

Model 9120

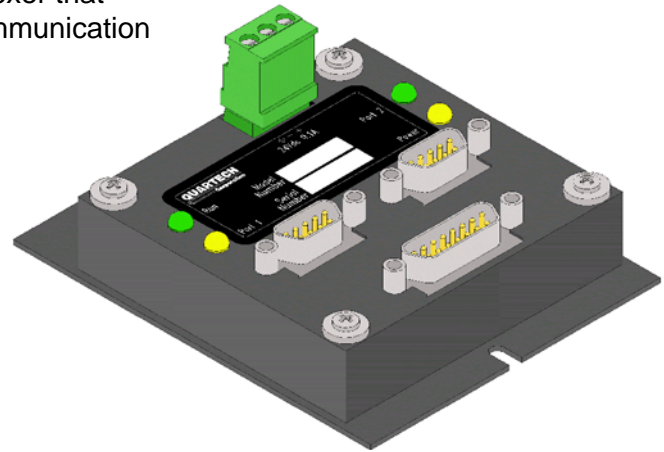
Two Port Multiplexer

TS9120-Rev 0

The Model 9120 is a serial communication multiplexer that will allow two devices to access a single serial communication port on a host device.

Protocol Considerations...

The 9120 is intended for use in a master/slave protocol environment. The host device would be the slave and two master devices would share access privilege to the host device. The 9120 simply switches transmit and receive circuits and has no effect on the communication protocol, baud rate, or byte format used.



Hardware Considerations...

The two input ports on the 9120 are RS-232. The output port that connects to the host device may be ordered as RS-232 or RS-485. The 9120 requires source power from a 12 to 24 volts DC power supply.

How it works...

The 9120 monitors the Request-To-Send signals (RTS) of the two input ports. The first master device to assert RTS will receive a Clear-To-Send signal (CTS) from the 9120. At the same time the transmitter and receiver of the output port will be connected to the input port receiving the CTS signal. The 9120 will ignore the other input port. The master device is free to complete a communication transaction. Once the transaction is complete the master device must de-assert its RTS signal which will allow the 9120 to begin monitoring the RTS signals of both input ports.

It is the responsibility of the master devices to share access to the slave device by controlling their RTS signals. A master device must be tolerant of the latency between asserting RTS and receiving CTS while another master device is executing a serial transaction. It is good practice for a master device to execute only a single transaction each time it receives the CTS signal.

Quartech products that are designed to function in a master/slave environment are typically configured to communicate through a multiplexer without any special setup. These products include the Quartech 2800, 2900, 3800, and 9112. The Quartech 2174 cable is available for connecting these products to the 9120.

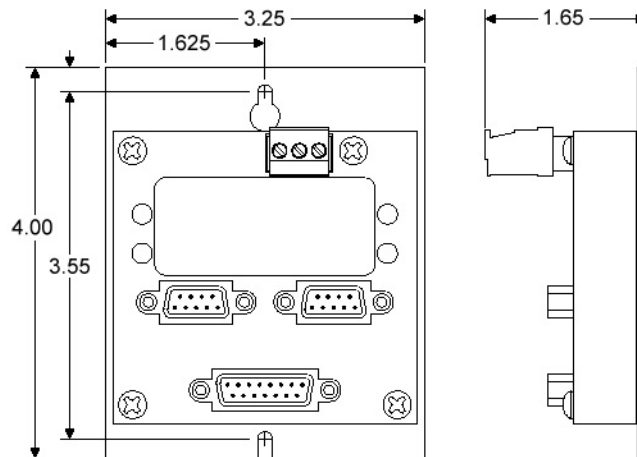
The 9120 is available in to configurations specified by a model number.

Model 9120-0	Two Port Multiplexer with RS-232 Input Ports and RS-232 Output Port.
Model 9120-1	Two Port Multiplexer with RS-232 Input Ports and RS-485 Output Port.

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Model 9120 Mounting Dimensions



Dimensions in inches

Use #6-32 Mounting Screws

Port Pin Assignments

Signal names are relative to the connected device.

RS-232 Input ports	RS-232 Output Port	RS-485 Output Port
Pin 2 Transmit Data (input)	Pin 2 Receive Data (output)	Pin 6 Receive A (output)
Pin 3 Receive Data (output)	Pin 3 Transmit Data (input)	Pin 14 Receive B (output)
Pin 4 Request-To-Send (input)	Pin 4 Clear-To-Send (output)	Pin 13 Transmit A (input)
Pin 5 Clear-To-Send (output)	Pin 5 Request-To-Send (input)	Pin 12 Transmit B (input)
Pin 7 Signal Common	Pin 7 Signal Common	Pin 7 Signal Common

LED Status Indicators

The 9120 has four Light Emitting Diode (LED) status indicators that are labeled on the front cover. The green Power LED will be lit when power is being supplied to the device. The green Running LED will flash when the 9120 is ready for communications and be off when it is not. The 9120 will ignore the input ports when the Running LED is off. On the 9120 with the RS-485 output this LED will flash as long as power is available. On the 9120 with the RS-232 output this LED will flash only when the Request-To-Send signal (pin 5) is asserted. In most cases the Request-To-Send and Clear-To-Send signals are wired together in the cable plugged into the output port so that the Running LED will flash only if the cable is plugged in. A Yellow Port LED will light when the Clear-To-Send signal associated with that port is asserted. This associated input port is connected to the output port while the LED is lit allowing the master device to access the slave device.