

CANopen



QUICK REFERENCE

370 N. MAIN ST., PO BOX 457, MARLBOROUGH, CT 06447
 PH: (860) 295-6102, FAX: (860) 295-6107
 Internet: www.imshome.com, E-Mail: info@imshome.com

Scope of this Document

This Quick Reference covers the specifications and pin configuration relating to the CANopen communications interface and the MD-CC500-000 USB to CANopen dongle.

For power and I/O specifications please refer to the quick reference and hardware manual specific to the product you purchased.

Impacted Products

The following Products are available with CANopen Communications:

1. MDrivePlus Motion Control (All frame sizes)
2. MForce MicroDrive Motion Control
3. MForce PowerDrive Motion Control

The Product Manuals

The manuals associated with your product:

1. DSP-402 Application Guide
2. MDrivePlus CANopen Hardware Manual
3. CANopen MForce Hardware Manual

Available from the IMS web site at <http://www.imshome.com>.

Specifications

Communications Specifications

Protocol	CAN 2.0B Active
Communications Profile	CI A DS-301
Device Profile	CI A DSP-402
Isolation	Galvanic

Motion Specifications

Steps Per Revolution (Fixed)	51200
Counters	
Counter 1 (C1) Type	Position
Counter 2 (C2) Type	Encoder
Resolution	32 Bits
Maximum Edge Rate	5 MHz
Velocity	
Range	±5,000,000 Steps/Sec.
Resolution	0.5961 Steps/Sec.
Acceleration/Deceleration	
Range	1.5×10^9 Steps/Sec. ²
Resolution	90.9 Steps/Sec. ²

Software Specifications

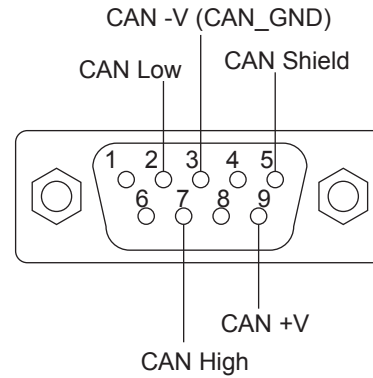
Setup Parameters	Storable to NVM
------------------	-----------------

Transmit PDOs	3 Dynamically Mappable
Receive PDOs	3 Dynamically Mappable
Manufacturer Objects	I/O Configuration, Run/Hold Current
Modes of Operation	Profile Position, Profile Velocity, Homing Mode
I/O Functions	
Input Functions	General Purpose, Homing Mode Profiles
Output Functions	General Purpose

CANopen Connector Pin Assignment

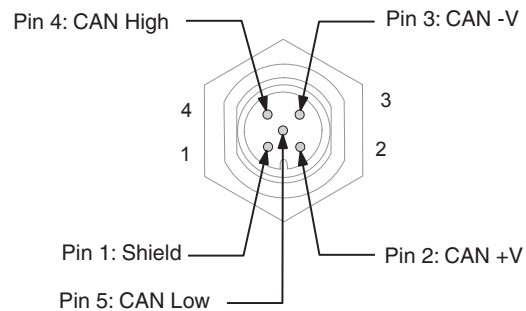
Connector pin assignment conforms to CiA DR-303-1. IMS products will have either 9-Pin D-Sub (Male) or a 5-Pin Micro Style (M12, Male) connector.

9-Pin D-Sub Connector (P2)



9-Pin D-Sub P2 Pin Configuration		
D-Sub 9-Pin	Function	Description
Pin 1	N/C	No Connect
Pin 2	CAN LOW	CAN_L bus line (dominant low)
Pin 3	CAN -V	CAN Communications Ground
Pin 4	N/C	No Connect
Pin 5	CAN Shield	Optional CAN Shield
Pin 6	CAN -V	Optional Ground
Pin 7	CAN HIGH	CAN_H bus line (dominant high)
Pin 8	N/C	No Connect
Pin 9	CAN +V	+7 to +30 VDC Supply

5-Pin Micro Style (M12) Connector (P2)



5-Pin Micro Style (M12) P2 Pin Configuration		
5-Pin M12	Function	Description
Pin 1	CAN Shield	Optional CAN Shield
Pin 2	CAN +V	+7 to +30 VDC Supply
Pin 3	CAN -V	CAN Communications Ground
Pin 4	CAN HIGH	CAN_H bus line (dominant high)
Pin 5	CAN LOW	CAN_L bus line (dominant low)

