

# NF/NQ Panelboards OEM

Catalog  
1600CT1901  
**2019**  
Class 1600



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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 Tables 9.5–9.14 and Tables 9.38–9.45 of Digest 178.

**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.

**NF/NQ Panelboards OEM**  
**NQ Interiors**

**NQ Interiors**

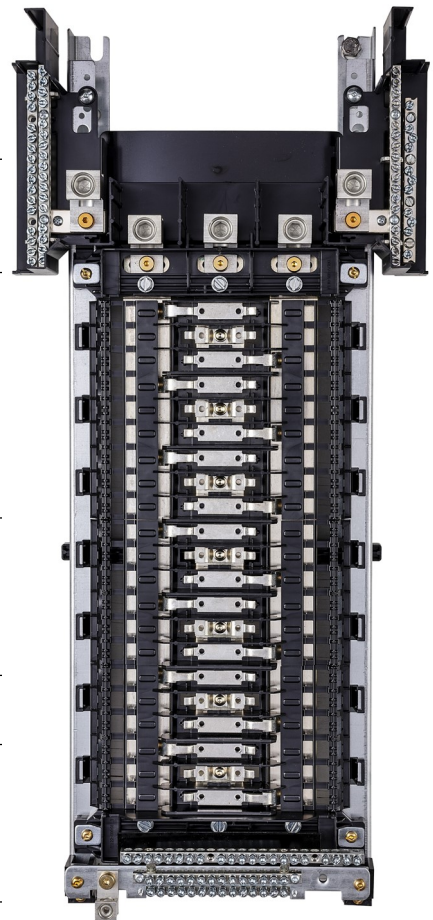
**Main Lug Interiors (MLO)—cULus Listed up to 240 Vac, or 48 Vdc**

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

- Order a main lug interior from Digest 178 Section 9, Tables 9.5, or 9.7.
- See Table 12 for OEM main lug only interior special offers (referencing the part number key below).

**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**

# NF/NQ Panelboards OEM

## NQ Interiors

### 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:

- Order a main lug interior, main circuit breaker adapter kit, and a circuit breaker
- Main circuit breaker kits and interiors up to 400 A are available from stock (refer to Digest 178, Section 9, Tables 9.6 or 9.8).
- See Table 13 for OEM main circuit breaker interior special offers

**Table 2: NQ Main Circuit Breaker Kit Part Numbering**

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 MLO section on page 3)
			Main circuit breaker
Family: NQ, NF			



**Figure 2: NQMB2HJ**

- A main circuit breaker may be factory installed onto nearly all NQ interiors

**Table 3: NQ Panelboard Main/Sub-Feed Circuit Breakers**

Installation Methods	Circuit Breaker Frame	Ampacity	Digest 178 Tables
Branch mounted on Interior	QOB/QOB-VH	15 to 150 A	9-11, 9-12
Vertical Main <sup>1, 2</sup> , Sub-feed <sup>1, 2</sup>	HD, HG, HJ, HL, HR	15 to 150 A	7.55, 7.57, 7.58
Vertical Main <sup>1, 2</sup> , Sub-feed <sup>1, 2</sup>	JD, JG, JJ, JL, JR	150 to 225 A	7.56, 7.57, 7.58
Vertical Main <sup>2</sup> , Sub-feed <sup>2</sup>	QB, QD, QG, QJ	70 to 225 A	7.59
Vertical Main <sup>3, 4</sup>	LA/LH	125 to 400 A	7.63 <sup>4</sup>
Vertical Main <sup>1, 2, 5</sup>	LD, LG, LJ, LL	125 to 600 A	7.65

<sup>1</sup> PowerPact H, J, L are available with LI or LSI electronic trip functions

<sup>2</sup> 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)

<sup>3</sup> Interrupting ratings for LA/LH circuit breakers (at 240 Vac):

LA = 35 kA; LH = 65 kA

<sup>4</sup> Add a MB suffix to part numbers in this table to obtain the short handle needed to fit in standard depth MH enclosures

<sup>5</sup> PowerPact L circuit breakers are available, factory installed only

For more information about 100 A, 225 A, 400 A, and 600 A main circuit breaker NQ panelboards please review Catalog 1640CT0801, Digest 178, Table 9.6, PowerPact H, J, L Catalog (0611CT1001), PowerPact Q-Frame Catalog (0734CT0201), or LA, LH, Q4 Catalog (0601CT9101).

