

NOVA Energy & Automation



## **Product Specifications**

# **30A 208V Power Distribution Panel with integrated controls**

**Model NEA020B**

A 3D perspective view of a complex geometric structure. It consists of several interconnected rectangular blocks in shades of blue and grey. The structure is composed of a large blue block on the left, a grey block in the middle, and another blue block on the right. The blocks are arranged in a way that they appear to be part of a larger, multi-faceted object. The lighting creates shadows and highlights, giving the structure a three-dimensional appearance.

03 January 2012

# Product Description

## 1. Standard Application

The Nova NEA020B system Main Disconnect Panel (MDP) serves as the main facility power disconnect source installed ahead of the Mammography equipment. Each MDP is sold with 2 remote Emergency stop Buttons. The MDP saves time, installation labor, and valuable mounting space by consolidating the main circuit breaker, feeder over current devices, and lighting controls into one integrated panel. The panel design includes short circuit, overload, Undervoltage release, and emergency shutdown of the system. All power is controlled by an ADA approved through the door disconnect or by the remote emergency operator control station.

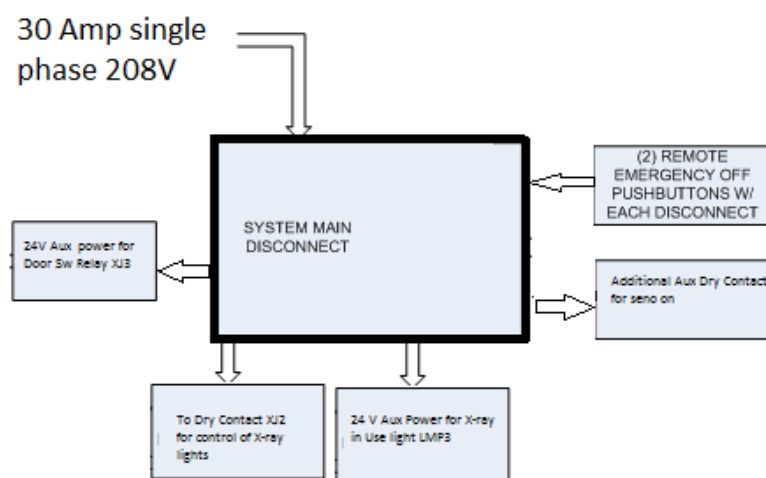


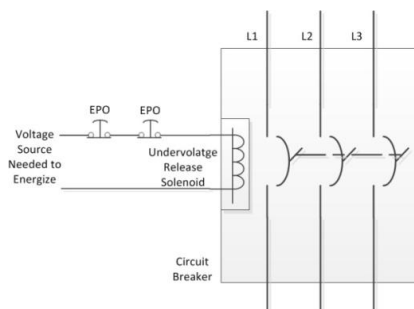
Figure 1 Nova Mammography Main Disconnect Application Diagram

## 2. Application of Undervoltage Release

The Under voltage release mechanism trips the circuit breaker by removing power from an internal coil. To energize a circuit breaker with a UVR mechanism, power must be present and applied to the UVR coil before the circuit breaker can be energized. If power is not provided to the UVR coil the breaker will continue to trip while one attempts to turn it on. UVR coils are designed to trip when its applied voltage falls between 35 to 70% of nominal rating.

UVR mechanism are best suited to “interlocking” a number of other equipment safety checks, as all circuits would need to be satisfied and all normally closed contacts would be wired in series. Any one of the contacts could open thereby tripping the circuit breaker.

Another benefit of the UVR is that it will not automatically restart the equipment after a power outage. It would require that a person would go to the breaker panel and manually energize it after checking to see that conditions are safe to do so.



**Figure 2 Undervoltage Release Diagram**

### 3. System Compatibility

The Nova NEA020B is compatible with the following medical imaging equipment:

GE Healthcare Mammography models: Senographe Essential and several other similar installations.

