



## **FieldServer Driver FS8700-102 InfraTox Serial Driver**

### **Description**

The InfraTox unit measures gas values and reports alarms and troubles.

The serial driver can emulate a client or a server. The FieldServer and InfraTox device are connected using a RS-485 network.

#### **As a client:**

This is a passive client driver. The driver listens for messages from the InfraTox unit and stores data extracted from the messages. The driver cannot poll the InfraTox device for Data. The driver records some additional data age information (which is stored in the FieldServer's Data Arrays) because messages do not always contain information about all sensors and depending on the InfraTox operational mode (e.g. Locked mode.), may never contain information other than for one sensor.

#### **As a server:**

The server side if this driver has been developed primarily to test the client side driver as part of FieldServer's QA program. The driver sends messages reporting the state of the samples. The server driver can also be locked to report the status/value of one particular sample channel.

Only one device can be connected to each of the FieldServer's ports as the protocol is node-less. That is; the protocol does not report the source node number and thus the FieldServer cannot differentiate messages from one unit or another.

To allow for the possibility that the device is connected on a RS-485 network with other devices (such as the relay module option) messages that are not 49 bytes long and which do not begin with 0xB1 will be ignored.

<b>FieldServer Mode</b>	<b>Nodes</b>	<b>Comments</b>
Client	1	Limit per port because protocol is node-less.
Server	1	Limit per port because protocol is node-less.

### **Formal Driver Type**

Passive Client & Active Server



## Protocol Driver



A Sierra Monitor Company

### Compatibility Matrix

FieldServer Model	Compatible with this driver
FS-x2010	Yes1
FS-x2011	Yes
FS-x40	Yes

### Connection Information

Connection type: RS-485 (Two wire, Half-Duplex)  
Baud Rates: **9600** (Vendor Limitation)  
Data Bits: **8** (Vendor Limitation)  
Stop Bits: **1** (Vendor Limitation)  
Parity: None  
Multidrop Capability **Yes**

