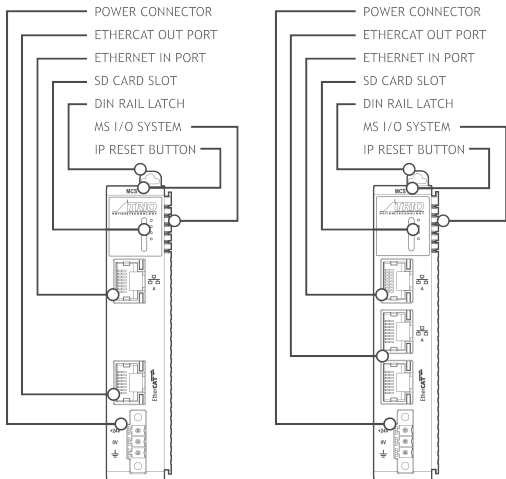




A MEMBER OF THE ESTUN GROUP



## QUICK START GUIDE

# MCS 30 | MCS 40 | MCS 50

P619 | P620 | P625

## SAFETY WARNING

During the installation or use of control systems, users of Trio products must ensure that there is no possibility of injury to any person or damage to machinery.

Control systems, especially during installation, can malfunction or behave unexpectedly. Bearing this in mind, users must ensure that even in the event of a malfunction or unexpected behaviour, the safety of an operator or programmer is never compromised.

## ENVIRONMENTAL

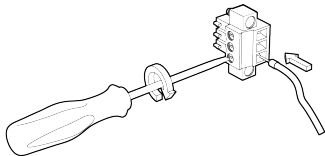
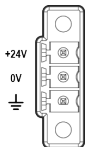
Operating Temperature: -20° to 55° (see user manual for details).

## CONNECTORS

Power (24V) connector:

Note: Use ferrules on all wires for best connection.

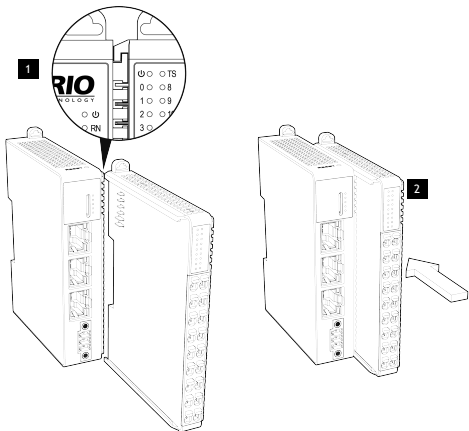
1. Connection: Push wire into hole of connector.  
**Important:** Use a small flat-bladed screwdriver to tighten the three screws onto the wires.
2. Removing the wires is the opposite procedure.



## ASSEMBLING THE MS I/O SYSTEM

### INSERTION

1. Ensure system is powered off. Align the Motion Slice I/O Module guide rails (top and bottom) to the corresponding guide rails on the controller or module.
2. Carefully slice the module back, engaging the blades, until it clicks into the DIN rail at the rear.



### REMOVAL

1. Lift the DIN rail latch at the rear of the controller or module to be removed.
2. Carefully slide the module forward, disengaging the blades, until it is free of the guide rails.



## MCS 30 (P619) & MCS 40 (P620)

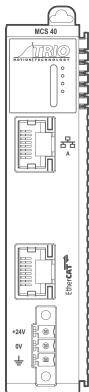
The MCS 30 & MCS 40 Flexible Machine Controllers provide performance for both motion control and general automation applications. They connect either directly to MS I/O slices via the MS Bus or can connect remotely via the MS EC coupler. An Ethernet port support application programming along with HMI and PLC protocols.

### CONNECTIONS

Power Supply	24V $\pm$ 10%
Ethernet Connection	RJ45 x 1
EtherCAT Connection	RJ45 x 1
EtherCAT Update Rates	1ms, 2ms, 4ms
Data Rate	100Mbit/s
Network Cable	CAT5e min
Dimensions WxHxD (mm)	23 x 100 x 75

### LED'S

 Status	Red
 Power Supply	Green
<b>RN</b> EtherCAT State	Green
<b>TS</b> Telegram Status (MS Bus)	Green





## MCS 50 (P625)

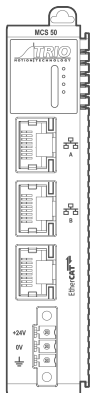
The MCS 50 Flexible Machine Controller provides performance for both motion control and general automation applications. It connects either directly to the MS I/O system via the MS Bus or can connect remotely via the MS EC coupler. Two Ethernet ports support application programming along with HMI and PLC protocols.

