Three Phase BLDC Motor Kit with DRV8312 and InstaSPIN-Enabled Piccolo TMS320F28069M MCU

(ACTIVE) DRV8312-69M-KIT

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Description

The DRV8312-69M-KIT is an InstaSPIN-FOC and InstaSPIN-MOTION technology-based motor control evaluation kit for spinning three-phase brushless DC (BLDC) and brushless AC (BLAC) - or permanent magnet synchronous (PMSM) - motors. Utilizing Texas Instruments' new InstaSPIN technology, the DRV8312-69M-KIT allows developers to quickly identify, automatically tune, and control a three phase motor, providing an "instantly" stable and functional motor control system. Together with InstaSPIN technology, the DRV8312-69M-KIT provides a high-performance, power-efficient, cost-effective sensorless field-oriented control (FOC) platform that speeds development for quicker time to market. Applications include sub-50-V and 3.5-A synchronous motors for driving pumps, gates, lifts, fans, as well as industrial and consumer robotics and automation.

InstaSPIN Simulation Tool

Start your FREE interactive simulation now for 3-phase motor control InstaSPIN-FOC and FAST software sensor enabled devices.

- more

Features

- DRV8312 three phase inverter integrated power module base board supporting up to 50V and 3.5A continuous with controlCARD interface
- C2000 Piccolo TMS320F28069M controlCARD with Isolated XDS100v2 JTAG Emulation
- Isolated XDS100 Emulation, UART, SPI, CAN Connectivity
- 1 BLDC/BLAC NEMA17 55W Motor
- 24 V power supply
- USB Cable
- Quick Start GUI and CCS Integrated Development Environment.
- All software and documentation freely available through MotorWare. Motorware now includes projects for torque, velocity, and position control.
- DRV83xx baseboard also works with MotorWare-supported InstaSPIN solutions using:
  - TMDSCNCD28054MISO
  - TMDSCNCD28027F - Emulator

What's Included

- 1 NEMA17 BLDC/PMSM 55W Motor
- 24V wall power supply (with adapters)
- USB Cable
- DRV8312 baseboard with controlCARD slot
- Piccolo Isolated F28069M controlCARD
- Latest USB contents for the motor kits here.
- See MotorWare™ for latest installation of all software and documentation

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Part Number	Buy from Texas Instruments or Third Party	Buy from Authorized Distributor	Status
DRV8312-69M-KIT: Three Phase BLDC Motor Kit with DRV8312 and InstaSPIN-Enabled Piccolo TMS320F28069M MCU	$299.00(USD) In Stock Typically Ships in 1 to 3 Business Days Buy from TI	Pricing may vary. Buy from distributor	ACTIVE

Contact a Distributor California Go

TI's Standard Terms and Conditions for Evaluation Modules apply.

Technical Documents

Datasheet (1)

Title	Abstract	Type	Size (KB)	Date	Views
TMS320F2806x Piccolo™ Microcontrollers (Rev. E)		PDF	1983	02 Jul 2014	

User Guides (4)

Title	Abstract	Type	Size (KB)	Date	Views
InstaSPIN-FOC and InstaSPIN-MOTION User's Guide (Rev. F)		PDF	39520	15 Jul 2014	6,413
TMS320F2806xM InstaSPIN-MOTION Technical Reference Manual (Rev. B)		PDF	1765	26 Mar 2014	3,725
TMS320F2806xF InstaSPIN-FOC Software Technical Reference Manual (Rev. A)		PDF	475	14 Jan 2014	2,893
InstaSPIN SIM User's Guide	Read Abstract	PDF	1550	14 Jun 2013	1,154

Solution Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
White Goods Solution Guide		PDF	11357	19 Jun 2013	4,147

More Literature (1)

Title	Abstract	Type	Size (KB)	Date	Views
Breakthrough InstaSPIN™-FOC motor control technology is here		PDF	216	17 Oct 2012	1,938

Related Products

Software (3)

Name	Part Number	Software Type
controlSUITE™ Software Suite: Essential Software and Development Tools for C2000™ Microcontrollers	CONTROLSUITE	Software Libraries
Motor kit Application Software for TMDSCNCD28069MISO controlCARDs	MOTORKITSCNCD69MISO	Application Software & Frameworks
MotorWare™ Software	MOTORWARE	Application Software & Frameworks

Development Tools (1)

Name	Part Number	Tool Type
InstaSPIN™ Simulation Tool	INSTASPINSIM	Circuit Design & Simulation

Design Kits & Evaluation Modules (4)

Name	Part Number	Tool Type
controlCARD with Piccolo TMS320F28069MPZT, InstaSPIN-FOC and InstaSPIN-MOTION enabled	TMDSCNCD28069MISO	Evaluation Modules & Boards
GUI Composer Runtime Installation and Webapp for MotorWare Universal GUI	INSTASPINUNIVERSALGUI	Development Kits
High Voltage Motor Control Kit with InstaSPIN-FOC and InstaSPIN-MOTION enabled Piccolo MCU	TMDSHVMTRINSPIN	Evaluation Modules & Boards
Three Phase BLDC & PMSM Motor Kit with DRV8301 and InstaSPIN-enabled Piccolo TMS320F28069M MCU	DRV8301-69M-KIT	Evaluation Modules & Boards

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TI Devices (9)

Part Number	Name	Product Family
TMS320F28052F	Piccolo Microcontroller with InstaSPIN-FOC	Real-time Control
TMS320F28052M	Piccolo Microcontroller with InstaSPIN-MOTION	Real-time Control
TMS320F28054F	Piccolo Microcontroller with InstaSPIN-FOC	Real-time Control
TMS320F28054M	Piccolo Microcontroller with InstaSPIN-MOTION	Real-time Control
TMS320F28062F	Piccolo Microcontroller with InstaSPIN-FOC	Real-time Control
TMS320F28066F	Piccolo Microcontroller with InstaSPIN-FOC	Real-time Control
TMS320F28068M	Piccolo Microcontroller with InstaSPIN-MOTION	Real-time Control
TMS320F28069F	Piccolo Microcontroller with InstaSPIN-FOC	Real-time Control
TMS320F28069M	Piccolo Microcontroller with InstaSPIN-MOTION	Real-time Control

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- drv6301-69m-kit

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