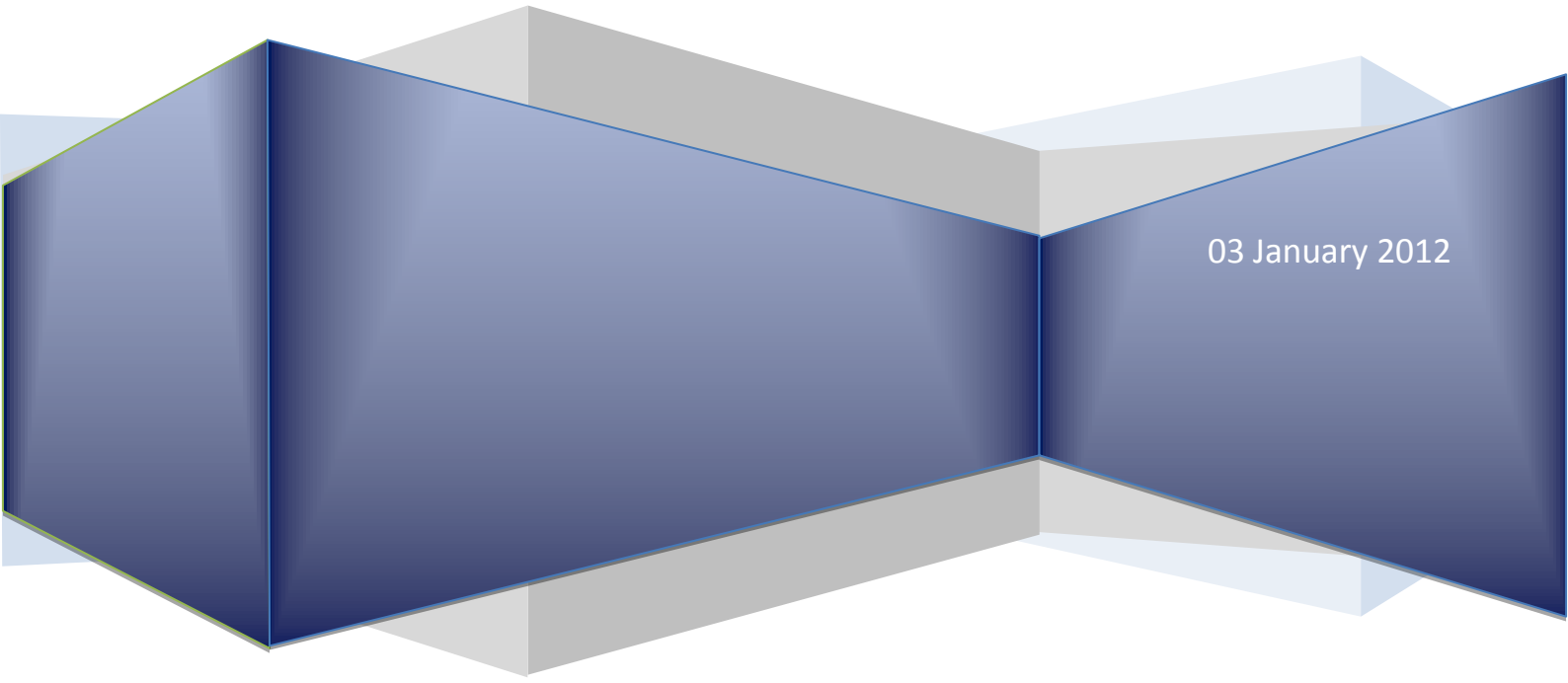
NOVA Energy & Automation

Product Specifications

80A Main Power Distribution Panel with Buffered Under Voltage Protection

Model NEAS-080-G-UV-B



03 January 2012

Product Description

1. Standard Applications

The Nova NEAS-080-G-UV-B system Main Disconnect Panel (MDP) serves as the main facility power disconnect source installed ahead of the Siemens CT Gantry. 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 and the feeder over current devices into one integrated panel. The panel design includes short circuit, overload and emergency shutdown of the system. All power is controlled by an ADA approved Siemens through the door disconnect or by the remote emergency operator control station.

