

TMdrive-Guardian™

TMEiC
We drive industry

TMdrive-Guardian is an innovative thermal management solution for air-cooled VFD. Rated for NEMA Type 3R, this enclosure is ideally suited for a wide variety of applications such as new installs, retrofits, energy audit upgrades, and reactive power compensation.

TMEiC manufactures high-quality, reliable air-cooled medium voltage Variable Frequency Drives (VFD). The TMdrive-MVe2 is TMEiC's world-class drive solution for powering a variety of rotating machinery such as pumps, compressors, fans, blowers, extruders and other driven equipment.



Voltage	Frame	Approximate Motor Shaft HP (kW) at 4.16 kV	Rated Output Current (A)	Inverter kVA output at 4.16 kV
4.16 kV	100 - 600	536 - 3,040 (400) - (2,268)	69 - 385	500 - 2,770

Design Feature	Customer Benefit
NEMA Type 3R Rated	The enclosure provides protection against dirt, rain, sleet, snow, windblown dust, water.
Wide Ambient Temperature Rating	Designed to operate in the most extreme temperature ratings: -40°C to +50°C (122°F) ^{*1}
HVAC Eliminated	Saves an average of \$10,000 - \$15,000 per year in HVAC costs alone when compared to an industrial control building or MCC room with cooling improvements. ^{*2}
Black Start Intelligence	Enclosure prevents thermal shock to VFD components when starting under extended shutdown situation in extremely cold ambient
No Air Filters Required	The innovative air-flow technique eliminates filters, the need for frequent filter replacement ^{*3}
Easy Installation	No building required, saving construction and development costs associated with E-houses or industrial buildings.
Plug and Play Installation	Self-sufficient enclosure. Three cables in, three cables out. No external 480V or 120V connections, only utility mains, control cables, and motor leads.
Reduces Tax Liability	The enclosure is classified as weatherproof, free-standing equipment, eliminating the need for real estate improvement that attracts property taxes.
Made in America	The enclosure is designed, assembled and tested in the U.S.A.

Notes:

^{*1} +50°C applicable with appropriate VFD sizing

^{*2} Estimate based on 1890kVA TMdrive-MVe2 running 80% of the time, industrial electricity rate = 6.51¢/kWhr

^{*3} Filters provided on the VFD will need to be serviced and cleaned as per installation site

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Item	Standard Specifications
Enclosure Rating	• TYPE 3R
Temperature Range	• -40°C to +50°C
Installation site	• Outdoor, nonexplosive
Wind Speed	• 125 MPH
Snow Loading	• Min 90 lbs/lbs ²
Enclosure structure	• Structurally steel sided and thermally insulated wall and door panels
Power Cable	• Back wall entry
Enclosure mounting	• Pad, pier or spot footings
Enclosure Base	• Galvanized
Enclosure lifting	• Fork lift and provisions for crane lift



TMdrive-Guardian™ enclosure for the TMdrive-MVe2 Medium Voltage Drive

Typical TMdrive-Guardian™ Installation

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For specifications not mentioned here, contact TMEIC

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