# DF1

## Description

The DF1 driver allows the FieldServer to transfer data to and from devices over RS-232 using DF1 protocol. The FieldServer can emulate either a Server or Client.

## Connection Facts

| FieldServer Mode | Nodes | Comments |
|---|---|---|
| Maximum remote Nodes the driver Client can connect to | 1 | Only one client per port |
| Maximum remote Nodes that can connect to the Driver Server | 1 | Only one client per port |
| Maximum local Client nodes the driver can emulate on one platform | 254 | Acting as single client to remote gateway |
| Maximum local Server Nodes the Driver can emulate on one platform | 254 | Acting as gateway to virtual nodes |
| Capable of Emulating local Server and Client at the same time? | Yes | |

## Formal Driver Type

Serial, Client or Server

## Compatibility

| FieldServer Model | Compatible | FieldServer Model | Compatible |
|---|---|---|---|
| ProtoCessor | Yes | QuickServer FS-QS-10xx | No |
| 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-232 (half-duplex/full duplex)

**Baud Rates:** 300 to 115200; 9600 (Vendor limitation)

**Data Bits:** 8 (Vendor limitation)

**Stop Bits:** 1, 2

**Parity:** Odd, Even, None

**Multidrop Capability:** No

**Error Checking:** CRC, BCC (BCC recommended)

## Devices Tested

| Device | Tested (FACTORY, SITE) |
|---|---|
| SLC 5/01 | Factory |
| SLC 5/02 | Factory |
| SLC 5/03 | Factory |
| SLC 5/04 | Factory |
| PLC 3 | Site |
| PLC 5 | Site |

## Communication Functions

### Data Types Supported

| FieldServer Data Type | Description (or Device Data Type) |
|---|---|
| I | Input |
| O | Output |
| B | Bit |
| N | Integer |
| C | Counter |
| T | Timer |
| S | System Status |
| St | String |
| F | Float |

### Commands Supported

The following commands are supported by the FieldServer for the various PLC types.

| PLC_ Type | File_ Type | FNC | Read | FNC | Write | Typical Command |
|---|---|---|---|---|---|---|
| PLC 3 | N | 1 | Range Read | 0 | Range Write | N7: 3, L5 |
| | F | 1 | Range Read | 0 | Range Write | F12: 3 L5 |
| | B | 1 | Range Read | 2 | Bit Write | B3/4: 5 L5 |
| PLC 5 | N | 1 | Range Read | 0 | Range Write | N7: 3, L5 |
| | F | 1 | Range Read | 67 | Typed Write | F12: 3 L5 |
| | B | 1 | Range Read | 26 | Read Modify Write | B3/4: 5 L5 |
| SLC5 | N | A2 | Protected Typed Logical Read | AA | Protected Typed Logical Write | N7: 3, L5 |
| | F | A2 | Protected Typed Logical Read | AA | Protected Typed Logical Write | B3/4: 5 L7 |
| | B | A2 | Protected Typed Logical Read | AB | Protected Typed Logical Write | B3/4: 5 L8 |
| | I | A2 | Protected Typed Logical Read | - | - | I: 13. L5 |
| | O | A2 | Protected Typed Logical Read | - | - | O: 13, L5 |

### Unsupported Functions and Data Types

| Function | Reason |
|---|---|
| Programming messages | FieldServer is a data transfer device, thus programming messages are not required |