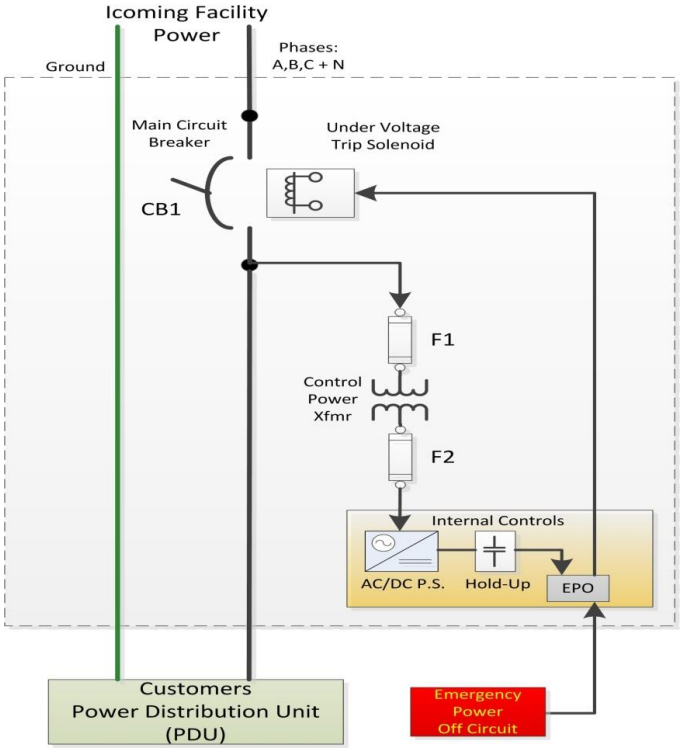


Figure 1 Nova 80A Main Disconnect Panel Application Diagram

Buffered Under Voltage Release

Under voltage release mechanisms trip 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.

This inherent feature of the UVR mechanism also makes it susceptible to nuisance breaker tripping during voltage sags and intermittent power outages such as when the utility system's Reclosers open to attempt to clear a shorted line due to tree branches moving across power lines.

UVR mechanism are better 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.

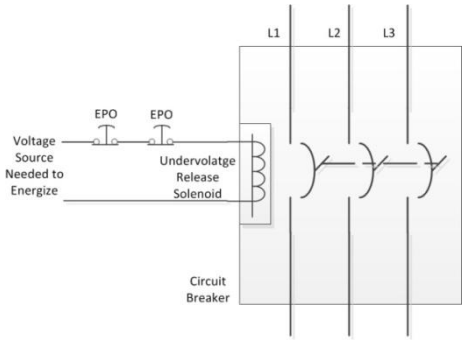


Figure 2 Undervoltage Release Diagram

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.

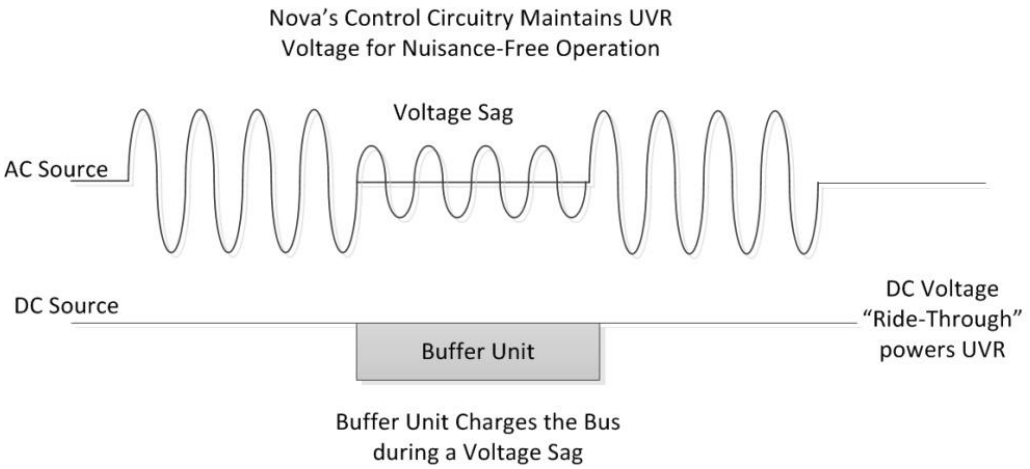


Figure 3 Undervoltage Buffer Operation

In order to continue to provide all the positive safety benefits of the Under Voltage Release mechanism and to eliminate the nuisance trips, Nova Energy & Automation developed and integrates into its panels a buffer circuit that provides ride-through capability of up to 1 minute. Typical voltage sags are in the order of a few cycles and with the Nova design we have eliminated the nuisance tripping that other manufacturer’s panel designs experience.

