

Description

Operating as a Client

- This driver poll's L Connection capable devices, reading status and other information.
- The retrieved data is loaded into two data arrays – one for status bits and one containing values.
- The location of each data element within the arrays is fixed. The locations are provided in the driver manual.
- The driver polls only one device per query – broadcasts (address zero) are not supported.
- The driver can poll the potential 255 devices per port.
- Set points, control data and operating modes can be written to the remote devices.
- The Client requests and then stores a sorted alarm table when a new alarm is detected.

Operating as a Server

- The driver can emulate up to 255 devices per port.
- Limited functionality is supported and the driver is only capable of responding with status and set point data.
- Commands used to change operating mode, clear timers, etc. have no meaning when sent to the driver acting as a Server.
- The Server responds with data which must be arranged in the FieldServer's Data Arrays in the format specified in the driver manual.
- No value validation is performed. Out of range values and illegal status/mode combinations are therefore possible. Master is responsible for validation before sending.

Guest Support

- Guest devices may take over the Client functions. The driver will reclaim the master after some time period has expired. During the period where control is relinquished the Client driver will not poll any remote devices and data will not be updated.
- The Client may be configured to operate as a guest or master. As a master it will poll devices as configured. As a guest it will attempt to become the master and if successful will poll devices for data for short periods and then relinquish control to the previous master and become idle (no new data) until it becomes the master again.

Connection Facts

FieldServer Mode	Nodes	Comments
Client	1	Only 1 Client node allowed on Multidrop systems
Server	255	

Formal Driver Type

Serial, Client or Server

Compatibility

FieldServer Model	Compatible	FieldServer Model	Compatible
ProtoCessor	Yes	QuickServer FS-QS-10xx	Yes
ProtoCarrier	Yes	QuickServer FS-QS-12xx	Yes
ProtoNode	Yes	QuickServer FS-QS-20xx	Yes
ProtoAir	Yes	QuickServer FS-QS-22xx	Yes
		QuickServer FS-QS-3x10-F	Yes

Connection Information

Connection Type: RS-485 (Half-Duplex)

Baud Rates: 9600

Data Bits: 8

Stop Bits: 1 (Vendor limitation)

Parity: None (Vendor limitation)

Multidrop Capability: Yes

Devices Tested

Device	Tested (Factory, Site)
None	None

Device Status Data Arrangement

When the driver (acting as a Client) reads a device’s status, the driver will update two FieldServer’s Data Arrays. The first Data Array will hold integer/float values and will store setpoints, sensor readings and modes states reported as a number. The second Data Array will store bit type values indicating on/off type states – this will facilitate the FieldServer serving status type data via some other driver to an upstream device.

The location’s in the FieldServer’s Data Arrays are fixed and are defined in the driver manual.

Unsupported Devices/Limitation or Protocol Options

Device	Details
All	Limitation: Commands to clear timers, set modes, enable/ disable items have little effect on the Server side of this driver. In most cases they cause the Server to update an array element to a value (for example. A value of 1 for an enable command) but the Server does not emulate the operation of a controller.
All	Limitation: ‘Write Through’ not supported.
All	Limitation: “Port expander” not supported.
All	Limitation: Commands to change remote devices address are not supported. The FieldServer cannot change the address of a device nor can it have its address changed when configured as a Server.
All	Limitation: Request for an expanded device ID is only capable of storing a maximum of 10 bytes of data. A request to echo data can handle a maximum of 10 bytes of data. A request to clear timers can only clear a maximum of 10 array elements. A Group HVAC command can only send a maximum of 20 bytes of data.
All	The driver cannot process Broadcast commands (commands sent to address zero).