January 27, 2022

To Whom It May Concern,

The following details the rating of the bus by amperage for NQ and NF Panelboards.

NQ

There are only two bus sizes for NQ: **225A** and **600A**. The **lugs** or the main breaker control the system rating in addition to bus size.

100A: **225A** bus with 125A rated lugs
225A: **225A** bus with 250A rated lugs
400A: **600A** bus with 600A rated lugs
600A: **600A** bus with 600A rated lugs

One optional configuration of note is the use of a 250A J-frame Main Circuit Breaker on a 225A NQ Panelboard. A 225A NQ panelboard is permitted to be used on the subsequent sections of a NQ Main Circuit Breaker panel with a Standard 250A J-frame main breaker.

The following label is applied to a Main Lug panel that is fed by a Main Circuit Breaker panel in a Multi-section panelboard in the factory.

This NQ panelboard is rated 250 A only when protected by a 250 A integral J-frame main circuit breaker 80% rated (200 A maximum actual amperage) from this multi section panel. 80043-815-01	El valor nominal de este tablero de alumbrado NQ es de 250 A sólo cuando está protegido por un interruptor automático principal marco J integral de 250 A con capacidad nominal al 80% (intensidad de corriente real de 200 A como máximo) de este tablero de múltiples secciones.	L'intensité nominale de ce panneau de distribution NQ est de 250 A seulement lorsqu'il est protégé par un disjoncteur principal intégré à châssis J de 250 A d'une intensité nominale de 80 % (intensité de courant réelle de 200 A maximum) de ce panneau à sections multiples.

It has been listed and approved by UL because the Standard breaker is rated for an 80% continuous load, not a 100% continuous load.

.80 x 250 = 200A

Standard rated circuit breakers can be used with normal derating without additional equipment testing. 100% rated circuit breakers can be used if the equipment is tested and UL Listed for 100% ratings. A 225A NQ panelboard with a 250A main breaker is not 100% rated, and Schneider Electric does not offer a 100% J-frame main breaker.

Square D NQ Panelboard 225A bus is rated for 225A continuous load. A 250A Square D J-frame breaker is rated for 200A continuous load. The breaker is the limiting factor as the bus is designed for a higher continuous load than the breaker.

This application is addressed by a combination of three factors: UL 489 Main Circuit Breaker certification, NEC requirements, and UL 67 Panelboard certification. Please see Schneider Electric document **0600DB0101 "Standard and 100% Rated Circuit Breakers"** for further information on the
breakers related to Standard (80%) and 100%. This document addresses the UL 489 and NEC aspects of this application.

Certification of equipment with UL 67 is about worst case loads in the applications. Main Lug 225A is a worse case than 250A "Standard" (80% rated) Main Circuit Breaker. In a Main Lug 225A interior, it is expected to always carry a full load, and utilize cables sized to 225A (tested with 4/0 wire) in a smaller size enclosure than a Main Circuit Breaker configuration.

The 250A Main Circuit Breaker offer in Panelboards only uses "Standard" (as the label states: "Maximum continuous load on any circuit breaker must not exceed 80% of the circuit breaker rating."). In a Main Circuit Breaker "Standard" test, the load would be 200A, the size of the wire larger than Main lug (250 Kcmil) and the enclosure larger.

If the application requires a true 250A continuous load, please select a 400A NQ Panelboard for that application.

NF

NF is different. NF uses laminations of bus as the amperage increases. The first layer is rated for 250A. Laminations are added for each step up, 400A is two layers, 600A is three layers, and 800A is 4 layers.

125A: 250A bus with 125A rated lugs
250A: 250A bus with 250A rated lugs
400A: 400A bus with 400A rated lugs
600A: 600A bus with 600A rated lugs
800A: 800A bus with 800A rated lugs

One exception to these rules is **current density rated bus**. For example, in order to provide current density rated bus for a NQ 225A panelboard, we provide 600A rated bus on a 225A platform.

Schneider Electric Square D brand panelboards have been fully tested to meet the requirements of UL67, Standard for Safety, Panelboards, and the National Electric Code (NEC), or NFPA 70 and the Canadian Electrical Code (CEC). They are 3rd party certified by Underwriters Laboratories per UL file E33139. Therefore, Schneider Electric must adhere to the specifications dictated therein.

Schneider Electric certifies that Square D panelboard products are designed, manufactured, and tested to comply with the following standards:

UL 67 Standard for Panelboards
UL 50 Standard for Enclosures for Electrical Equipment
CSA C22.2, No. 29-15 Panelboards and Enclosed Panelboards
CSA C22.2, No. 94 Special Purpose Enclosures
NEMA PB 1 Panelboards
NFPA 70 National Electrical Code® (NEC®)
Federal Specification W-P-115C Type I Class 1 Circuit Breaker Panelboards
ASCE, IBC, CBC, NBCC Seismic Qualification, and OSHPD Special Seismic Certification Pre-approval: OSP-0016-10
ABS Type Certified
DNV GL Type Certified for I-Line Panelboards

Sincerely,

Rich Langley

Rich Langley
Product Engineering Manager