### **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

# NF/NQ Panelboards OEM

## NQ Interiors

**Table 4: NQ Column Width Interior Part Numbering**

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 <sup>1</sup> , 10 <sup>1</sup> , 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**

<sup>1</sup> Available only as a split bus special interior

## NF/NQ Panelboards OEM Branch Circuit Breakers (Bolt-On or Plug-On)

### 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, Table 9.7 and 9.8 for more information.

### 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, Table 9.10–9.12 and Table 9.14 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 5: QOB NQ Branch Circuit Breaker Part Numbering**

QO	B	2	20	VH
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     Blank = Standard 10 kA AIR<sup>1</sup>                      VH = 22 kA AIR                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     Ampere Rating                      (10 A–150 A)                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     Number of poles                      (1, 2, or 3)                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     B = Bolt-on                      Blank = Plug-on                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     Circuit breaker frame                      QO = Standard                      QH = 65 kA AIR                 </div>				

<sup>1</sup> 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, Tables 7.45–7.46, 7.52–7.61 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, Tables 9.39–9.41)**

- 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, Table 9.39–9.40)**

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

**Feed-through Lugs (See Digest 178, Table 9.39–9.41)**

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

**Table 6: NQ Sub-feed Lugs, Feed-through Lugs, and Sub-feed Circuit Breaker Kits Part Numbering**

NQ	SF	L	4
			<p>Circuit breaker frame:                      Blank = Lugs only                      Q = Q-frame main circuit breaker                      HJ = H/J-frame main circuit breaker</p> <p>Mains rating = 1, 2, 4, or 6                      (see Table 1)</p> <p>L = Lugs                      B = Circuit breaker</p> <p>SF = Sub-feed                      FT = Feed-through</p> <p>Family: NQ, NF</p>



**Figure 4: NQSFL4**



# NF/NQ Panelboards OEM

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

### 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, Table 9.38)

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

#### NQ Optional Lugs (See Digest 178, Table 9.42)

**Table 7: NQ Lug Kit Part Numbering**

NQ	AL	M	1
Mains rating = 1, 2, 4, or 6 (see Table 1)			
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, Table 9.9, 9.31, and 9.43)

- Isolated Ground—PKG TAB kits may be added to the ground bar kits listed in Table 8 below

**Table 8: Ground Bar Kits**

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

**Table 9: 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

## NF/NQ Panelboards OEM

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

#### Rail Extensions (See Digest 178, Table 9.43)

- 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, Table 9.44 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.

## NF/NQ Panelboards OEM Factory Assembled Options & Interiors

### 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 10: 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	Deadfront	Rails Length (in./mm)	Neutral Assembly
NQ4301818SM200C	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

**Table 11: NQ OEM Main Lug Interior Part Numbering**

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 Table 1)	
		L = Lug only B = Circuit breaker			
		Circuit breaker counts			
Family: NQ, OEM					

# NF/NQ Panelboards OEM

## NQ OEM Special Offers

Table 12: NQ OEM Main Lug Interior Examples \*

Pole Spaces	Amps	Catalog Number	Main Lugs	Bus <sup>1</sup>	Rails Type <sup>2</sup>	Dead Front	Rails Length <sup>3</sup> [in./mm]	Neutral Assembly
1P2W								
18	100	NQM18L1C	N/A	CU	Z	N/A	12.88/327	N/A
24	100	NQM24L1C	Yes	CU	C	N/A	13.65/347	N/A
36	100	NQM36L1C	Yes	CU	C	N/A	20.40/518	N/A
24	225	NQM24L2C	Yes	CU	C	N/A	13.99/355	N/A
30	225	NQM30L2C	N/A	CU	Z	N/A	15.88/403	N/A
36	225	NQM36L2C	Yes	CU	C	N/A	20.74/527	N/A
42	400	NQM42L4CCF <sup>4</sup>	Yes	CU	Z	N/A	24.50/622	N/A
54	600	NQM54L6C	Yes	CU	Z	Yes	22.55/573	N/A
1P3W								
42	400	NQM42L4CFT <sup>5</sup>	Yes	CU	Z	Yes	33.88/861	AL <sup>6</sup>
3P3W								
30	100	NQM430L1C	N/A	CU	Z	N/A	15.88/403	N/A
42	225	NQM342L2CGS <sup>7</sup>	Yes	CU	C	N/A	26.03/661	N/A
54	225	NQM354L2CS	PS <sup>8</sup>	CU	C	Yes	26.25/667	N/A
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 <sup>6</sup>
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 <sup>9</sup>	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 <sup>10</sup>	Yes	CU	Z	Yes	33.64/854	AL

\* CAD models available upon request for most OEM interiors

<sup>1</sup> Bus: AL = aluminum; CU = copper

<sup>2</sup> Rail type: C = Figure 1; Z = Figure 2

<sup>3</sup> Mounting hole spacing is 1" (25 mm) shorter than rails length

<sup>4</sup> Center feed bus

<sup>5</sup> Comes with 225 A feed-through lug

<sup>6</sup> NQOB neutral: Figure 3; AL neutral: Figure 4

<sup>7</sup> Isolated ground, short rails

<sup>8</sup> PS: preserved space for lugs

<sup>9</sup> 30/18 split bus interior

<sup>10</sup> Density Rated (1000 A/in<sup>2</sup> bus)

