



FieldServer Protocol Driver Sheet

SBT-FSI (Siemens Building Technologies – Foreign Systems Interface)

FS-8700-40

Version: 1.13 / Rev. 4.G

1 DESCRIPTION

This FieldServer driver can be used to poll a Siemens Fire Safety MXL or XLS system or to emulate a Siemens Fire Safety MXL or XLS system with attached modules. Either configuration supports remote monitoring as well as selected command and control functions.

NOTE: This driver does not support MXL and XLS networked panels together.

1.1 Connection Facts

FieldServer Mode	Nodes	Comments
Client	1 (Only 1 Client allowed. As a Client, the FieldServer can poll panel addresses 1-999).	Only 1 client node allowed on multidrop systems.
Server	1-99	Panel numbers from 1 to 99 may be emulated.

2 FORMAL DRIVER TYPE

Serial

Client or Server

3 COMPATIBILITY

FieldServer Model	Compatible
FS-B35 Series	Yes
ProtoNode/ProtoAir	Yes
QuickServer FS-QS-101x	No
QuickServer FS-QS-121x	Yes (MXL Panel)
QuickServer FS-QS-122x	Yes (MXL & XLS Panel)
QuickServer FS-QS-20xx	Yes
QuickServer FS-QS-22xx	Yes

4 CONNECTION INFORMATION

Connection Type: **MXL:** RS-232 with NIM-1R¹ configured for Foreign System Interface (FSI) by setting all the switches in SW2 to open (or OFF)
RS-485 when using NIM-1W
XLS: RS-232 with connection to RPM module

Baud Rates: 19200 (vendor limitation)

Data Bits: 7

Stop Bits: 1

Parity: Even

Multidrop Capability: Yes

5 DEVICES TESTED

Device	Tested (FACTORY, SITE)
MXL	In-house
MXL-IQ	Field tested
XLS	In-house
Cerberus Pro Modular	Factory

6 SUPPORTED COMMUNICATION FUNCTIONS

6.1 Client Configuration File Structure

In FSI mode, the NIM-1R or RPM allows the FieldServer to gather data from up to 63 Siemens Panels connected on an MXL or XLS network. When configured according to the default, the FieldServer will monitor two panels (1 and 2) with 8 modules (1 to 8) each.

Two sets of data are collected by the driver. The first is a collection of 19 counters per panel. Each 16-bit counter is incremented whenever the corresponding event occurs. These counters can be read to determine if a new event has been reported to the server.

¹ NIM-1R is no longer supported by Siemens and is therefore considered to be legacy while NIM-1W is common.



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The counters occur in the following order:

Event	Offset
Fire Alarm In	0
Fire Alarm Out	1
Fire Alarm Acknowledge	2
Trouble In	3
Trouble Out	4
Trouble Acknowledge	5
Supervisory In	6
Supervisory Out	7
Supervisory Acknowledge	8
Security Alarm In	9
Security Alarm Out	10
Security Alarm Acknowledge	11
Status In	12
Status Out	13
Test In	14
Test Out	15
Audible Silenced	16
Audible Unsilenced	17
System Reset	18

The second is a collection of bit maps that can be queried to determine which device has reported the event. When an alarm from a device is received, two arrays are updated – one indicating the alarm and the other indicating that the alarm has not been acknowledged. An alarm clear will clear the bit in the alarm array, and an alarm acknowledge will clear the bit in the un-acknowledged array. Each of these arrays is optional. To enable one, a Map Descriptor needs to be configured with a message type corresponding to the array as shown in this table:

Array	Msg_Type
Fire Alarm	Fire
Fire Alarm Un-Acknowledged	Fire_Ack
Trouble Alarm	Trouble
Trouble Un-Acknowledged	Trouble_Ack
Supervisory Alarm	Super
Supervisory Un-Acknowledge	Super_Ack
Security Alarm	Secur
Security Alarm Un-Acknowledged	Secur_Ack
Status	Status
Test	Test

6.2 Server Configuration File Structure

The driver can also be used to emulate an MXL or XLS server. Other protocol drivers could then poll remote devices and access the local MXL or XLS server data to set or clear events. In this configuration, an existing Siemens Fire Safety MXL or XLS panel could be replaced with an emulation. Existing clients could poll the emulation driver on the FieldServer to get the same data as from a conventional MXL or XLS server.

Up to 100 panels can be emulated with the driver. Each panel has to be on a unique port and have a unique Node_ID assigned. A Map Descriptor must be defined for each type of remote device. The following types can be used:

Device Type
Fire Alarm In
Fire Alarm Out
Fire Alarm Acknowledge
Trouble In
Trouble Out
Trouble Acknowledge
Supervisory In
Supervisory Out
Supervisory Acknowledge
Security Alarm In
Security Alarm Out
Security Alarm Acknowledge
Status In
Status Out
Test In
Test Out
Audible
System Reset
System Date and Time
Analog Volts
Analog Sensitivity
Analog Threshold



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6.3 Command and Control Functions

Function
Un(Silence) Audible
System Reset
Set Date and Time
Acknowledge Fire Alarm Event
Acknowledge Trouble Event
Acknowledge Security Event
Acknowledge Supervisory Event

6.4 Analog Functions

Function	Description
Request Analog Data	Requests the present value of analog data from a loop of analog devices. The available data is limited to analog voltage, sensitivity voltage and alarm threshold voltage.

6.5 Unsupported Devices or Protocol Options

Device	Details
Cerberus FC924	Panel does not support the FSI protocol.