

# Oscilloscope measuring high frequency inverter





## Overview

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This primer describes methods for making measurements using inverter, motor and drive analysis software on oscilloscopes to provide stable, accurate electrical measurements on the inputs, DC buses, and outputs of variable frequency drives, as well as mechanical measurements on the motor.

Due to the pulse-width modulation on the output of motor drives, making stable measurements on these signals is challenging.

Forms of pulse width modulation are used to drive many types of motors, including brushed DC motors, AC induction motors, brushless DC motors.

Most industrial and heavy commercial VFDs have 3-phase inputs. Smaller drives may use single-phase line voltage. Especially in electric vehicle and other battery-powered.



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### [How to measure frequency on ANY oscilloscope!](#)

In this video, I demonstrate how to perform a simple frequency measurement of a signal on an analog oscilloscope. This can be used on any triggered analog oscilloscope, and even digital

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### [Frequency Inverter output waveform using oscilloscope](#)

Try using a single/falling rising trigger on your pwm waveform channel to freeze a scan and adjust the H speed and position until the stopped signal is suitable for frequency ...

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### [How To Measure High Frequencies Using An Oscilloscope?](#)

How To Measure High Frequencies Using An Oscilloscope? In this informative video, we will guide you through the process of measuring high frequencies using an oscilloscope.

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### **How to Make Successful Harmonic Measurements , Yokogawa Test& Measurement**

Accurate measurement of harmonics with the highest fidelity possible requires a high-precision



instrument with guaranteed accuracy statements for both fundamental frequencies and ...

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### **Measuring between mosfet drain and source with oscilloscope**

Is it possible to measure signals between a mosfet drain and source without using a differential probe? I do not want to destroy my oscilloscope and or be electrocuted.

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### **Application of Multi-function Oscilloscope in Frequency Converter**

Once a fault occurs inside the inverter during production, especially a board-level fault, it is sometimes difficult to judge based on experience alone. At this time, it is necessary to use ...

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### **Yokogawa's High-Voltage, Wide-Bandwidth Oscilloscope Probes ...**

This is valuable for testing traction inverters in EVs and other next-gen power electronics, as it enables the accurate observation of tiny changes in high-speed switching ...

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### Wide-bandwidth differential probe optimizes measurement of high ...

This means that your measurement system requires a higher frequency bandwidth. Our PBDH0400 series probes provide you with a wide frequency range from DC to 400 MHz. ...

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### Measurements on 3-Phase Motor Drives with an Oscilloscope

This primer describes methods for making measurements using inverter, motor and drive analysis software on oscilloscopes to provide stable, accurate electrical measurements on the inputs, ...

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### Multichannel Measurement for SiC Inverter Voltage Waveforms

Combining the eight-channel, high voltage DLM5000 Mixed Signal Oscilloscope with high-frequency differential probes produces accurate simultaneous measurements for each voltage ...

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