V	1
Ampacity: 1 = 125 A 2 = 250 A 4 = 400 A 6 = 600 A			
V= Compression lug kit M= Mechanical lug kit			
AL = aluminum; CU = copper			
Family: NQ, NF			

Factory Assembled Options and Interiors

Almost all RTI interiors are available factory assembled (with main, sub-feed, and/or branch circuit breakers, sub-feed or -through feed lugs, aluminum, copper, or 200% neutrals).

Some options are only available factory assembled (or as part of a custom OEM commercial reference):

- PowerPact L main circuit breaker (up to 600 A)
- Engraved name plates
- Lighting contactors
- Canadian service entrance barriers
- Boxes wider than 20" (26", 32")
- Power meters or circuit monitors

SurgeLogic SPD Protection

The SurgeLogic IMA series surge protective device is a modular parallel surge protective device (SPD). The IMA device is a multi-stage suppression circuit consisting of field-proven, fast-acting, 34 mm metal oxide varistors (MOVs).

- Available surge current ratings: 100 kA, 120 kA, 160 kA, 200 kA, 240 kA
- Ready to install SPD interiors (42 circuit, 3-phase, 4-wire) 250 A or 400 A:
 - 480Y/277 Vac—120 kA, 160 kA
 - 600Y/347 Vac—120 kA

Separated Distribution and Split Bus

250 A NF panelboards are available in separated distribution or split bus configurations, see *Separated Distribution, Split Bus, page 15*.

Factory Assembled Interiors (available to OEMs as custom Commercial References)

- 3P 4W, 1P 3W, 3P 3W (240 Vac)
- 100 A, 250 A, 400 A, 600 A, 800 A (MLO)
 - Aluminum or copper bus up to 400 A
 - Copper only 600 A, 800 A
- For more detailed NF main lug interiors and main circuit breaker interiors please review *catalog 1670CT0701*, and *Digest 178, Section 9*.
- Panelboards with PowerPact L main circuit breaker require an 8.75 in. deep box.
- 800 A main lug panelboards require an 8.75 in. deep enclosure.

Power Meters

NF and NQ Panelboards accept the same power meters for mains and branch circuits, see *Power Meters and Circuit Monitors (Mains and/or Branches), page 15*.

NF Enclosures and Trims (Covers)

NF and NQ Panelboards use the same boxes and trims, see *NQ/NF Enclosures and Trims (Covers)*, page 19.

NF OEM Special Offers

A wide variety of custom NF panelboard configurations are available only to authorized OEMs (original equipment manufacturers). The OEM becomes responsible for UL Listing when choosing these options.

- No deadfront option
- No neutral option
- No lugs option
- Short rails

Table 19 - NF OEM Interior Part Numbering

NFOM	4	30	L	2	C	T2
						CB = Continuous bus S, T2 = Short rail
						C = copper
						Mains rating (see <i>NF Interior Part Numbering</i> , page 22)
						M = Main circuit breaker L = Main lug
						Circuit breaker count: 12-84
						Blank = 1-phase 3 3 = 3-phase 3-wire 4 4 = 3-phase 4-wire
Family: NF OEM						

Figure 11 - NFOM430L2T2



Figure 12 - NFOM430L2T2 dimensions

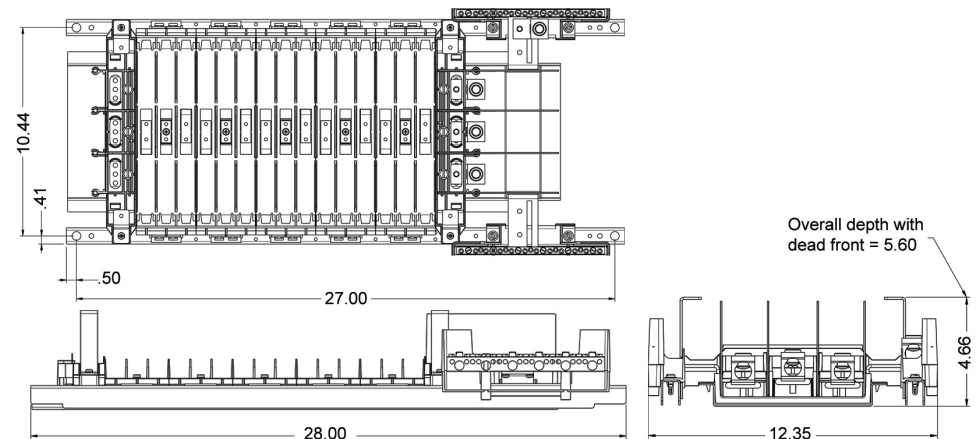


Table 20 - NF OEM Main Lug Interior Examples

Pole Spaces	Main Amps	Catalog Number	Main Lugs	Bus ²⁵	Rails Type	Dead-front	Rails Length ²⁶		Neutral Assembly
							in.	mm	
1P2W									
42	800	NFOM42L8C	PS ²⁷	CU	C	Yes	29	737	N/A
3P3W									
84	400	NFOM384L4CCB ₂₈	PS	CU	C	N/A	51	1295	N/A
42	800	NFOM442L8C	PS	CU	C	Yes	29	737	N/A
66	400	NFOM366L4CL	PS	CU	C	N/A	44.7	1135	N/A
84	400	NFOM384L4CL	PS	CU	C	N/A	53.8	1366	N/A
42	250	NFOM8342L2C ₂₉	300-6 MCM AL	CU	N/A	N/A	49.5 ³⁰		N/A
3P4W									
42	400	NFOM442L4CHD2	750MCM-1/0 AL	CU	C	N/A	31	788	CU
42	400	NFOM442L2T2	350MCM-6 AL	CU	C	N/A	34	864	AL
54	250	NFOM454L2CR ₃₁	350MCM-6 AL	CU	C	Yes	46	1168	AL
54	400	NFOM454L4CR51 ₃₁	750MCM-1/0 AL	CU	C	Yes	52	1321	AL
54	400	NF454L4CCLSR ₃₂	750MCM-1/0 AL	CU	C	Yes	46	1168	AL
84	400	NF484L4SCFTLAMZ ₃₃	750MCM-1/0 AL	CU	C	Yes	82	2083	AL

Table 21 - OEM NF Main Circuit Breaker Interiors

Pole Spaces	Main Amps	Catalog Number	Main Lugs	Buses	Rails Type	Deadfront	Rails Length		Neutral Assembly
							in.	mm	
3P4W									
42	250	NFOM442M250CR ₃₄	N/A	CU	C	Yes	46	1168	AL
54	250	NFOM454M125CR ₃₄	N/A	CU	C	Yes	52	1321	AL
54	250	NFOM454M250CR ₃₄	N/A	CU	C	Yes	52	1321	AL

Table 22 - OEM NF Main Circuit Breaker Kits

Catalog Number	Main Circuit Breaker Frame	Special Feature	Rails Extension Length	
			in.	mm
N150MHSK	PowerPact H	Attaches to short rail main lug interior	6	152
N250MJSK	PowerPact J	Attaches to short rail main lug interior	6	153

25. Bus: AL = aluminum; CU = copper.
 26. Mounting hole spacing is 1" (25 mm) shorter than rails length.
 27. PS: preserved space.
 28. Continuous bus.
 29. NFOM8: column width interior.
 30. Length of mounting pan, no rails supplied.
 31. Accepts H- or J-frame M/B motor operator.
 32. SR Short rails.
 33. Includes AL mechanical feed through lugs, fits in 92" enclosure.
 34. Includes connectors and mounting pan for J-frame M/B with motor operator.

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