### CONNECTIONS

Power Supply	24V $\pm$ 10%
Ethernet Connection	RJ45 x 2
EtherCAT Connection	RJ45 x 1
EtherCAT Update Rates	1ms, 2ms, 4ms
Data Rate	100Mbit/s
Network Cable	CAT5e min
Dimensions WxHxD (mm)	23 x 100 x 75

### LED'S

 Status	Red
 Power Supply	Green
RN EtherCAT State	Green
TS Telegram Status (MS Bus)	Green



## MICRO-SD CARD SLOT

The micro-SD Card slot provides a means of transferring programs, firmware and data without a PC connection. The memory slot is compatible with a wide range of micro-SD cards up to 32Gbytes using the FAT32 compatible file system.

## ETHERNET PORT(S)

The upper RJ45 connector is provided for use as the primary programming interface.

The Trio programming software, *Motion Perfect*, must be installed on a Windows based PC and be fitted with an Ethernet connection.

The default IP address is 192.168.0.250. This address may be changed and will be retained after a power cycle.

If the IP address is not known, holding the reset button during power up will force the IP address to it's default value of 192.168.0.250 and prevent any program execution.

This Ethernet port may also be used for other factory communications (e.g. Modbus TCP). See User Manual for further details

Recommended cable is CAT5e shielded SF/UTP.

On **MCS 50**, the additional Ethernet port (middle port) works in conjunction with the top Ethernet port as an Ethernet switch. Either the top or middle port can be used for Ethernet communications. The top port and middle port both share the same IP address.

## ETHERCAT PORT

The lower RJ45 connector is dedicated as an EtherCAT master. EtherCAT devices such as drives and I/O can be connected to this device in a chain.

Recommended cable is CAT5 shielded SF/UTP. Ether symmetric or cross-over cables can be used between EtherCAT devices.



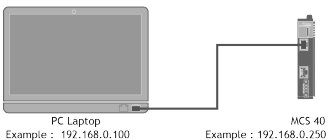
## NETWORK SETUP

### Point-to-point or closed network

(No DHCP server)

*The PC MUST be set to a fixed IP\_ADDRESS.*

The first 3 octets MUST match the controller, the last MUST be different, but not 000 or 254 or 255



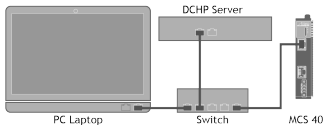
### Setting a fixed IP address

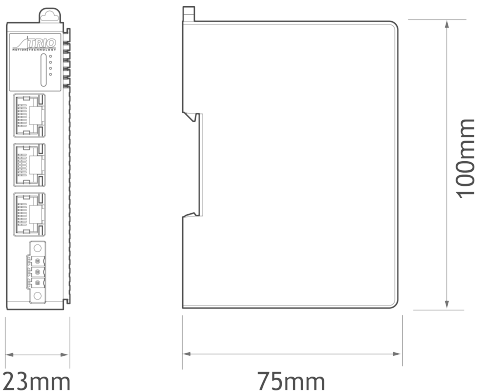
In Windows 11. Open “Network and Sharing Centre” then change “Adapter Settings”. Select the properties of the Local Area Network and the IPv4 properties. The IP Address is set to 192.168.0.100 with subnet mask set to 255.255.255.0. Assuming that the MCS 40 and MCS 50 has IP\_ADDRESS=192.168.0.250 or similar.



### Network connection

The controller has a fixed IP address and does not support dynamic IP address allocation (DHCP). When connecting the controllers Ethernet port to a PC, or other Ethernet device, the first 3 octets MUST match on controller and network, the last octet MUST be different to any other device on the network.





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CAD data Drawings to aid packaging and mounting are available in various formats from the Trio web site. Products should be wired by qualified persons.  
Specifications may change without notice. E & OE

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