### 4. Identification

GE Healthcare- The proper panel can be identified on GE Healthcare Drawings:

Sheet E1 → Right Column → Junction Point Descriptions → A, A1, or MDP → Main Disconnect:  
Equal to E4502B

### 5. Features/ Benefits

#### Features

- UL and cUL listed to conform to NEC
- Available from stock
- Supports modality UPS and operators console UPS
- Labeled to conform with NFPA99, NFPA-70, NEC 100, NEC 110-3, NEC 660.5
- Provides over current and short circuit protections
- Short circuit current rated at 25kAIC
- Undervoltage Circuit protection
- Single point main disconnect and termination point
- American Disabilities Act (ADA) approved through the door disconnect handle provides one hand ON/OFF operation.
- Lock Out/ Tag Out lockable operating handle provides added safety during maintenance and OSHA requirements.
- Interlocked ON/OFF hinged door prevents access to the panel while the disconnect is in the ON position.
- Door may be locked closed with customer provided padlock.
- ¼ turn slotted door latch provides additional security.
- Isolated Neutral lugs
- Oversized ground lugs for parity sizing of ground wire
- Compact size for easy installation

- Thermal protection
- Factory wired to match GE equipment and tested
- Disconnect automatically shuts down during first loss of power, preventing damage to system components
- Manufactured in the USA
- Provides additional system power and controls for auxiliary devices including door switches and warning lights such as X-ray in Use or Seno On, as required by local code

## Benefits

- Designed, tested, and installed on hundreds of projects worldwide
- Acceptable low cost alternative to GE
- Manufactured using the highest quality components for high reliability and long life
- Provides protection for sensitive electronic equipment
- Manufactured to a tolerance which exceeds the specifications of GE Medical equipment.
- Easy to view LED indicator lights for System ON
- Field adjustable overload and instantaneous trip
- Reduced weight- all components are within a small 45lb enclosure
- Reduces installation time and cost by eliminating delays in obtaining individually enclosed components and by eliminating on site assembly
- Provides a standardized platform for other future modifications or upgrades
- The ADA handle makes turning the imaging equipment on and off during emergencies or power failures easy for technicians and nursing staff.



**Figure 3 Nova 30A Mammography Main Disconnect Panel**

## 6. Specifications

<b>Model</b>	NEA020B
<b>Application</b>	Main Disconnect Panel for Mammography installations
<b>Input Voltage</b>	208VAC (please specify if other voltage is required)
<b>Output Voltage</b>	208VAC (please specify if other voltage is required)
<b>Overload Current Protection</b>	Factory set to 30A, (please specify if other current rating is required)
<b>Control Voltage</b>	Internally derived 120VAC and 24VAC for controls and warning lights
<b>Maximum Lighting Load</b>	20 Amps
<b>Emergency Power Off Controls</b>	120VAC Undervoltage release (N.O.)
<b>Operators Controls</b>	Compatible with EPO and Remote Start
<b>Compatible Estop Buttons</b>	Normally closed contacts  GE Mammography: 2 ESTOPS- 1 N.O, 1 N.C. contacts
<b>Grounding</b>	Isolated and non isolated ground bar
<b>Short Circuit Current Protection</b>	25 kAIC
<b>Instantaneous Trip Settings</b>	Field adjustable from 1 - 10x of over current rating
<b>Approvals</b>	UL/cUL

