



## Introduction to VFD Series

### – A Design Platform for BLDC Application

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Improving energy efficiency is a global issue that concerns and involves everyone. Due to global warming and high energy costs, people are adapting themselves with less air-conditioning and spending more money on products with energy labels. According to an IEA report, more than 40% of global electricity consumption goes to electric motor systems. By employing more efficient electric motor systems, such as those with Variable Frequency Drives (VFDs), it is possible to reduce electricity consumption by a quarter. This could lead to a 10% reduction in global electrical energy use. One effective solution for replacing old three-phase induction motors is to use brushless DC motors with variable frequency control. The benefits of using BLDC motors include high efficiency, better controllability that optimizes system operation and efficiency, and a high power factor if a Power Factor Correction (PFC) circuit is designed.

What hindered the wide use of BLDC motors is not from performance aspect, but the design complexity and the consequent overall cost. To facilitate the use of high efficient BLDC motors, MEAN WELL has developed a series of products for BLDC design – **the “VFD” series**. The VFD series features power levels with PFC, three-phase six-switch gate drivers, and multiple sensors. This platform offers a convenient hardware solution for BLDC motor system designers, enabling them to focus on motor control design while leveraging the capabilities of the VFD for other critical functionalities. Just like all other MEAN WELL standard products, the VFD series motor drive modules are readily accessible at competitive prices. To further reduce the design threshold, a reference design daughterboard with a built-in highly integrated motor control IC is available as well. The board allows designers to swiftly configure and design systems through an intuitive PC interface, simplifying tasks like entering motor parameters and considering load requirements.



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As part of our commitment to support our customers, our technical service team has developed the VFD-350-230 demonstration kit. This kit not only showcases the extensive capabilities of the VFD but also serves as a valuable tool for designing other three-phase motor applications:

For related product and application requirements, please directly contact MEAN WELL dealers or MEAN WELL technical personnel. Please continue to pay attention to the MEAN WELL Online Exhibition online courses on related products and solution.