Statistics show that 80 percent of all mains faults last less than 0.2s. These mains faults are completely bridged by the buffer unit and will have no influence on the DC power. This increases the reliability of the system as a whole.

In times when the power supply provides sufficient voltage, the buffer unit stores energy in integrated electrolytic capacitors. In case of a mains voltage fault, this energy is released again in a regulated process.

2. System Compatibility

The Nova NEAS-080-G-UV-B is compatible with the following medical imaging equipment:

Siemens Medical Systems: PET-CT Biograph Truepoint 6 and several other related projects

3. Identification

Siemens Medical Systems PET-CT: The proper distribution panel can be identified in the Siemens Constructions Drawings ➔ sheet E-501 ➔ Biograph Truepoint 6/16 Power Diagram requirements ➔ item ME

Equal to item ED43B080 with related components 24VDC U.V trip, copper ground bus bar,

Note B- 2 pole fuse block, Note C- 24VDC power supply

4. Features/ Benefits

Features

- UL and cUL listed to conform to NEC.
- 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 10kAIC.
- Internally derived 24VDC power for Under Voltage Release with Nova designed Hold-Up circuit which prevents nuisance tripping on power line transients.
- Single point main disconnect and termination point.
- American Disabilities Act (ADA) approved through the door disconnect handle provides one hand ON/OFF operation. The ADA handle makes turning the imaging equipment on and off during emergencies or power failures easy for technicians and nursing staff.
- 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 and Magnetic protection.
- Factory wired to match Siemens equipment and tested.
- Manufactured in the USA

Benefits

- Designed, tested, and installed on several projects worldwide.
- Manufactured using the highest quality Siemens components for high reliability and long life.
- Provides protection for sensitive electronic equipment.
- Manufactured to a tolerance which exceeds most OEM specifications.
- Easy to view LED indicator lights for “Main Power ON”.
- Field adjustable instantaneous trip.
- 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.

Figure 4 80A Main Disconnect Panel Front View

5. Specifications

Model	NEAS-43B080PET
Application	Main Disconnect Panel for PET-CT Scan
Input Voltage	480/277Volts, 3 Phase, 4 Wire, plus ground (L1, L2, L3, N,G)
Control Voltage	Internally derived 24VDC for EPO Hold Up and UVR
Emergency Power Off Controls	24VDC Under Voltage Release via N.C. EPO Contact
Operator Controls	Compatible with EPO and Remote Start
Compatible EPO buttons	Siemens PETCT – 4 N.C. contacts
Grounding	Non-Isolated Ground Bar
Circuit Breaker	Siemens DG 150A Frame, VL Series DG Thermal-Magnetic with Instantaneous Trip Adjustment
Overload Current Protection	Fixed at 80A with Inverse Time Delay, (please specify if other current rating is required)
Instantaneous Trip	Field adjustable from 450 Amps to 800 Amps
Short Circuit Current Rating	10 KAIC (Circuit Breaker is Rated at 35 KAIC @ 480 VAC)
Approvals	UL/cUL

Figure 5 Enclosure Interior Components

6. Weights and Dimensions

Mounting	Main disconnect is provided in a steel enclosure suitable for surface or semi flush installations.
Dimensions	Height: 23.62” (600mm) Width:19.7” (500mm) Depth: 5.9” (150mm)
Weight	47.4 lbs. (21.5 kg)
Mounting	Rear wall mounting holes (4). Spaced 0.79” (20mm) from enclosure edge. Optional mounting brackets are available
Enclosure	16 Gauge Carbon Steel, all rounded corners 1 gland plate in the enclosure base.
Enclosure Sealing	Foamed-in place polyurethane door gasket
Finish	Dip coat primed, powder coated in textured RAL 7035
Latching Mechanism	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.
Interior Panel	Zinc-Plated subpanel
Protection Category	IP 66 to EN60 529/09:2000 Enclosure Approvals: UL/cUL, Type 1, 12, 3R, 4