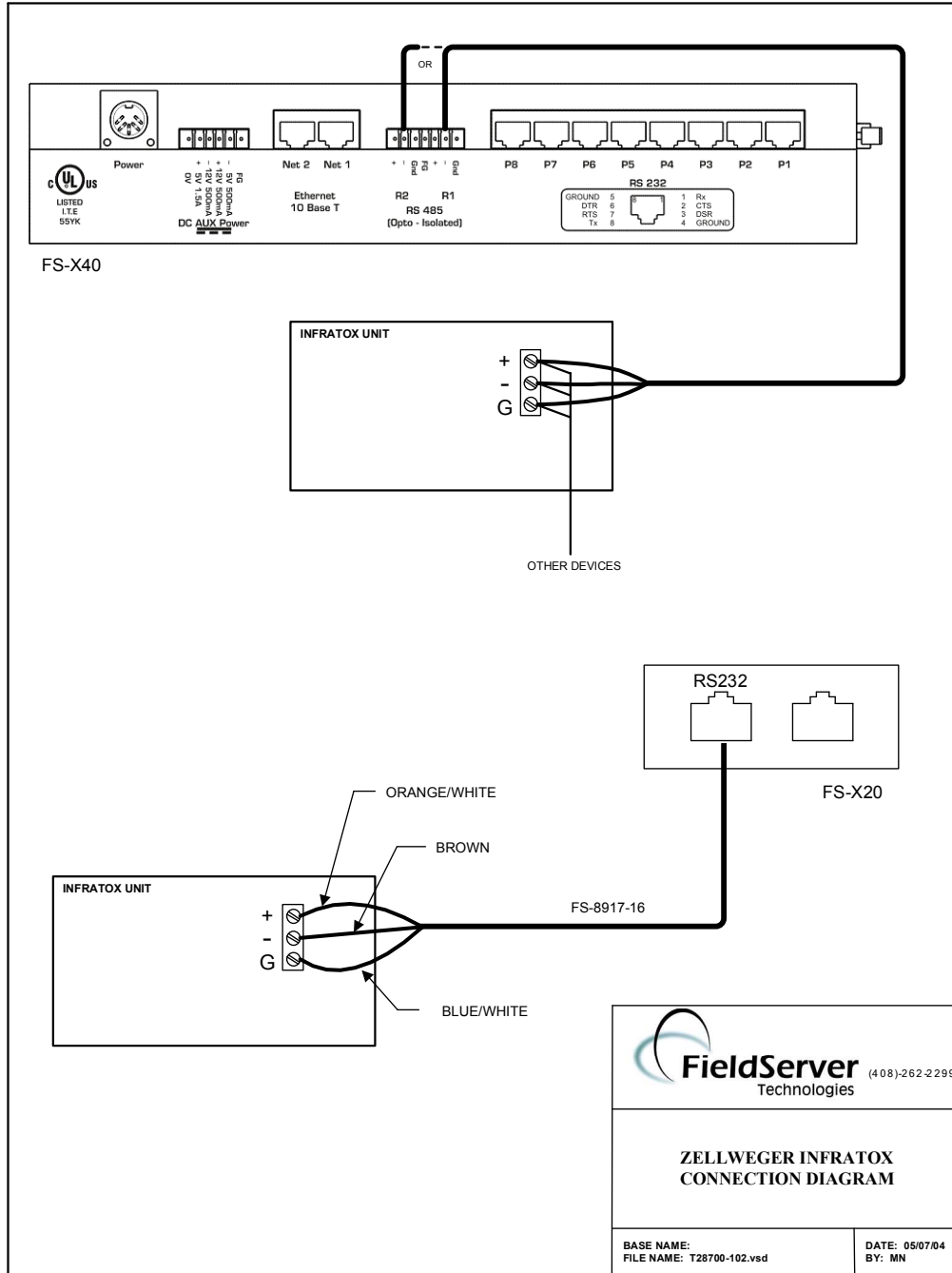
### Devices tested

Device	Tested (FACTORY, SITE)
None	



Connection configurations

Configure the device according to manufacturer's instructions



\*Other devices must not transmit InfraTox 49 byte messages.



**Communications functions - Supported functions at a glance:**

Message Types	Notes
Gas Value Message	Message reports a gas value and units.
Trouble Message	Message reports a trouble for one sensor
Blank Message	Message used to flash InfraTox display
Alarm Message	Message reports an alarm (C/W/A) for one sensor
Locked Point Message	Unit is locked onto a single sample.
Other 49 byte messages beginning 0xb1	Discarded but driver reports stats on these messages.
Other 49 byte messages	
Other messages	

**Data Storage**

One Set of consecutive Data Array elements used for each InfraTox Unit. One set per point/sensor.

Offset	Sensor	Stored	Notes
0	1	Alarm or Trouble	Set non-zero if alarm or a trouble has been reported. Set to zero if neither are currently being reported.
1	1	Alarm Type	0 = None 1 = Caution 2 = Warning 3 = Alarm
2	1	Trouble	0 = None 1 = Trouble
3	1	Gas Value	Gas value multiplied by 100 is stored here. When stored, if configured, scaling will be applied.
4	1	Gas Units	1 <sup>st</sup> 3 bytes of gas units are written here as ASCII characters.
5	1	Gas Units	
6	1	Gas Units	
7	1	State	0 = Enabled 1 = Disabled
8	1	Gas Value Valid	1 = Gas Value updated with most recent message. 0 = Gas Value not updated.
9	1	Gas Value Age	In seconds since last update. Initial (and max) value = 0xffff
10	1	Sensor Data Age	Time since last message containing data about this sensor. In seconds since last update. Initial (and max) value = 0xffff
11..21	2		
22..32	3		
33..43	4		
44..54	5		
55..65	6		
66..76	7		
77..87	8		

