World Traction Inverter Family

WTI-S160, WTI-S260, & WTI-D260
**Traction Inverter**

State-of-the-art technology and innovative design from Curtiss-Wright for use in hybrid and pure-electric applications

Our experience in power electronics for commercial vehicles is unrivaled, having manufactured our first production unit in 2002.

Since that time our units have successfully logged nearly 2 billion on-road kilometers.

That experience, in-depth product knowledge, and past lessons learned, ensures our customers receive a robust, low risk, inverter solution with quick time to market.

The state-of-the-art WTI range is used in hybrid and pure-electric vehicles, and can operate with multiple motor technologies including AC induction, permanent-magnet synchronous (PMS) and interior permanent-magnet (IPM) types. This latest generation combines the latest technology and lessons learned from over 17 years of field experience producing like products.

*Specifications*

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**Electrical**

- **Input Voltage**
  - Up to 425 Vdc
  - 300Arms (225A DC Input)

- **Continuous Current Limits**
  - 440Arms / 360Arms

- **Peak Phase Current**
  - 540Arms

- **Max Phase Current**
  - 80KW at 360Vdc

- **Continuous Input Power**
  - 208KVA, 360Vdc, 440Arms

**Mechanical**

- **Dimensions (mm)**
  - 360W x 325D x 150H
  - 12 KG

**Environmental**

- **Sealed**
  - IP67, IP69K

**Typical Applications**

- Ideally suited for shuttle buses, delivery trucks and other medium-duty truck applications.
- Ideally suited for full-size hybrid buses and heavy-duty truck applications.
- Dual inverter in one package to handle two motor applications on the same vehicle, ideally suited for full-sized FEV buses and articulated bus applications.

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(1) - Rated at 1 hour operation
(2) - Rated at 2MM power cycle life, 2kHz switching, >50Hz for 5 minutes
(3) - Rated at 2MM power cycle life, 6kHz switching, >200Hz for 10 minutes
(4) - Rated at 150,000 power cycle life, 2kHz switching, >50Hz for 1 minute
(5) - Input: 700A for 5 minutes, 455KW at 650Vdc
(6) - Input: 1000A for 1 minute, 650KW at 650Vdc

Note: All valves at 40°C ambient and 55°C coolant. Max coolant temp 65°C.
Serving the Power Electronic Industry

From electronic shift systems, electronic throttle controls and vehicle electronics, to industry leading power electronics, Curtiss-Wright is trusted by today’s leading heavy-duty vehicle original equipment manufacturers across the globe.

We are the leading supplier of heavy-duty traction inverters for the North American transit-bus market and a leading supplier of high voltage power distribution and charge switching units in Europe.

Our performance is unmatched. We achieved 100% OTD for our power electronics portfolio in 2016 and 2017 and zero factory PPM for our traction inverters for over 12 years running!

Why Choose Curtiss-Wright

Our products combine the strength and stability of Curtiss-Wright with the cutting edge, innovative technology of our WTI family of mobile traction inverters.

- **Safety** - features that protect vehicle service and maintenance staff, while employing 3-level monitoring enabling support of our customers’ ISO 26262 functional safety goals.

- **Modular Design** - allows for customization that minimizes validation, resulting in short time-to-market and minimized risk while meeting product-specific requirements.

- **Unprecedented Fault Protection** - driven by unmatched direct “on-die” temperature monitoring and built-in current mirror.

- **Compact Design** - at each power level the WTI offering is the smallest and most lightweight inverter on the market.

- **Heavy-Duty On-Board Diagnostic (HDOBD)** - to successfully incorporate the latest requirements in on-board diagnostics for various vehicle configurations.

Successfully logged nearly **2 billion on-road kilometers** since 2002