

***B**USSWORKS*



**cULus PANELBOARD**  
**PRODUCT SPECIFICATION**

# cULus 67 Panelboard Specification

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# JANUS



## Overview

**JANUS** is a patented cULus listed panelboard with an architecture compatible with all Molded Case and Miniature Circuit breakers on the market. The system is completely touch safe and designed to insulate electrical components and isolate electrical arcs from service personnel.

### Mechanical Characteristics

cULus Certification	E472864 UL67 and CSA22.2 E494273 UL508 and CSA22.2
IEC Certification	IEC60529 IP20
US Patent Number	9,197,039 and 9,293,897
Touchsafe Design	Personnel have no exposure to energized Components during servicing or operating any portion of the system.

### Electrical Characteristics

System Ampacity	150A and 225A
Branch Circuit Ampacity	32A, 63A, 100A
Voltage Rating	120, 240, 277, 480, 575, 600VAC & 24VDC
Voltage Type	Delta or Wye / 1ph or 3ph / 2,3, or 4 wire
Withstand	10kA (Higher ratings available upon request)
Neutral	100% or 200% / Linear or Non-linear Loads

### Configurations

Enclosure	UL50 Type 1
Interior Only	Available as Single Unit
Main Incoming	Main Lug or Main Breaker
Single Cable	#4-4/0 Compression Lug
Single Cable	#4-4/0 Crimp Lug
Parallel Cables	#8-1/0 Compression Lug
Parallel Cables	#8-1/0 Crimp Lug
Branch Configuration	Single or Double Column
Circuits	12, 24, 36, 42, 72

### Compatibility

For use with all UL489 miniature and molded case circuit breakers

# Specification

## 1.00 General

### 1.10 Certifications

- 1.11 All panelboard interiors, enclosures, components, and accessories shall be manufactured and tested in accordance with the latest applicable standards as follows:
- a) UL67 panelboards
  - b) UL50 cabinets and boxes
  - c) UL489 molded case breakers and miniature circuit breakers
  - d) CSA22.2 Canadian Certification
  - e) IEC60529 IP20 touch safe personnel safety

### 1.20 Qualifications

- 1.21 The manufacturer of the assembly shall be the manufacturer of a preponderance of all components that comprise the assembly.
- 2.22 The manufacturer shall be ISO 90001:2008 certified.

### 1.30 Documentation

- 1.31 The panelboard shall be labeled in accordance with cULus 67.
- 1.32 The panelboard shall be shipped with one copy of the manufacturer's handling and storage instructions.
- 1.33 The panelboard shall be shipped with one copy of the manufacturer's installation and operating instructions.
- 1.34 The manufacturer shall provide an online reference of the following documentation for the complete assembly and for each major component; Instruction leaflets, instruction bulletins, replacement parts, and field installable accessory lists.

## 2.00 Product Compatibility

### 2.10 Interior

- 2.11 The panelboard interior assembly shall have an open architecture that provides compatibility with all available UL489 molded case breakers and UL489 miniature circuit breakers.

## 2.20 Main Breakers

2.21 The panelboard shall be compatible with the all Molded Case Breaker series produced by the following manufacturers:

- a) Schneider / SqD
- b) Eaton-Cutler Hammer
- c) Siemens
- d) GE
- e) ABB
- f) Rockwell
- g) WEG
- h) LG / LS
- i) Noark

## 2.30 Branch Breakers

2.31 The panelboard shall be compatible with following Miniature Circuit Breakers 1" wide or less:

- a) ABB S200U
- b) ABB S200UP
- c) ABB SU200M
- d) ABB S800U
- e) Altech L
- f) Altech UL
- g) Carlo Gavazzi GMB
- h) Carlo Gavazzi GMBH
- i) CBI QL
- j) Eaton FAZ
- k) Eaton QC/QCD/QCR/QCGF
- l) ETA 4230
- m) GE TQC/THQC/THHQC
- n) GE/AEG EP 100ULH
- o) Nader NDB2T
- p) Noark B1H
- q) Noark B1N
- r) Rockwell MCA/MCB/MCEA/MCGA
- s) Rockwell 1489M
- t) Schneider Multi 9 C120
- u) Schneider Multi 9 C60
- v) Siemens 5SJ4 HG41
- w) Siemens 5SJ4 HG42
- x) Siemens BQ/BQH/HQB
- y) Sprecher + Schuh L9
- z) SqD QOU
- aa) Techna Jtec
- bb) WEG UMBW
- cc) Weidmuller BR

