

Brushless motion application sources

Digital Motion Control applications sources for the TMS320F240 or TMS320F243 are supplied with the **DMCD-Pro-S** platform.

The complete source files of the applications are included in the project structure.

With these ready-to-run motion application examples, the designer receives all information required to understand its basic DSP implementation aspects.

The represents therefore a convenient starting point for the development of DMC applications.

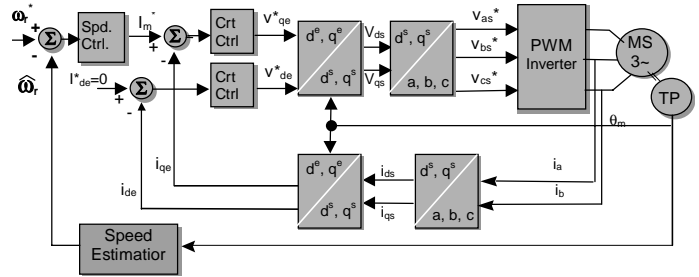
Basic structure of the BLDC application

The application is a speed control application of the brushless motor operating in trapezoidal mode.

The **BLDC** control scheme is presented in the block diagram figure on this page. The scheme is based on the measure of two phase's currents and of the motor position. The speed estimator block is a simple encoder position difference block over one.

Basic structure of the BLAC application

The application is a speed control application of the brushless motor operating in sinusoidal mode.

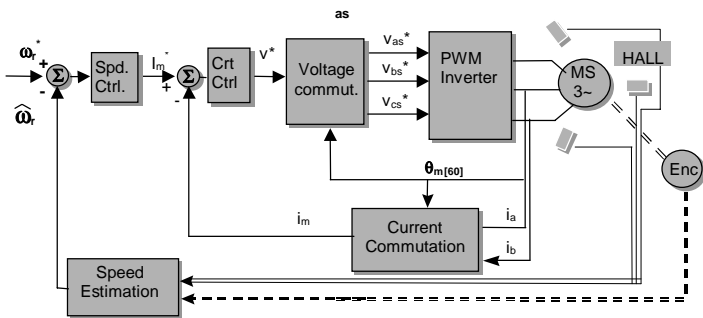


PMSM control scheme

The **BLAC** control scheme is presented in the figure above (PMSM control scheme).

It is based on the measure of two phase currents and the motor position.

The speed estimator block is an encoder position difference block over one sampling period of the speed control loop.



BLDC control scheme

The code is developed both in C language (the main structure of the application), and assembler (the time-critical parts, as controllers, coordinates transformations, etc.).

EVM Compatible

DMCD Pro EVM

This version is the classic digital motion control developer provision without application sources.

It comes with the DSP side monitor code. Programmed to the Flash of your EVM it supports directly serial communication with the DMCD Pro environment.

DMCD Pro-S EVM

This version is similar with the DMCD Pro EVM.

It comes however with the optional application sources.

As an alternative to the use of the EVM module you may use the specific advantages of the DMCD Pro development environment with IMMC24x industrial target board.

The IMMC24x works with the DMCD Pro and DMCD Pro-S.

Ordering Information

IMMC24x/MCK24x compatible

24CSS00004	DMCD Pro	(only available with IMMC24x)
24CSS00005	DMCD Pro-S	(only available with IMMC24x)
P072 000 C00	IMMC240 C00	(TMS320F240)
P081 000 C00	IMMC243 C00	(TMS320F243)

EVM Compatible

24CSS00014	DMCD Pro EVM (for EVM)
24CSS00015	DMCD ProC EVM (for EVM)
24TAN00111	ACPM750 EVM, Power Inverter 115-230VAC, 4A
24TGN00111	RDIM16 EVM Resolver to Encoder Interface

Technosoft offers a full range of advantageous development packages for evaluation and development with the TMS320C24x.

Please ask for our brochures.

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