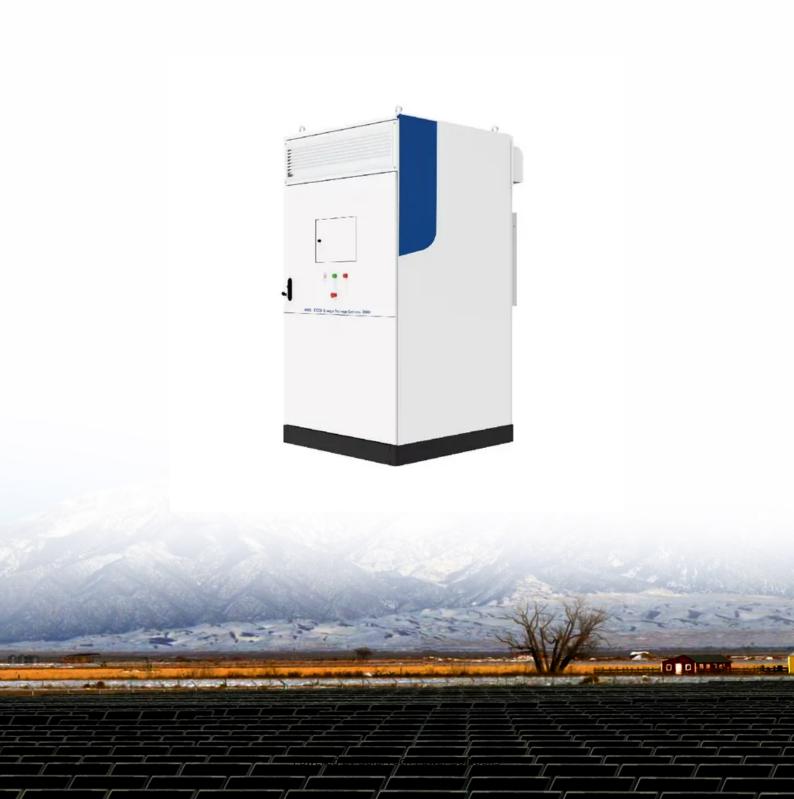


SolarTech Power Solutions

Inverter variable frequency motor rated voltage





Overview

These machines generally operate at higher rated voltages (>690 V) and, because they may experience PD within their lifetime, are defined by IEC 60034-18-42 as Type II.How do I know if a motor is inverter duty rated?

To identify whether a motor is inverter duty rated from the nameplate, users will want to look for a couple pieces of information. First, "Inverter Duty" labels are an easy giveaway. Occasionally, there will be a label that says "VT/CT," meaning variable torque/constant torque, which is also an indicator that a motor meets NEMA MG1 Part 31.

What is a medium-voltage inverter-duty motor?

Medium-voltage inverter-duty motors with a base rating that exceeds 600 V must be able to withstand a peak voltage equal to 2.04 times the motor's rated line-to-line voltage. Rise times must equal or exceed 1 microsecond. Inverter-duty motors are also designed for wider constant-torque speed ranges than can be provided with a general-purpose motor.

What is an inverter duty motor?

Over years of use in the motor industry, the term "inverter duty" for motor ratings has become watered down. Whenever someone refers to an inverter duty motor, they are usually referring to a higher insulation class for the windings. The term inverter duty means much more than just windings.

What is an inverter-Ready Motor?

These "inverter-ready" motors are suitable for use with variable torque loads over a wide speed range. In contrast, inverter-duty motors are wound with voltage spike-resistant insulation systems. Some use inverter-grade magnet wire to minimize the adverse effects of waveforms produced.

Are eficiency motors inverter-friendly?

Most motor manufacturers offer general-purpose, three-phase premium



eficiency motors that feature "inverter-friendly" insulation systems. These "inverter-ready" motors are suitable for use with variable torque loads over a wide speed range. In contrast, inverter-duty motors are wound with voltage spike-resistant insulation systems.

Do I need an inverter-duty motor?

A definite-purpose, inverter-duty motor and/or harmonic suppression filter, load reactor, or other voltage conditioning equipment may be required. Specify inverter-duty motors when operating at extremely low speeds, particularly when serving a constant torque load, or when operating over base speed.



Inverter variable frequency motor rated voltage



Variable Frequency Operation of Induction Motors

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. . .

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Setting Inverter for Motor Voltage and Frequency

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CSM_Inverter_TG_E_1_1



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Variable Frequency Inverter and Motor Matching Guide

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Motor Tip Sheet #14: When Should Inverter-Duty ...

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Variable Frequency Drives (VFD), Sumitomo Invertek





VFDs

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. . .



INVERTER DUTY MOTORS

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Applications

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FAQ :: VFDs , Should I Use An Inverted Rated Motor On VFD Applications?

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. . .

Apr 14, 2025 · An AC motor inverter, also known as an inverter duty motor, is rated for use with variable frequency drives (VFDs). It offers high voltage insulation and supports a speed range ...



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EEWORLD

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