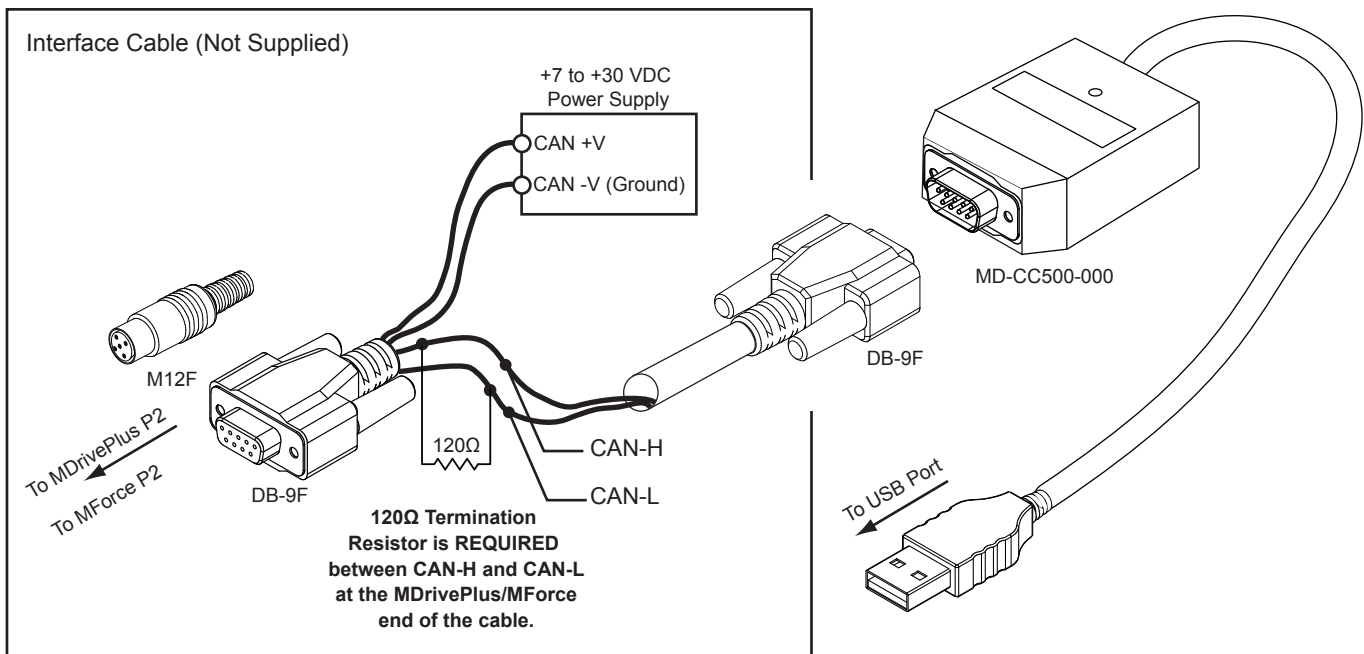
MD-CC500-000 Interfaces to the CANopen MDrivePlus & MForce Products

Installation Instructions

1. Install the MD-CC500-000 adapter per the Phytex PCAN-USB Operating Instructions included on the PEAK CD included with the product.
2. Install the IMS CANOpen_Tester Interface available online at <http://www.imshome.com/canopen.html>
3. Using the interface cable (not supplied), connect the MDrivePlus/MForce product to the MD-CC500-000.
4. Apply Power to the MDrivePlus/MForcePlus CANopen product.

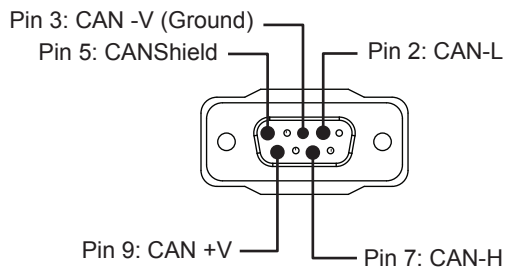
Interface Cable Construction

To connect the MD-CC500-000 dongle to the MDrivePlus/MForce CANopen product an interface cable will need to be constructed. The figure below shows the parts required.



DB-9F

9-Pin D-Sub Connector Front View



M12F

5-Pin M12 Circular Connector Front View

