NQ, NF, I-Line® and QMB Panelboard Products

Reliable, Versatile and Convenient Solutions
Developed with customer input, Square D panelboards are built to last, featuring design innovations that make these products easy to install. Supported by the largest distribution, sales and service organization in the industry, Square D panelboards are readily available to meet the needs of contractors, consultants and end-users.

### Application

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<tr>
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<th>Industrial</th>
<th>O.E.M.</th>
<th>Utility</th>
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### Product Table

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<th>NF</th>
<th>Column-Width</th>
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<td>AC Voltage (max)</td>
<td>240</td>
<td>600Y/347</td>
<td>240</td>
<td>600Y/347</td>
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<td>DC Voltage (max)</td>
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<td>Main Device Amps (max)</td>
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<td>225</td>
<td>1200</td>
<td>800</td>
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<td>Main Lugs Amps (max)</td>
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<td>800</td>
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<td>1200</td>
<td>1600</td>
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<td>SCCR Amps x 1000 (max)</td>
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<td>Plug-On/Bolt-On Branch</td>
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<td>Bolt</td>
<td>Bolt</td>
<td>Plug</td>
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<td>Top or Bottom Feed</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>UL and cUL Service Equipment</td>
<td>Yes</td>
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<td>Enclosure Types</td>
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<td>1, 3R, 4, 4X, 5, 12</td>
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</table>
The NF and NQ families of lighting panelboards have been redesigned to meet the evolving needs of our customers. Easier to install, improved availability and greater installation flexibility all combine to make these panels state of the art in lighting panelboards.

**NF and NQ Panelboard Improvements**
- 66, 72 and 84 circuit interiors that fit in a single enclosure that will be allowed by the 2008 National Electric Code® (NEC®)
- 50% fewer enclosures to reduce complexity and installation errors
- Common trims for NF and NQ to simplify inventory
- Simplified and more pictorial installation instructions to save installation time
- Broad range of new, field-installable, ready-to-install kits available from local distributor stock:
  - NQ: Thru-feed and sub-feed lugs
  - NQ: Sub-feed circuit breakers
  - NF and NQ: Transient Voltage Surge Suppression (TVSS) interiors
  - NF and NQ: 200% neutrals
  - NF and NQ: Copper neutrals and ground
- NF and NQ: 6”, 12” and 18” rail and dead front extension
- Plastic filler plates in place of “twist-outs” to reduce branch circuit breaker installation time

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**Available Branch Circuit Count in a Single Enclosure**

<table>
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<tr>
<th></th>
<th>18</th>
<th>30</th>
<th>42</th>
<th>54</th>
<th>*66</th>
<th>*72</th>
<th>*84</th>
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<tr>
<td>NQ</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>NF</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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*Available in U.S. locations that have adopted the 2008 National Electrical Code*
Developed with electrical contractor input, the NQ family of lighting and appliance panelboards sets new standards for ease of installation and durability. Plus, new design innovations increase the availability of these panelboards by offering complete ready to install products.

Features
- 240Vac, 48Vdc maximum
- 600A maximum main circuit breakers or main lugs
- 150A maximum branch circuit breakers
- 10,000A through 200,000A SCCR
- Both fully rated and series rated systems are available
- Interiors are field convertible to top or bottom feed
- Interiors are available in plated copper or aluminum bus
- Interiors accept both bolt-on and plug-on branch circuit breakers
- Complete line of UL/cUL listed interiors with 200% rated neutrals for non-linear loads
- Suitable for use as service entrance equipment
- 20" wide trims and boxes common for NQ and NF panelboards
- Mono-flat® or hinged trims

“Ready-to-Install” Panels and Kits Available from Stock
- 100A – 600A MLO 1P3W and 3P4W Interiors
- NEMA 1 and 3R/12 enclosures
- 100A – 400A main circuit breaker kits
- TVSS interiors
  - 120,000A or 160,000A surge current ratings
- 100A – 400A sub-feed and thru-feed lugs
- Sub-feed circuit breaker kits
  - 1 – 225A sub-feed circuit breaker per 225A panelboard
  - 2 – 225A sub-feed circuit breakers per 400A panelboard
- 200% neutral kits up to 400A
- Copper neutrals and equipment ground bars

Factory Options
- 1P3W or 3P4W – 600A main lugs and main breaker panelboards
- Sub-feed and thru-feed lugs
- Sub-feed circuit breakers
- Optional 200% rated neutrals up to 400A
- Split bus bars
- TVSS
  - 100,000A – 240,000A surge current rating
  - All voltage systems
- Lighting contactors
- Customer equipment space
The NF panelboard offers superior performance and application flexibility for commercial and industrial electrical systems up to 600Y/347 Vac. This versatile lighting and power distribution panelboard features a wide selection of circuit breakers, accessories and ready-to-install kits, as well as 200% rated neutrals for non-linear loads.