## 7. Weights and Dimensions

<b>Mounting</b>	Main disconnect is provided in a steel enclosure suitable for surface or semi flush installations.
<b>Dimensions</b>	Height: 23.62" (600mm) Width:15.7" (400mm) Depth: 5.9" (150mm)
<b>Weight</b>	45 lbs. (20.45 kg)
<b>Mounting</b>	Rear wall mounting holes (4). Spaced 0.79" (20mm) from enclosure edge. Optional mounting brackets are available
<b>Enclosure</b>	16 Gauge Carbon Steel, all rounded corners 1 gland plate in the enclosure base.
<b>Enclosure Sealing</b>	Foamed-in place polyurethane door gasket
<b>Finish</b>	Dip coat primed, powder coated in textured RAL 7035
<b>Latching Mechanism</b>	Two ¼ turn latches with double-bit inserts (cam lock). Door is hinged on the left side but can be swapped if specified when order is placed.
<b>Interior Panel</b>	Zinc-Plated subpanel
<b>Protection Category</b>	IP 66 to EN60 529/09:2000, complies with NEMA 4 Enclosure Approvals: UL, CSA, TUV, GL, Lloyds, VDE, Bureau Veritas

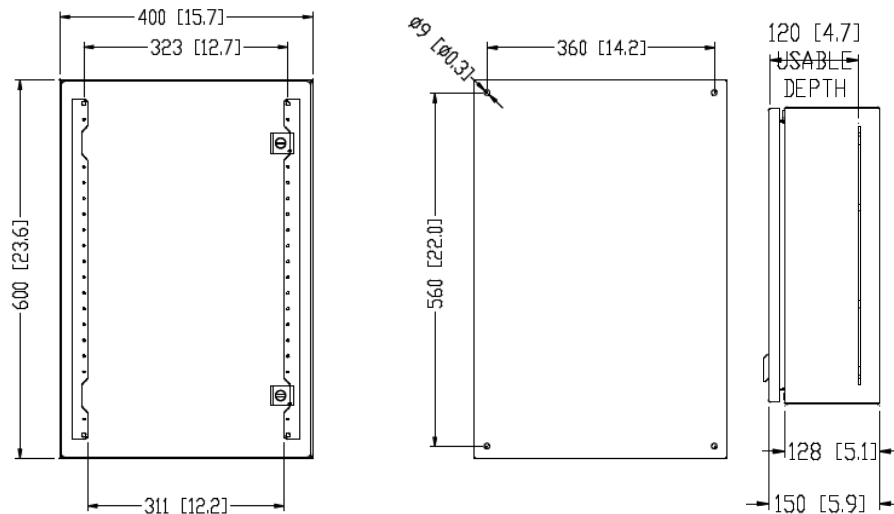


Figure 4 Enclosure Dimensions: Outside, Mounting, Depth

## 8. Warranty

This limited warranty set forth below is given by Nova Automation ("Seller") with respect to the electrical equipment ("Product") packaged with this limited warranty. The Product, when delivered to you in new condition in its original packaging, is warranted against defects in materials or workmanship as follows: For a period of one (1) year from the date of original purchase, defective parts or a defective Product returned to a Seller, or its authorized service providers, as applicable,

and proven to be defective upon inspection, will be repaired, or exchanged for a new Product, as determined by the Seller, or the authorized service provider.

This limited warranty covers all defects encountered in normal use of the Product, and does not apply in the following cases: Loss of or damage to the Product due to abuse, mishandling, alteration, accident, electrical current fluctuations, failure to follow operating, maintenance or environmental instructions prescribed by Seller, failure to follow Sellers installation instructions, or service performed by someone other than Seller or its authorized service provider.

Nova assumes no responsibility for labor or freight costs incurred in connection with the installation, removal, or replacement of products determined to be defective or any consequential or incidental damages arising from the use of the product. Nova Automations entire liability on any claim of loss or damage resulting from a defective product is limited to the replacement of the product.

WARRANTY IS VOID IF PRODUCT IS NOT USED FOR THE PURPOSE FOR WHICH IT WAS MANUFACTURED.

## 9. Product Service and Technical Assistance

Nova Automation, LLC  
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Milwaukee WI 53210  
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Website: [www.NovaAutomation.net](http://www.NovaAutomation.net)

## 10. Approvals

**Prepared By** \_\_\_\_\_  
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This document requires the following approvals

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\_\_\_\_\_  
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**Approval Date** \_\_\_\_\_