

### 1 DESCRIPTION

The Veeder-Root Serial Driver allows the FieldServer to transfer data to and from devices over either RS-232 or RS-485 ports using Veeder-Root protocol as defined in Veeder Root Document 576013-635 Revision J. The Veeder-Root Driver supports TLS350 as per Veeder-Root Document 576013-635 Revision Y, and TLS450 as per Veeder-Root Document 577013-950 Revision G. Since the data protocol is the same for the TLS-350+ as for TL-S350, it is assumed that the driver will support the TLS350+ but this has not been tested. The Driver also successfully communicates with the TLS-450 as it has the same data protocol. Please refer to the driver manual for hardware connections.

The FieldServer emulates a Client.

The Veeder-Root Serial Driver is a poll response driver. Only one query or command can be processed at a time.

A limited set of the queries and commands defined in the protocol specification have been implemented. The reason for the limitation is two-fold. Firstly, not all commands/queries will have any meaning to a Server device as they are principally defined to configure the Veeder-Root Device. Secondly, some commands return very complex data sets which cannot be processed in a method suitable for loading into the FieldServer's Data Arrays.

The driver can show communications statistics, which can be monitored using a Server device.

#### 1.1 Connection Facts

FieldServer Mode	Nodes	Comments
Client	1 to 8 depending on the FieldServer Type	Only one node can be connected per port

### 2 FORMAL DRIVER TYPE

Client Only

### 3 COMPATIBILITY

FieldServer Model	Compatible
FS-B35 Series	Yes
ProtoNode/ProtoAir	Yes
QuickServer FS-QS-10xx	No
QuickServer FS-QS-12xx	Yes
QuickServer FS-QS-20xx	No
QuickServer FS-QS-22xx	Yes

### 4 CONNECTION INFORMATION

Connection Type: RS-232 or RS-485 (Half-Duplex)  
 Baud Rates: Standard baud rates up to 9600 (TLS-350), 115200 (TLS-450)  
 Data Bits: 7,8  
 Stop Bits: 1,2  
 Parity: Odd, Even, None  
 Multidrop Capability: No

### 5 DEVICES TESTED

Device	Tested (FACTORY, SITE)
TLS-350	SITE
TLS-450	SITE

### 6 COMMUNICATION FUNCTIONS

#### 6.1 Supported Functions – TLS-350

The revision number indicates the minimum Veeder-Root firmware revision required for support of the function. The function numbers are hexadecimal numbers.

Function	Revision	Description
<b>SYSTEM REPORTS (7.2.1)</b>		
101	1	System Status Report
102	1	System Configuration Report
113	14	Active Alarm Report
114	19	Cleared Alarm Report
<b>IN-TANK REPORTS (7.2.2)</b>		
201	1	In-Tank Inventory Report
202	1	In-Tank Delivery Report
204	1	In-Tank Shift Inventory Report
20D	15	In-Tank Stick Height Report
<b>SENSOR REPORTS (7.2.3)</b>		
301	1	Liquid Sensor Status Report
306	1	Vapor Sensor Status Report

Function	Revision	Description
311	1	Groundwater Sensor Status Report
341	2	Type A (2 Wire CL) Sensor Status Report
346	2	Type B (3 Wire CL) Sensor Status Report
34B	4	Universal Sensor Status Report
<b>LINE LEAK REPORTS (7.2.4)</b>		
381	7	Pressure Line Leak Status
386	10	WPLLD Line Leak Status
<b>I/O DEVICE REPORTS (7.2.6)</b>		
401	1	Input Status Report
406	1	Relay Status Report
<b>SYSTEM DIAGNOSTIC REPORTS (7.4.1)</b>		
901	1	Self Test Results Report
902	1	System Revision Level Report
905	15	System Revision Level Report II
<b>CONTROL FUNCTIONS (7.1)</b>		
1	1	System Reset
2	1	Clear Power Reset Flag
3	1	Remote Alarm Reset
31	10	Confirm Clear Function
51	1	Clear In-Tank Delivery Reports
52	1	Start In-Tank Leak Detect Test
53	1	Stop In-Tank Leak Detect Test
54	5	Delete CSLD Rate Table
81	7	Start Pressure Line Leak Test (3.0 GPH only in V18)
82	7	Stop Pressure Line Leak Test
83	10	Start WPLLD Line Leak Test (3.0 GPH only in V18)
84	10	Stop WPLLD Line Leak Test

### 6.2 Supported Functions – TLS-450

Function	Revision	Description
<b>SYSTEM REPORTS</b>		
101	1	System Status Report
<b>IN-TANK REPORTS</b>		
201	1	In-Tank Inventory Report