Features
- 600Y/347Vac maximum
- 600A maximum main circuit breaker, 800A maximum main lugs
- 14,000A through 200,000A SCCR
- Sub-feed circuit breakers are vertically mounted
- 125A maximum branch mounted circuit breakers (110A for 600Y/347V)
- Interiors are field convertible to top or bottom feed
- Bolt-on branch circuit breakers attach with captive screws
- Visi-Trip® indication on branch circuit breakers
- Suitable for use as service equipment
- Complete line of UL/cUL listed interiors with 200% rated neutrals for non-linear loads
- 20" wide trims and boxes common for NF and NQ panelboards
- Mono-flat or hinged trims
- Vertically mounted main breakers available, all amperages
- Branch circuit filler plates provide fast and easy installation

Factory Options
- 1P3W or 3P4W – 800A main lugs and 600A main breaker panelboards
- Sub-feed and thru-feed lugs
- Sub-feed circuit breakers
- Optional 200% rated neutrals through 600A
- Split bus bars
- TVSS
  - 100,000A – 240,000A surge current rating
  - All voltage systems
- Lighting contactors
- Customer equipment space

“Ready-to-Install” Panels and Kits Available from Stock
- 100A – 600A MLO 3P4W interiors
- Type 1 and 3R/12 enclosures
- 100A – 400A main circuit breaker kits
- 120,000A or 160,000A surge current ratings
- 100A – 400A sub-feed and thru-feed lugs
- Sub-feed circuit breaker kits
  - 1 – 250A sub-feed circuit breaker per 250A panelboard
  - 2 – 250A sub-feed circuit breakers per 400A or 600A panelboard
- 200% neutral kits up to 400A
- Copper neutrals and equipment ground bars
Our I-Line® power distribution panel is the most versatile on the market. It’s used to feed NQ and NF lighting and appliance panelboards. I-Line panelboards can also feed large motors and HVAC systems.

Features
- 600Vac, 250Vdc maximum
- 1200A main circuit breaker or main lugs
- 1200A maximum branch circuit breaker
- 200,000A SCCR when using current limiting main or branch circuit breakers
- Fully rated and series rated systems available
- Interiors available in plated copper or aluminum bus
- Suitable for use as service entrance equipment
- Complete line of UL/cUL listed interiors with 200% rated neutrals for non-linear loads
- Sub-feed or through-feed lugs through 1200A
- Interiors accept plug-on thermal magnetic or solid state branch circuit breakers
- Interior, front and most circuit breakers only require a screwdriver for installation
- Branch circuit breaker mounting not restricted by location on bus stack
- Capable of mounting 15A branch circuit breaker across from or next to a 1200A branch circuit breaker
- Branch circuit breakers have no loose mounting hardware and install in as little as 20 seconds with only a screwdriver
- Branch circuit breakers are simple to rearrange in the field, limited restrictions on mounting locations
- 100,000A – 240,000A field installable plug-in TVSS units
- Available with or without door, or with hinged trim
- Broad range of field installable kits available from stock

Factory Options
- Split bus bar
- Sub-feed/thru-feed lugs through 1200A
- Optional 200% rated neutrals through 1200A
- Thermal-mag or solid state circuit breakers
- Plated copper or aluminum bus
- Optional customer metering with PowerLogic® power meters or circuit monitors
- Plug-in TVSS modules
- 100,000A – 240,000A plug-in TVSS
- Door in door or hinged trim
- Six circuit QO 240V plug-in distribution module
- Ground fault protection available on main or branch circuit breakers
- Current density-rated panelboard bus
QMB Power Panelboards

When specifications or electrical codes call for a fusible panelboard, the QMB family offers unbeatable performance and time-saving installation features. The QMB power distribution panelboard feeds motors, transformers and lighting systems.

Features
- 600Vac, 250Vdc maximum
- Maximum main lugs 1600A
- Maximum main switch 800A
- Fusible switches are rated for 200K RMS symmetrical amperes with appropriate Class J, L, R or T fuses installed
- Main lug or main switch interiors suitable for top or bottom feed
- Main lugs and solid neutral mounted in same compartment
- Front and branch devices simply require a screwdriver for installation
- Branch devices include 30A – 800A fusible switches, 15A – 400A circuit breakers
- Time savings during installation because switches plug on to the bus
- Visible blades provided on 30A – 800A switches provide visual verification of blade status
- Fuse pullers provided on 30A – 100A switches
- Field-installable accessories include Class R fuse kits, Versa-Crimp® lugs and electrical interlocks
- 100,000A – 200,000A TVSS surge current ratings

