

MT-VCT-480VAC-20KW-125VDC-N1-M1

20KW AC to DC Rectifier – 480V AC 3PH Input – 125V DC Output – NEMA 1 – 680 Ah Battery Backup – BAA Compliant

Product ID: 339340

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Image: MT-VCT-480VAC-20KW-125VDC-N1-M1

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

MT-VCT-480VAC-20KW-120VDC-N1-M1 AC to DC Converter

Unit Type: AC to DC Converter
Dimensions: 144"-W x 30"-D x 80"-H
Weight: 6,500 Lbs
Input Voltage: 480V AC $\pm 10\%$, 3-Phase
Input Frequency: 60 Hz
Output Power: 20 KW
Output Voltage: 125V DC $\pm 5\%$
Maximum Output Current: 160 Amps
Battery Bank Capacity: 680 Ah
Battery Backup Duration: 8 Hours Minimum
Maximum Fluctuation: $\pm 2\%$
Minimum Power Factor: 0.8
Fluctuation Without Connecting Battery: $\pm 1\% V_n$
Equalizing Timer: 0-24 Hrs
Undervoltage Protection: Included
DC Digital Voltmeter: Included, 1.5% precision
AC Digital Voltmeter: Included, 1.5% precision
Equalizing Voltage Adjustment: Included
Floating voltage adjustment: Included
Auto/Manual Control For Equalizing Voltage: Included
Protection Level: NEMA 1

Ratings/Features

NEMA 1 Rated
Natural Forced Cooling
High Frequency Switch Mode
Automatic Float & Equalize Charging
BAA Compliant
Battery Bank Included
LED Display

Special Orders - Special Requirements



Cable Entry: Bottom Entry
Operating Temperature: -10 / +40 °C
Relative humidity: 5 - 90 %
Operating Altitude: Max. 9850 ft
Noise Level: Max. 60 dBA

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The Larson Electronics MT-VCT-480VAC-20KW-125VDC-N1-M1 is an industrial AC to DC Rectifier/Battery Charger designed to provide reliable DC power for substations, utility facilities, and industrial applications. This 20 kW unit accepts 480V AC three-phase input and delivers regulated 125V DC output for critical control, protection, and auxiliary power systems. The NEMA 1 enclosure is intended for indoor installations and features automatic float and equalize charging with comprehensive protection against short circuit, overload, overvoltage, undervoltage, and over-temperature conditions.

The MT-VCT-480VAC-20KW-125VDC-N1-M1 converts 480V AC, 60 Hz power into stable 125V DC output while simultaneously supplying connected DC loads and maintaining the battery bank. The system includes a 680 Ah battery bank, providing a minimum of 8 hours of backup runtime during AC power outages. The charger is rated for 20,000 watts continuous output and utilizes high-frequency switch mode technology for efficient, reliable operation. The battery bank capacity shall be verified based on the connected DC load requirements.

This AC to DC rectifier operates in ambient temperatures from -10°C to +40°C and features natural forced-air cooling for continuous industrial duty. The unit includes LED status indication, AC and DC digital metering, adjustable float and equalize voltage settings, automatic/manual equalize control, and bottom cable entry for simplified installation. The enclosure is BAA compliant and suitable for utility and government-funded projects.

Wiring/Connections: AC and DC power connections are made within the enclosure using appropriately sized field-installed conductors. Bottom cable entry is provided as standard.

Mounting: The MT-VCT-480VAC-20KW-125VDC-N1-M1 is designed for floor-mounted indoor installation in electrical rooms, substations, and industrial facilities.

Applications: Utility substations, battery charging systems, protective relay power, SCADA systems, switchgear control power, battery-backed DC distribution, BESS facilities, industrial control systems, and critical auxiliary power applications.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.



Frequently Asked Questions (FAQ)

There are no Fags



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