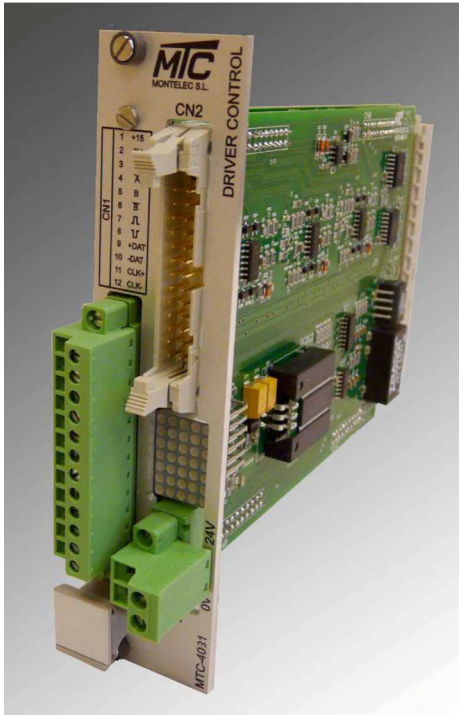


DESCRIPTION



MTC-4031 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 has a high level of flexibility and excellent dynamic response. It can be configured precisely to match the needs of each industrial application.

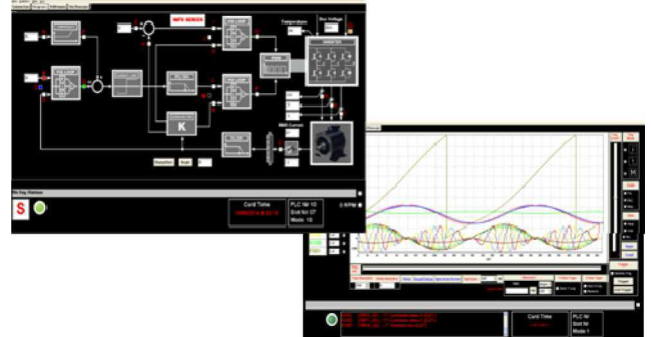
Control unit and power are separated each other, allowing in this case to manage all kind of NFS or higher model power stacks.

For more information see Application Note No. 201.

CHARACTERISTICS

Drive control features are inside the **MTC-4031** 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.

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-4031-C	Digital square signal:..... (Incremental Push-pull) Absolute encoder: (SSI)
MTC-4031-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..... $\pm 10V$ 1 temperature0-10V 1 DC-link0-10V	