Fuse Selection Guide for Main and Branch Switches

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<tr>
<th>UL Class</th>
<th>Voltage</th>
<th>Ampere Ratings</th>
<th>AIC</th>
<th>Fuse Type</th>
<th>Loads</th>
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<td>H</td>
<td>600V</td>
<td>1 – 600A</td>
<td>10,000A</td>
<td>One-time</td>
<td>Miscellaneous loads</td>
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<td>J</td>
<td>600V</td>
<td>1 – 600A</td>
<td>200,000A</td>
<td>Time-delay</td>
<td>Motors, welders, etc.</td>
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<td>J</td>
<td>600V</td>
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<td>Fast-acting</td>
<td>Non-motor loads</td>
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<td>200,000A</td>
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### Features Panelboard Types Benefits

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<th>Panelboard Types</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Complete ready-to-install product offering</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Products available from local distributor stock</td>
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<tr>
<td>Main circuit breaker ready-to-install kits</td>
<td>NQ Yes, NF Yes</td>
<td>Creates flexible inventory</td>
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<td>Vertically mounted main breakers available</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes</td>
<td>Allows quick main breaker identification as a result of vertical handle motion</td>
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<tr>
<td>Field installable cULus listed 200% neutral for non-linear loads</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes</td>
<td>Field installable 200% neutral now available</td>
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<td>Plug-on and bolt-on branches</td>
<td>Both Yes, Bolt-on Yes, Bolt-on Yes, Plug-on No</td>
<td>Allows flexibility in breaker selection which eliminates duplicate stock</td>
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<td>Branch breakers equipped with captive hardware</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Saves time, keeps screws from getting lost</td>
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<td>Ready-to-install hinged trim option</td>
<td>NQ Yes, NF Yes</td>
<td>Provides economical alternative to door-in-door construction</td>
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<td>Simple enclosure mounting</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Reduces installation time and eliminates hardware required</td>
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<td>Field convertible from bottom to top feed</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Allows flexibility for installation</td>
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<td>Plated bus as standard</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Provides for superior bus to breaker electrical connection</td>
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<td>Galvanized box</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Provides superior corrosion resistance</td>
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<tr>
<td>Direct connection between branch device and bus</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Eliminates additional connections, saving installation time</td>
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<tr>
<td>Push-to-trip feature</td>
<td>NQ Yes, NF Yes</td>
<td>Provides convenient means to periodically test the breaker</td>
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<tr>
<td>Visi-Trip® indication</td>
<td>NQ Yes, NF Yes, Column-Width Yes, I-Line Yes, QMB Yes</td>
<td>Provides positive indication of a tripped breaker</td>
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<tr>
<td>Split neutral</td>
<td>NQ Yes, NF Yes</td>
<td>Allows uniform branch wire termination, reducing waste</td>
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<tr>
<td>Dual cover interlocks</td>
<td>NQ Yes, NF Yes</td>
<td>Prevents opening of cover when switch is ON or turning switch to ON while cover is open. Interlocks may be manually overridden</td>
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<tr>
<td>True blade and jaw construction</td>
<td>NQ Yes, NF Yes</td>
<td>Provides a firm electrical connection</td>
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<td>Dual colored operating handles</td>
<td>NQ Yes, NF Yes</td>
<td>Allows for quick visual inspection of switch handle for ON or OFF indication (red and black handle)</td>
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### Federal Specifications Descriptions

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<th>Descriptions</th>
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<td>W-C-865C</td>
<td>Fusible Switches</td>
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<tr>
<td>W-P-115B Type I Class I</td>
<td>Circuit Breaker Panelboards</td>
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<tr>
<td>W-P-115B Type II Class I</td>
<td>Fusible Switch Panelboards</td>
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### Codes Descriptions

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<tr>
<td>NEC Article 384</td>
<td>Panelboards</td>
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<tr>
<td>NFPA 70</td>
<td>National Electrical Code (NEC)</td>
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<td>2003 IBC, NFPA 5000, ASCE/SE17</td>
<td>Seismic Qualification</td>
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### Standards Descriptions

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<td>Enclosures for Electrical Equipment</td>
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<td>UL 67</td>
<td>Panelboards</td>
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<td>UL 98</td>
<td>Enclosed and Deadfront Switches</td>
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<td>UL 489</td>
<td>Molded Case Circuit Breakers</td>
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<tr>
<td>NEMA AB 1</td>
<td>Molded Case Circuit Breakers and Molded Case Switches</td>
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<td>NEMA KS 1</td>
<td>Enclosed Switches</td>
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<td>NEMA PB 1</td>
<td>Panelboards</td>
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<td>NEMA 250</td>
<td>Enclosures for Electrical Equipment</td>
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<td>C22.2 No.5</td>
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<td>C22.2 No.29</td>
<td>Panelboards and Enclosed Panelboards</td>
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<tr>
<td>C22.2 No.94</td>
<td>Special Purpose Enclosures</td>
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</table>

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