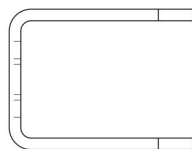


Figure 1: C-shaped rail



Figure 2: Z-shaped rail

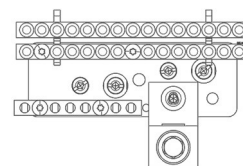


Figure 3: NQOB Neutral



Figure 4: AL Neutral

**Table 13: NQ Main Breaker OEM Interior Examples**

Pole Spaces	Amps	Catalog Number	Main Circuit Breaker	Bus	Rails Type	Dead Front	Rails Length [in./mm]	Neutral Assembly
3P3W								
24	225	NQM324M2CS	Back-fed QOB	CU	C	N/A	14.00/356	N/A
30	225	NQM330M2CS	Back-fed QOB	CU	C	N/A	16.25/413	N/A
42	225	NQM342M2CS	QBL32225	CU	C	N/A	33.93/862	N/A
3P4W								
42	225	NQM442M2CSQB <sup>1</sup>	QDL32225	CU	C	N/A	33.93/862	AL
42	225	NQM442M2SQD <sup>2</sup>	QDL32225	CU	C	N/A	33.93/862	AL

<sup>1</sup> QB suffix: QB main circuit breaker installed onto interior

<sup>2</sup> QD suffix: QD main circuit breaker installed onto interior

**NF/NQ Panelboards OEM**  
**NQ/NF Enclosures and Trims (Covers)**

**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, Table 21: Enclosure Types.

**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 14: NEMA 1 NQ / NF Enclosure Part Numbering**

MH	26	BE
		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)
		Height (in.)
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 15: 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: 10px;">                     WMD = Welded metal directory holder                      Blank = Plastic directory card pouch                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     HR = Hinged (right) front                      Blank = Mono-flat front                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     "F" = flush mount                      "S" = surface mount                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     V = Vented trim                      Blank = standard                 </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                     Nominal Height (In.)                      Surface / Flush trim fronts are 0.12" / 1.52" taller than nominal                 </div> <p>NC: NEMA cover</p>					

**NF/NQ Panelboards OEM**  
**NF Panelboard Features and Benefits**

**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, Table 9.46)**

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, Table 9.47 for more information on NF main circuit breaker panelboards.

**Table 16: 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 Tables 9.86–9.87 of Digest 178) 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-pole EDB, EGB, or EJB branch circuit breakers.

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

**Table 17: NF Column Width Interior Part Numbering**

NF	8	4	42	M	2	J	D	C
								C = copper
								Main circuit breaker interruption rating (see Digest 178, Table 7.46)
								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 6: NF8442M2J2DC**

**NF/NQ Panelboards OEM  
Branch Circuit Breakers**

**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 (Digest 178, Table 9.48)**

- 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 18: E-frame NF Branch Circuit Breaker Part Numbering**

<b>E</b>	<b>D</b>	<b>B</b>	<b>1</b>	<b>4</b>	<b>015</b>
					Ampere rating
					Voltage rating: 4 = 480Y/277 Vac 6 <sup>1</sup> = 600Y/347 Vac
					Number of poles: 1, 2, or 3
					Bolt-on construction
					Breaking capacity code: D, G, or J
Frame type					

<sup>1</sup> 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, Digest 178, Table 9.47)**

- 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, Digest 178, Table 9.77)**

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

**Table 19: 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/NQ Panelboards OEM

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

#### 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, Table 9.77)

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

##### Feed-through Lugs (See Digest 178, Table 9.77)

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

##### NF Neutrals (100% Aluminum Standard) (See Digest 178, Table 9.76)

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

##### NF Optional Lugs (See Digest 178, Table 9.80)

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

#### Ground Bars

- Isolated Ground—PKG TAB kits may be added to isolate ground bars

**Table 20: Ground Bar Kits**

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

**Table 21: 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

**NF/NQ Panelboards OEM**  
**NF Lug, Neutrals, Ground Bar, and Rail Extensions Kits**

**6", 12", 18", 24" Rail Extensions (See Digest 178, Table 9.81)**

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

**Table 22: NF Compression Lug Kit Part Numbering**

NF	AL	V	1
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Ampacity:</p> <p>1 = 125 A</p> <p>2 = 250 A</p> <p>4 = 400 A</p> <p>6 = 600 A</p> </div> <p>V= Compression lug kit</p> <p>M= Mechanical lug kit</p> <p>AL = aluminum; CU = copper</p> <p>Family: NQ, NF</p>			

## NF/NQ Panelboards OEM

### Factory Assembled Options and Interiors

#### 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 and Split Bus section above.

#### 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, Table 9.46–9.47.
- 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) section above.

