

## MT-IVT-125VDC-20KVA-120VAC-R2

20KVA DC to AC Inverter - 125V DC to 120V AC - 0.8 Power Factor - IP20

Product ID: 306200

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



Image: MT-IVT-125VDC-20KVA-120VAC-R2

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-IVT-125VDC-20KVA-120VAC-R2 - DC to AC Inverter

**Unit Type:** DC to AC Inverter  
**Dimensions:** 70.9"-H, 48.43"-W, 25"-D  
**Weight:** 33.1 lbs  
**Input Voltage:** 125V DC  $\pm 15\%$   
**Output Power:** 20 KVA / 16KW  
**Power Factor:** 0.8  
**Output Voltage:** 120V AC - 0 - 120V AC  
**Output Connections:** 2 x (1 Phase 2 Wires)  
**Nominal Output Frequency (while synchronized with the line):** 60 Hz  $\pm 2\%$   
**Output Frequency (while not synchronized with the line):** 60 Hz  $\pm 0.1\%$   
**Switching Frequency:** 20 KHz  
**Static Voltage Tolerance:**  $\pm 1\%$   
**Dynamic Voltage Tolerance (with 100% load change):**  $\pm 10\%$  in 100 msec  
**Waveform:** True Sine Wave  
**Efficiency:**  $>92\%$  Depending on DC Bus Voltage  
**Recommended Battery Capacity:**  $>850$  Ah  
**Paralleling:** Parallel Redundant (Hot Standby) with Static Transfer Switch Unit (optional)  
**Isolation Transformer:** 2x Galvanically Isolated (standard)  
**Short-circuit behaviour:** 3 x Nominal Output Current  
**Total harmonic Distortion THD (at Linear Load):**  $< 3\%$   
**Total harmonic Distortion THD (at Non-Linear Load):**  $< 5\%$   
**Crest Factor :** 3 : 1 (1 second)

### Ratings/Features

IP20  
Natural Forced Cooling  
Compatible with MasterBus  
V6 HF Switch Mode  
Complies with EN 50091-1 (Security)  
Complies with EN 50091-2 (EMC)  
LED Display

**Regulation time:** 40 msec into  $\pm 2\%$

**3-Phase Configuration:** Yes, up to 3x3

**Protection:** Short Circuit Protection, Over Voltage Protection, Under Voltage Protection, Over Current Protection and Over Temperature Protection

**Front Panel Warnings:** Battery / Low DC Input, Inverter Overload, Internal Overtemperature / Fan Failure, Bypass MCB OFF, Output MCB OFF IGBT SCR Fuse Failure, Maintenance Bypass On, Backfeed Protection Failure

**Front Panel Set Menu:** Automatic Start ON / OFF, ECO Mode ON / OFF, DC Cut off Low Battery Level Adjustment, Date, Time, Alarm Sound Level, Communication Slave Number

**Indication LEDs:** Load at By-Pass, Load at UPS, Mains Normal, Battery in Use

**Alarm Contacts (1 Open 1 Closed):** Inverter Failure, Low Battery

**Over Voltage Protection :** IEEE 587 4500 A, 110 Joules (standard)

**Electrical Interference Reduction:** FCC Part 15 Class B

**Protection Level :** IP20

**Enclosure Color:** RAL7035

**Enclosure Material:** Mild Steel, Zinc-phosphate coated; 100  $\mu$ m electrostatic paint; 1.5 mm thickness

**Cooling:** Forced fans

**Cable Entry:** Top

**Operating Temperature:** -10 / +40 °C

**Relative humidity :** 5 - 90 %

**Operating Altitude:** Max. 9850ft

**Noise Level:** Max. 60 dBA

**14K ASL:** Yes

#### **Special Orders - Special Requirements**

Contact us for special requirements

**Toll Free:** 1-800-369-6671

**Intl:** 1-903-270-1187

**Fax:** 1-903-765-7664

**E-mail:** [sales@larsonelectronics.com](mailto:sales@larsonelectronics.com)

**The Larson Electronics MT-IVT-125VDC-20KVA-120VAC-R2 DC to AC Inverter converts DC input to AC output in industrial sites. This power converter is rated at 16,000 watts continuous and offers 125V DC input and 120V AC output, 60 Hz. The IP20 rated device offers the following protective features: short circuit, overload, over temperature, high battery and low battery.**

The MT-IVT-125VDC-20KVA-120VAC-R2 provides a safe and effective way for users to tap into and utilize 125V DC voltage to be converted to 120V AC. Rated at 16,000 watts (continuous), this true sine wave unit can be operated with low voltage 125V DC input voltage and 120V AC output voltage. Output frequency is 60Hz, adjustable. The transformer provides short circuit, overload, over temperature, high battery and low battery protection. Peak wattage for this unit is 20,000W (short-term use only, not for extended periods). The recommended battery capacity is 850aH minimum.

This DC to AC transformer offers a -10°C to 40°C operating temperature range. The unit has a 92% conversion efficiency and is Master-Bus compatible. Cooling is facilitated by natural and forced mechanisms. Powered by V6 HF switch mode technology, the power converter features an LED display for real-time monitoring.

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**Wiring/Connections:** AC connections can be completed inside the unit. This inverter accepts 70 mm<sup>2</sup> minimum cable size.

**Mounting:** The MT-IVT-125VDC-20KVA-120VAC-R2 caters to surface and wall mounting applications via openings on the back of the transformer.

**Applications:** Voltage rectification, power conversion, DC to AC transformer, DC to AC



conversion, solar-powered systems, power supply, engine rooms and more.

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](mailto:sales@larsonelectronics.com) for more information about our custom options tailored to meet your specific industry needs.



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## Frequently Asked Questions (FAQ)

There are no Faqs



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**Export Control Classification Number (ECCN):** EAR99



Links (Click on the below items to view):

- **Operations Manual** ( <https://www.larsonelectronics.com/images/product/Manual/306200.PDF> )
- **HigResPic1** ( <https://www.larsonelectronics.com/images/product/HigResPic1/306200.JPG> )
- **Video1** ( <https://www.youtube.com/watch?v=cPpdHjsMXps> )
- **ISO 9001 Certification** ( <http://larsonelectronics.com/images/pdfdocs/ISO9001.PDF> )
- **Business Certificate** ( <https://www.larsonelectronics.com/images/pdfdocs/w9.PDF> )
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