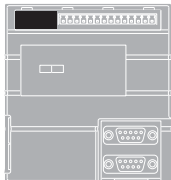


MOTION COORDINATOR
MC302X
Quick Connection Guide

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

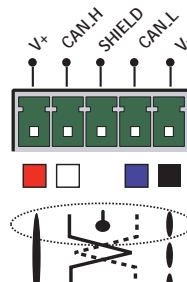
5-WAY CONNECTOR



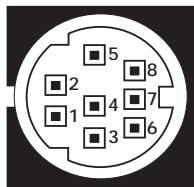
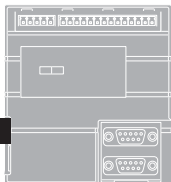
This is a 5 way 3.81mm pitch connector. The connector is used both to provide the 24 Volt power to the MC302X and provide connections for I/O expansion via Trio's P316 and P325 CAN I/O expanders. A 24V dc, Class 2 transformer or power source must be provided as this powers the unit.

This 24 Volt input is internally isolated from the I/O 24 Volts and the +/-10V voltage outputs.

The 24V (V+) and 0V (V-) MUST be connected as they power the MC302X. The Shield MUST also be connected to ground as it provides the EMC screen for the Motion Coordinator. The CAN connections are optional.



SERIAL CONNECTIONS

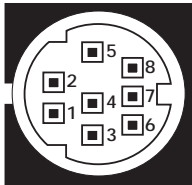
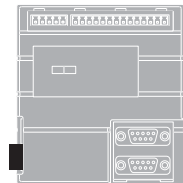


Serial Connector A

Pin	Function	Note
1	No Connection	Serial Port #0
2	No Connection	
3	RS232 Transmit	
4	RS232 0V	
5	RS232 Receive	
6	No Connection	
7	No Connection	
8	No Connection	

Note: Port 0 is the default programming port for connection to the PC running *Motion Perfect*.

SERIAL CONNECTIONS

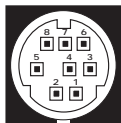
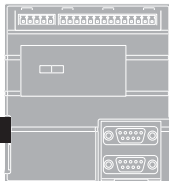


Serial Connector B

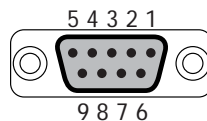
Pin	Function	Note
1	RS485 Data In A Rx+	Serial Port #1
2	RS485 Data In B Rx-	
3	RS232 Transmit	Serial Port #1
4	RS232 0V	
5	RS232 Receive	Serial Port #1
6	No Connection	
7	RS485 Data Out Z Tx-	
8	RS485 Data Out Y Tx+	

Note: Option for port #1 to be either RS232 or RS485

SERIAL CABLE

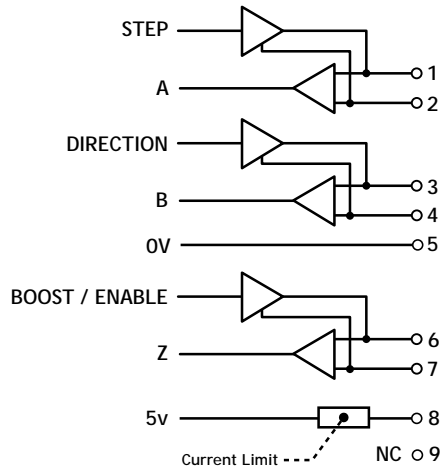
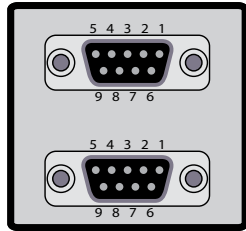
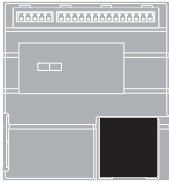


- 3 ————— 2 - Rx
- 5 ————— 3 - Tx
- 4 ————— 5 - Gnd
- 7 - RTS
- 8 - CTS



Motion Coordinator to "AT" style PC with 9 pin serial connector

STEPPER OUTPUTS / ENCODER INPUTS

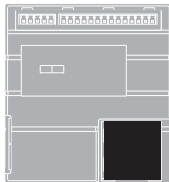


Pin	Servo Axis	Stepper Axis
1	Enc. A	Step +
2	Enc. /A	Step -
3	Enc. B	Direction +
4	Enc. /B	Direction -
5	0V	0V
6	Enc. Z	Boost +
7	Enc. /Z	Boost -
8	5V	5V
9	Not Connected	Not Connected

Current limit is 150mA total, shared between all outputs.

STEPPER OUTPUTS / ENCODER INPUTS

(CONTINUED)



Default ATYPE Configuration:

Axis 0: Voltage output servo axis with encoder feedback ATYPE AXIS(0)=2
Axis 1: Encoder feedback axis for synchronisation ATYPE AXIS(1)=3

Stepper Configuration:

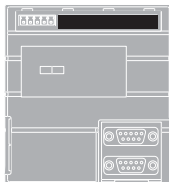
Axis 0: Step and direction differential outputs ATYPE AXIS(0)=1
Axis 1: Step and direction differential outputs ATYPE AXIS(1)=1

Stepper/Encoder Configuration:

Axis 0: Encoder feedback axis for synchronisation ATYPE AXIS(0)=3
Axis 1: Step and direction differential outputs ATYPE AXIS(1)=1

Changes to ATYPE should be set prior to enabling the axes with WDOG=ON. This statement should ideally be placed in the STARTUP program. See user manual for other ATYPE combinations.

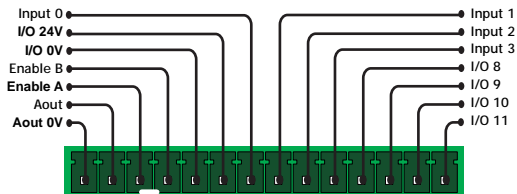
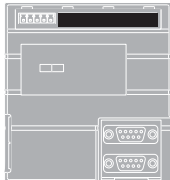
AMPLIFIER ENABLE (WATCHDOG) RELAY OUTPUT



An internal relay (Enable A and Enable B) is used to enable external amplifiers when the controller has powered up correctly and the system and application software are ready. The amplifier enable is a single pole solid state relay with a set of normally open volt free “contacts”.

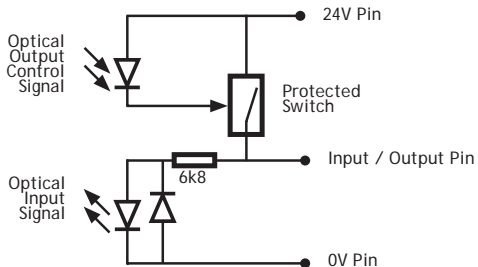
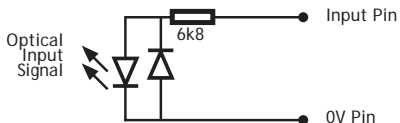
ALL STEPPER AND SERVO AMPLIFIERS MUST BE INHIBITED WHEN THE AMPLIFIER ENABLE OUTPUT IS OPEN CIRCUIT

I/O CONNECTOR 1

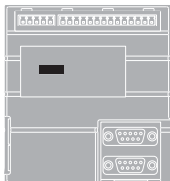


I/O Connector

Analogue Output / WDOG / Inputs 0-3 / I/O 8-11



LED ERROR CODES



OK	STATUS	No power or critical fault
OK	STATUS	Normal operation
OK	STATUS	Enable relay open
OK	STATUS	Enable relay energised
OK	STATUS	Error in motion system (flashing)

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