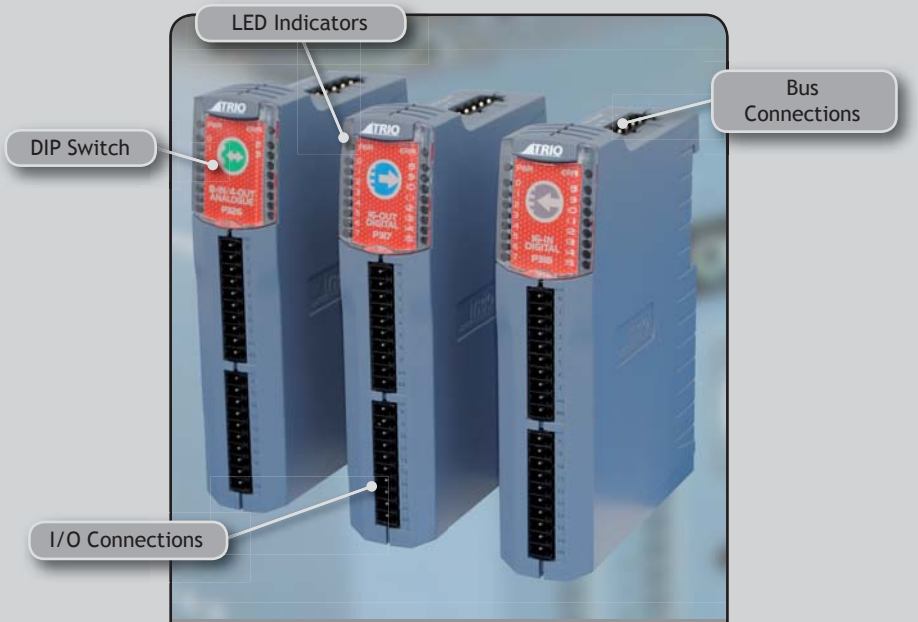
TRIO
MOTION TECHNOLOGY



CAN I/O MODULES

Quick Connection Guide

(Please refer to the ***Motion Coordinator*** Technical Reference Manual 7 for Full Details)

DESCRIPTION

Trio CAN Input and CAN Output modules allow I/O expansion for the MC464 and for most of the range of MC2xx and MC3xx ***Motion Coordinators***. The number of CAN Input and CAN Output modules that can be connected to a single network depends on which master is used.

MC464 MASTER

Up to 16 CAN 16-Output modules and up to 16 CAN 16-Input modules may be connected allowing up to 512 channels in addition to the internal channels built-in to the ***Motion Coordinator***. Up to 4 CAN Analogue I/O modules may be connected, allowing up to 32 analogue input channels and up to 16 analogue output channels.

MC2XX / MC3XX MASTER OR MC464 WITH P315/P316 ON THE CANBUS

CAN 16-Output modules and CAN 16-Input modules may be mixed with CAN 16-I/O modules up to a total of 16 modules allowing up to 256 input/output channels in addition to the internal channels built-in to the ***Motion Coordinator***.

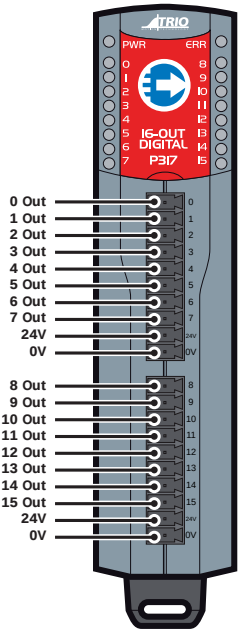
Up to 4 CAN Analogue I/O modules may be connected, allowing up to 32 analogue input channels to be used.

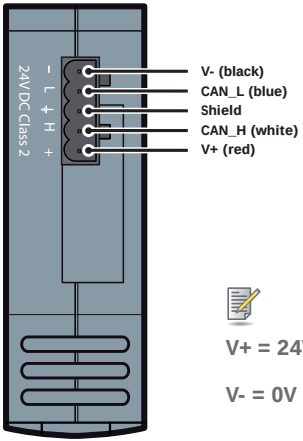
Note that the analogue output channels may not be accessible from MC2xx or MC3xx ***Motion Coordinators***.

CAN 16-Output Module (P317)

CONNECTIONS

Power supply: 24V dc Class 2 transformer or power supply. +/-20%
Output bank 1: 8 x 24V dc 250 mA Outputs
Output bank 2: 8 x 24V dc 250 mA Outputs
Max current per output bank: 1 Amp
Isolation between output banks: 1,500V DC
Isolation outputs/CAN: 1,500V dc





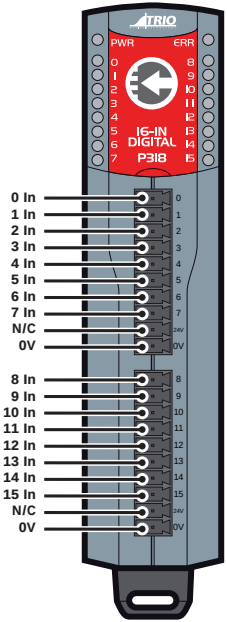
V+ = 24V

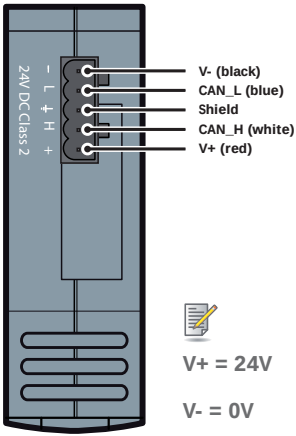
V- = 0V

CAN 16-Input Module (P318)