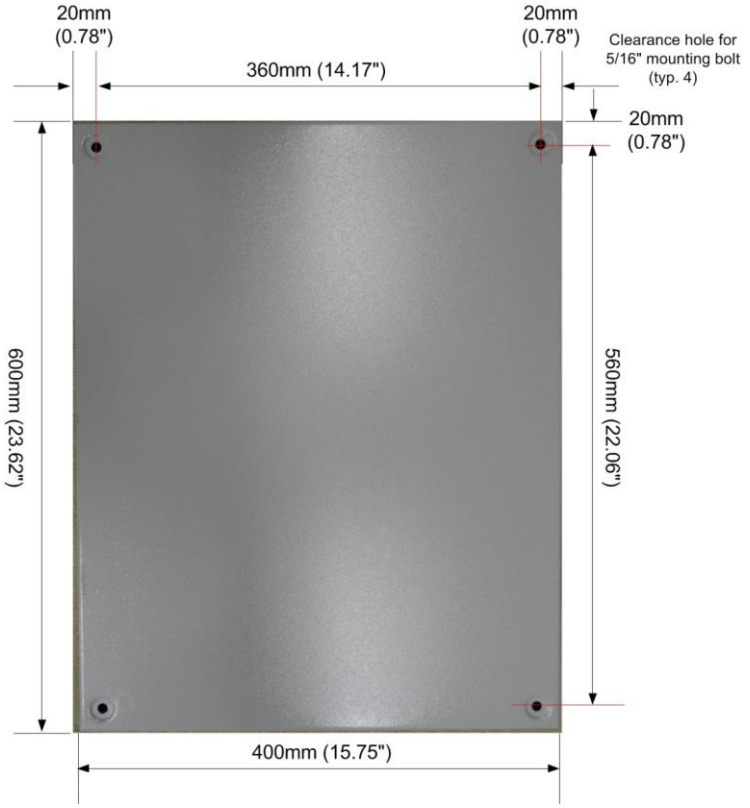


Figure 6 Enclosure Backside showing Mounting Holes

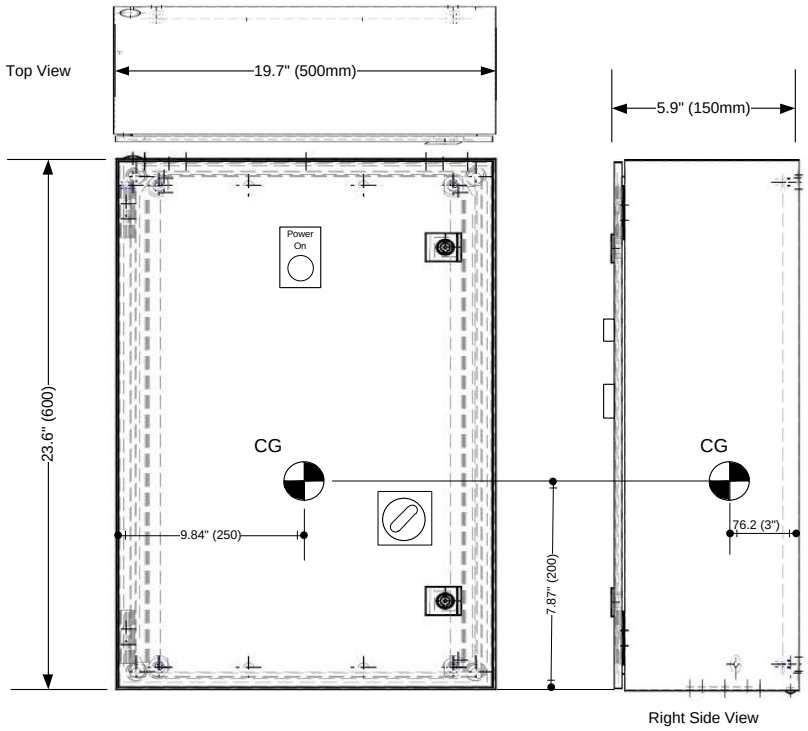


Figure 7 Enclosure Center of Gravity

7. 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.

8. Product Service and Technical Assistance

Nova Automation, LLC
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