

dsPICDEM MC1 Motor Control Development Board

Part Number: DM300020



Summary

The Motor Control Development System provides the application developer with three main components for quick prototyping and validation of BLDC, PMAC and ACIM applications. The three main components are: dsPICDEM™ MC1 Motor Control Development Board, dsPICDEM MC1L 3-Phase Low Voltage Power Module and dsPICDEM MC1H 3-Phase High Voltage Power Module.

The dsPICDEM MC1 Motor Control Development Board contains the dsPIC30F6010 but supports all dsPIC® Digital Signal Controller (DSC) motor control variances, various peripheral interfaces and a custom interface header system, which allows different motor power modules to be connected to the PCB. The control board also has connectors for mechanical position sensors, such as incremental rotary encoders and hall effect sensors, and a breadboard area for custom circuits. The main control board receives its power from a standard plug-in transformer.

The dsPICDEM MC1L 3-Phase Low Voltage Power Module is optimized for 3-phase motor applications that require a DC bus voltage less than 50 volts and can deliver up to 400W power output. The 3-phase low voltage power module is intended to power BLDC and PMAC motors.

The dsPICDEM MC1H 3-Phase High Voltage Power Module is optimized for 3-phase motor applications that require DC bus voltages up to 400 volts and can deliver up to 1 kW power output. The high voltage module has an active power factor correction circuit that is controlled by the dsPIC30F device. This power module is intended for AC induction motor and power inverter applications that operate directly from the AC line voltage.

Two motors are available that are compatible with the development system.

Features

Features of the dsPICDEM MC1 Motor Control Development Board are:

- dsPIC30F6010 Motor Control MCU Based Board

The optional power modules provide:

- Heat sink for Ambient Cooling of Power Sections
- Full Automatic Protection of Power Circuits
- Electrical Isolation from Power Circuits
- Many Options for Motor Feedback Signals

Package Contents (Power Modules)

- High Voltage or Low Voltage Power Module
- Example Software and Documentation on CD

Package Contents

(Motor Control Development Board)

- dsPICDEM MC1 Motor Control Development Board with Pre-programmed dsPIC30F Device
- RS-232 Cable
- Power Supply
- Example Software and Documentation on CD

dsPICDEM MC1 Motor Control Development System

Part Number	Description	Availability
DM300020	dsPICDEM MC1 Motor Control Development Board (Supports dsPIC30F6010)	Now
DM300021	dsPICDEM MC1H 3-Phase High Voltage Power Module	Now
DM300022	dsPICDEM MC1L 3-Phase Low Voltage Power Module	Now
AC300020	3-Phase BLDC Low Voltage Motor (24V)	Now
AC300021	3-Phase ACIM High Voltage Motor (208/460V)	Now

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