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## MT-IVT-715VDC-200KVA-480VAC-R1

# 200 KVA DC to AC Grid-Tied Inverter - 715V DC to 480V AC - 200 KW Continuous - NEMA 4X - UL1741 (SA/SB) listed - Bidirectional

**Product ID: 333643**



Image: MT-IVT-715VDC-200KVA-480VAC-R1

**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-715VDC-200KVA-480VAC-R2 DC to AC Power Inverter**
**Unit Type:** DC to AC Inverter, Grid-Tied
**Dimensions*:** 30" W × 24" D × 48" H
**Weight*:** 350 Lbs
**Phase:** Three Phase
**Nominal DC Voltage:** 715V DC

**DC Operating Voltage Range:** 640 – 790 VDC (±75V tolerance)

**Maximum DC Voltage:** 800 VDC (recommended ceiling for protection margin)
**Output Voltage:** 480V AC (@ $T_L$=25°C)
**Output Power Factor:** 1.0
**Frequency:** 60 Hz
**$L_{PL}$:** 5.3 nH

**DC Link Capacitance:** 3000uF

**Power Density:** 32 kW/L
**Controller: Included**
**Rated output power:** 200 kW
**Max. apparent output power:** 200 kVA
**Rated Grid Frequency:** 50 Hz / 60 Hz
**Waveform:** True Sine Wave
**Max. Efficiency:** 99.0%
**DC Reverse-polarity Protection:** Included
**Short-circuit Protection:** Included
**Output Overcurrent Protection:** Included

**Ratings/Features**
UL1741 (SA/SB) listed
NEMA 4X
Bidirectional inverter
LED Display
DC precharge circuit
Designed for operation in high-humidity environments (0–100% RH, non-condensing)
Compatible with MasterBus
Regulates DC Voltage/link
Natural Forced Cooling
Anti-islanding protection (UL1741 compliant)
Enhanced surge protection (Type I + Type II coordinated)
Designed for operation in IEEE C62.41 Category B/C environments when installed with coordinated external surge protection

Standard Warranty: 2 Years (extendable options available)

**Surge protection:** DC Type II / AC Type I + Type II (coordinated)
Internal SPD Energy Handling**:** Designed for coordinated protection only; not intended for direct lightning or substation fault energy absorption

**Nominal Discharge Current (In):** ≥ 20 kA

**Maximum Discharge Current (Imax):** ≥ 40–80 kA

**Voltage Protection Level (Up):** ≤ 2.5 kV (480V system)

**Grid monitoring:** Included, Integrated grid protection & synchronization
**Anti-islanding protection:** Included, Compliant with UL1741 SA/SB anti-islanding requirements

**Grid Monitoring & Synchronization:** Integrated

**String Monitoring:** Included

**Temperature protection:** Included
**Strings monitoring:** Included
**I/V Curve scanning:** Included
**Night-time SVG function:** Included
**Integrated PID recovery:** Included
**Integrated DC switch:** Included
**Topology:** Transformerless
**Self-consumption (night):** < 3 W
**Operating ambient temperature range:** -30 ~ + 60°C
**Relative humidity:** 0-100%
**Ingress protection:** NEMA 4X

**Cooling Type:** Hybrid Liquid-Cooled Cold Plate with Forced-Air Assist

**Cooling medium:** Liquid cooled cold plate
**Heat Rejection:** Air-side heat exchanger with variable-speed fans

**Condensation:** Not required under controlled environments

**Recommended:** Use of HVAC/dehumidification in sealed enclosures

**Special Orders - Special Requirements**

**Enhanced Grid Protection (Recommended for Wind / Unstable Grid Applications):**
- Service Entrance Protection: Type I SPD installed upstream
- Secondary Protection: Coordinated Type II SPD at inverter input
- Line Conditioning: 3–5% Line Reactor or Isolation Transformer (recommended)
- Transient Withstand Capability: Installation environment shall comply with IEEE C62.41 Category B/C surge exposure levels
- Protection Coordination: Multi-stage surge suppression architecture required

**Protection Limitation Notice:**

Internal surge protection is provided; however, high-energy transient events (e.g., lightning, substation faults, upstream switching surges) may exceed internal protection capability. Installation of external surge protection and line conditioning is required to mitigate high-energy transients and ensure long-term system reliability.

**Note:** External surge protection devices and line conditioning equipment are not included unless specified.

**Max. operation altitude:** 13,123ft Above Sea Level
**DC connection:** MC4-EVO2 connector
**AC connection:** IOT terminal (max. 750MCM)
**Display:** LED indicator & Bluetooth + APP
**Communication:** WIFI/Ethernet
**Design Life Consideration:** Power electronics components (e.g., capacitors, cooling systems) require periodic maintenance and component replacement (e.g., capacitors, cooling systems) to support 20-year operation
*Approximate numbers and subject to change.

Contact us for special requirements
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**The Larson Electronics MT-IVT-715VDC-200KVA-480VAC-R1 DC to AC Inverter converts DC input to AC output in industrial sites. This power converter is rated at 200 KW**

**continuous and offers 715V DC input and 480V AC output @ 50/60 Hz. The NEMA 4X rated device offers the following protective features: short circuit, overload, over temperature, high battery and low battery.**

The MT-IVT-715VDC-200KVA-480VAC-R1 provides a safe and effective way for users to tap into and utilize 715V DC power sources and step up this current to 480V AC. Rated at 200 kilo-watts (continuous), this true sine wave unit can be operated with low voltage 715V DC input current and 480V AC output current. Output frequency is 50/60Hz, adjustable. The transformer provides short circuit, overload, over temperature, high battery and low battery protection. The recommended battery capacity is 300aH minimum.

This DC to AC inverter offers a -30°C to 60°C operating temperature range. The unit has a 99% conversion efficiency and is MasterBus 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.

**Wiring/Connections:** AC connections can be completed inside the unit. This inverter accepts 750MCM maximum cable size.

**Mounting:** The MT-IVT-715VDC-200KVA-480VAC-R1 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 480-369-6671 or message 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