#### NF Enclosures and Trims (Covers)

NF and NQ Panelboards use the same boxes and trims, see NQ/NF Enclosures and Trims (Covers) section above.



### 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 23: NF OEM Interior Part Numbering**

NFOM	4	30	L	2	C	T2
						CB = Continuous bus S, T2 = Short rail
						C = copper
						Mains rating (see Table 16)
						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 7: NFOM430L2T2

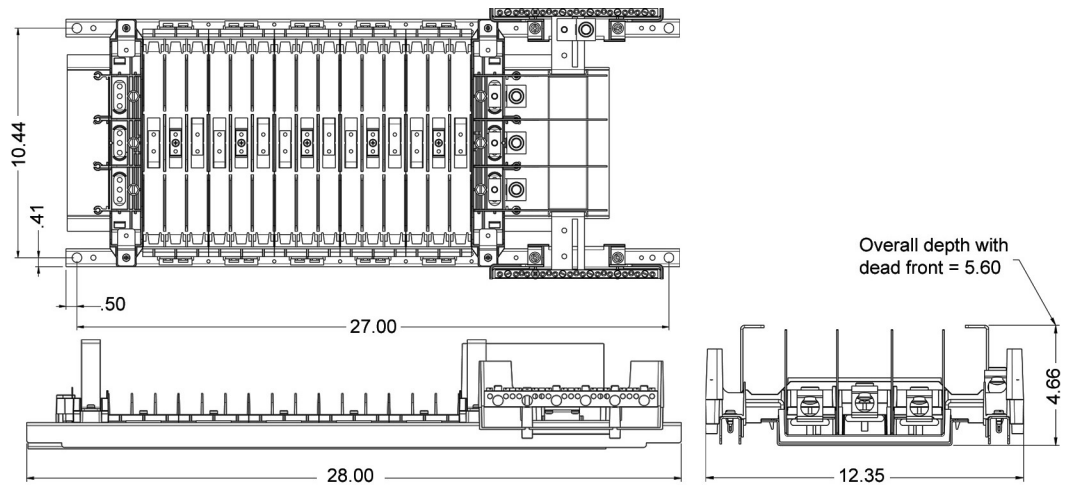


Figure 8: NFOM430L2T2 dimensions

**Table 24: NF OEM Main Lug Interior Examples**

Pole Spaces	Main Amps	Catalog Number	Main Lugs	Bus <sup>1</sup>	Rails Type	Deadfront	Rails Length <sup>2</sup> [in./mm]	Neutral Assembly
1P2W								
42	800	NFOM42L8C	PS <sup>3</sup>	CU	C	Yes	29/737	N/A
3P3W								
84	400	NFOM384L4CCB <sup>4</sup>	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 <sup>5</sup>	300-6 MCM AL	CU	N/A	N/A	49.5 <sup>6</sup>	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 <sup>7</sup>	350MCM-6 AL	CU	C	Yes	46/1168	AL
54	400	NFOM454L4CR51 <sup>7</sup>	750MCM-1/0 AL	CU	C	Yes	52/1321	AL
54	400	NF454L4CCLSR <sup>8</sup>	750MCM-1/0 AL	CU	C	Yes	46/1168	AL
84	400	NF484L4CFTLAMZ <sup>9</sup>	750MCM-1/0 AL	CU	C	Yes	82/2083	AL

- <sup>1</sup> Bus: AL = aluminum; CU = copper
- <sup>2</sup> Mounting hole spacing is 1" (25 mm) shorter than rails length
- <sup>3</sup> PS: preserved space
- <sup>4</sup> Continuous bus
- <sup>5</sup> NFOM8: column width interior
- <sup>6</sup> Length of mounting pan, no rails supplied
- <sup>7</sup> Accepts H- or J-frame M/B motor operator
- <sup>8</sup> SR Short rails
- <sup>9</sup> Includes AL mechanical feed through lugs, fits in 92" enclosure

**Table 25: OEM NF Main Circuit Breaker Interiors**

Pole Spaces	Main Amps	Catalog Number	Main Lugs	Buses	Rails Type	Deadfront	Rails Length [in./mm]	Neutral Assembly
3P4W								
42	250	NFOM442M250CR <sup>1</sup>	N/A	CU	C	Yes	46/1168	AL
54	250	NFOM454M125CR <sup>1</sup>	N/A	CU	C	Yes	52/1321	AL
54	250	NFOM454M250CR <sup>1</sup>	N/A	CU	C	Yes	52/1321	AL

- <sup>1</sup> Includes connectors and mounting pan for J-frame M/B with motor operator

**Table 26: 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