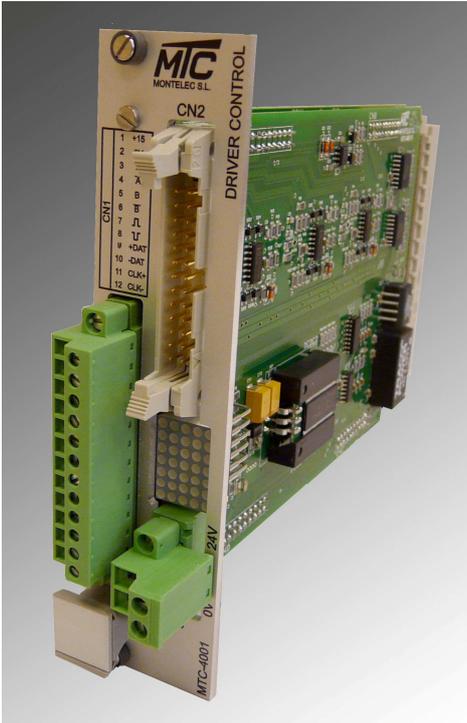# dutt

INVERTER
CONTROLLER MTC-4011

DESCRIPTION

MTC-4011 is a card designed to control inverters up to six IGBTs and three phases. Its main purpose is motor control. It also has a regenerative power control.

This controller have a high level of flexibility and excellent dynamic response. It can be configured precisely to match the needs of each industrial application.

Control unit and power are separated each other, allowing in this case to manage all kind of NFS or higher model power stacks.

For more information see Application Note No. 201.

CHARACTERISTICS

Drive control features are inside the **MTC-4011** card. This allows a precise control on DC motors, brushless motors (torque) and asynchronous in the following modes:

- **Vector control**
- **V/f Control**
- **Open loop**
- **Position, speed and torque controls**
- **Power regeneration**

The following highlights some of its advantages:

- Fast and intuitive parameter setup, checking and monitoring.
- Graphical configuration of the control loop and its parameters.
- Graphical oscilloscope with scaling, triggering and FFT functions for regulation analysis.
- Alarm historic with graphical storage access with only one click!.
- Easy update of the firmware even from internet.
- The encoder signals can be managed via wired or through internal bus. This provides flexibility in complex master / slave motor controls.
- Function blocks of CoDeSys programming environment (www.3s-software.com), allows dynamically modification of the instructions as well as commands related to the different control modes.

INVERTER
CONTROLLER MTC-4011

TECHNICAL SPECIFICATIONS

Size format
Europe size card

Power supply
Card control supply:......................Directly from rack (5V/1A consumption) Encoder and power stage control: .... Through frontal connector

Communications
Power stage: .... 26-wires shielded ribbon cable MTC-4000 PLC: ....Internal bus Configuration software: .... Routing through Ethernet port

Encoder	
Power supply comes from frontal 24V connector (15V converted). Maximum working frequency: 100KHz	
MTC-4011-C	Digital square signal:..................... (Incremental Push-pull) Absolute encoder: .... (SSI)
MTC-4011-S	Sinusoidal signal:....................................... (SinCos, 1Vss) Absolute encoder: .... (SSI)

Control modes
Vectorial control V/f control Open loop control

Control loops
Speed Torque Position

Type of controls
DC current motors Asynchronous motors Brushless (torque) motors
Power regeneration

Switching frequency
Configurable power stage switching frequency: 2KHz 20KHz

Setpoint and working status
Easily configurables from CoDeSys Function Blocks Accessibles through PLC bus

Alarms
Alphanumeric frontal display (led array) Ten alarm historic with graphical storage

Analog inputs
Located in the power stage and connected with ribbon cable to the card 3 current branches.. ±10V 1 temperature ....0-10V 1 DC-link 0-10V