CONNECTIONS

Power supply: 24V dc Class 2 transformer or power supply. +/-20%
Input bank 1: 8 x 24V dc inputs. 0V common
Input bank 2: 8 x 24V dc inputs. 0V common
Isolation between input banks: 1,500v DC
Isolation inputs/CAN: 1,500V dc





V+ = 24V

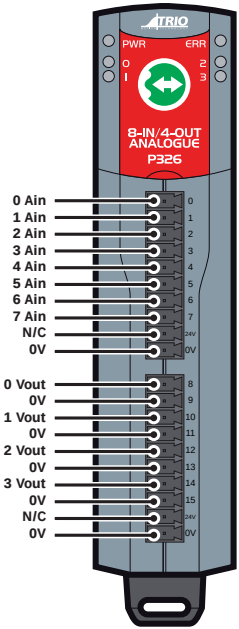
V- = 0V

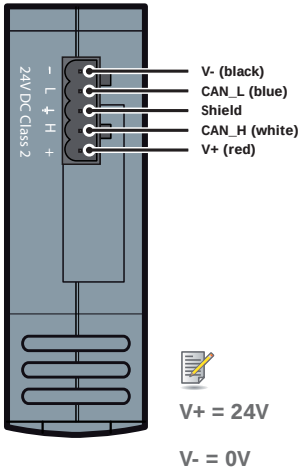
CAN Analogue I/O Module (P326)

CONNECTIONS

Power supply: 24V dc Class 2 transformer or power supply. +/-20%
Analogue inputs: 8 x 12 bit, +/-10V, single ended, 0V common
Analogue outputs: 4 x 12 bit, +/-10V, single ended, 0V common

I/O is opto-isolated from CANbus.



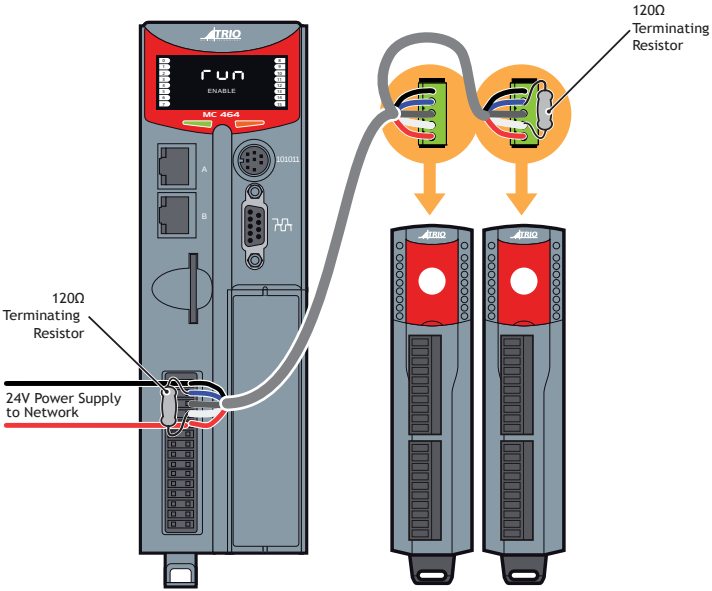


BUS WIRING

The CAN 16-I/O Modules and the ***Motion Coordinator*** are connected together on a CAN network. Terminate both ends of the network with 120Ω, 1/4W, 1% metal film resistors between CAN_H and CAN_L at both ends of the network.

The CAN 16-I/O modules are powered from the network. The 24V supply for the network must be externally connected. The ***Motion Coordinator*** does NOT provide the network power.

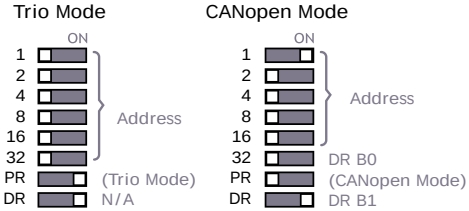
Use recommended CANbus specification cables.



P317 - It is recommended that you use a separate power supply from that used to power the digital outputs to power the network as switching noise from the I/O devices may be carried into the network.

DIP SWITCH SETTINGS P317, P318

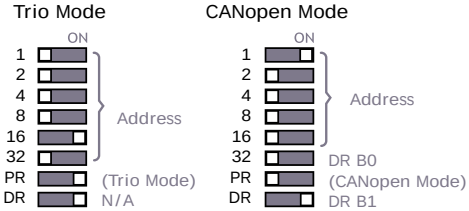
Trio mode module addresses must be set contiguously starting at address 0.



DR B0	DR B1	Data Rate Bit/s
0	0	125K
1	0	250K
0	1	500K
1	1	1M

DIP SWITCH SETTINGS P326

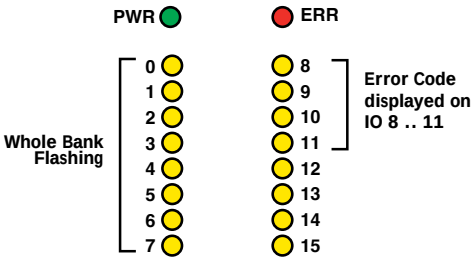
Trio mode module addresses must be set to 16...19.



DR B0	DR B1	Data Rate Bit/s
0	0	125K
1	0	250K
0	1	500K
1	1	1M

LED ERROR CODES

When an error occurs on a CAN I/O module, the ERR LED will be lit and the fault code is represented by a binary number displayed on the leds.



Code	Error Description
1	Invalid Protocol
2	Invalid Module Address
3	Invalid Data Rate
4	Uninitialised
5	Duplicate Address
6	Start Pending
7	System Shutdown
8	Unknown Poll
9	Poll Not Implemented
10	CAN Error
11	Receive Data Timeout

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