### 3.00 Product Interior

#### 3.10 Features

- 3.11 The panelboard interior shall be certified by an independent testing agency as IEC60529 IP20 touchsafe. The panelboard will not have any exposed electrical parts that can be inadvertently touched by personnel. This requirement will apply when the enclosure dead front is installed or uninstalled.
- 3.12 The branch breakers shall be connected to the interior bus bar by a separately insulated spring clamp connector. The connector shall secure the breaker to the chassis by a non-energized means.
- 3.13 Personnel shall not be exposed to any uninsulated electrical components when removing or installing branch circuit breakers.
- 3.14 The panelboard shall be available in interior only and enclosed configurations.

#### 3.20 Electrical Ratings

- 3.21 Network
  - 50/60Hz
  - Single or three phase
  - 2, 3, or 4 wire
  - Delta or Wye; grounded or ungrounded
  - 100% or 200% neutral; linear and non-linear loads
- 3.22 Interrupting Rating
  - Maximum Withstand 10kAIC
- 3.23 Rated Voltage
  - Maximum Voltage 600 VAC
  - Voltage Types 120/208/230/240/277/415/347/480/575 VAC & 24VDC
- 3.24 Interior Assembly Bus Bar Amps
  - 150A and 225A
- 3.25 Incoming Connection Configurations
  - Main Lugs or Main Breaker
    - Single 150A and 225A Mechanical Lugs
    - Single 150A and 225A Crimp Lugs
    - Parallel 150A and 225A Mechanical Lugs
    - Parallel 150A and 225A Crimp Lugs
- 3.26 Branch Circuit Amps
  - 100A capacity
- 3.27 Branch Circuit Configuration
  - Single Column or Double Column
  - 12, 24,36, 42 or 72 circuits

### 3.30 Components

- 3.31 The main distribution bus bar shall be individually insulated and isolated. The bus bar insulation shall prevent exposure of personnel to energized electrical components.
- 3.32 The main Incoming lugs shall be a fully insulated and isolated module that prevents personnel from inadvertently touching energized electrical components.
- 3.33 The interior branch breaker electrical connection points shall be certified by an independent agency as IEC60529 IP20 to prevent personnel from inadvertently touching energized electrical components.
- 3.34 The branch breaker electrical connection points shall have covers that prevent the insertion of any type of foreign object on energized components.
- 3.35 The branch breaker connections shall be made using a stand-alone spring clamp connection that is independent of the interior system and the breaker. The branch breaker spring clamp connectors shall be commercially available as a unit separate from the breaker.
- 3.36 The branch breaker spring clamp connectors and branch breakers shall be secured by a non-energized means.
- 3.37 Personnel shall not be exposed to uninsulated electrical components or electrical arcs during the removal or installation of branch breakers.
- 3.38 The branch breaker spring clamp connectors shall be provided with the following ratings and configurations;  
1Pole, 2 Pole, and 3 Pole modules  
32A, 63A, 100A configurations

## **4.00 Product Enclosure**

### 4.10 Features

- 4.11 The enclosure assembly shall be cULus 50.
- 4.12 The enclosure shall be manufactured from sheet steel and powder coat painted.
- 4.13 The enclosure shall have the required wire bending radius and wire gutter space as specified in the National Electrical Code.
- 4.14 The enclosure shall be provided with removable blank ends, a hinged door with a circuit directory card, and removable dead front panel.
- 4.15 The enclosure dead front shall have insulated covers to fill spaces where breakers are not installed.

## **5.00 Factory Testing**

### 5.10 Electrical

- 5.11 The panelboard shall be tested after assembly in compliance with cULus UL67 and CSA22.2 requirements.
- 5.12 Each panelboard assembly shall be serialized and all cULus UL67 and CSA22.2 test results recorded. The manufacturer will maintain a database of all factory test results for future traceability.



