



FieldServer Driver – Serial FS-8700-60 Gardner Denver Auto Sentry ES

Driver Code: GDEN
Version: 1.0a
Protocol Documentation: N/A
Physical Interface: EIA232 or EIA485

Driver Description

The Gardner Denver Auto Sentry ES driver allows the FieldServer to transfer data from devices over either EIA232 or EIA485 using Gardner Denver Auto Sentry ES protocol. The FieldServer can emulate either a Server or Client. (versions supp)

The client driver implements the following functionality:

1. Polls ES controllers for service and maintenance data.
2. Polls ES controllers for operating mode data.
3. Polls ES controllers for operating data.

The server driver of the FieldServer implements the following functionality:

1. Provides service and maintenance data
2. Provides operating mode data
3. Provides operating data

The driver can poll up to 8 units connected to one ES controller. It always sets the active unit on the ES controller before polling for data even if consecutive polls are for the same unit. This is done to prevent synchronization problems.

Gardner Denver ES controllers implement three message types for which the driver can poll. The driver does not validate the message data fields for correct values although it does validate data field lengths eg. (shutdown codes reported by V2.1 ES controllers range from 0 to 27. If a code of 28 is reported, the driver will not flag it as an error since codes have to be interpreted by the operator. However, a message length longer than 2 digits will be reported as an error).

This version of the driver works according to the following specification:
Gardner Denver ES+ COMMUNICATIONS PROTOCOL – Doc Number 305EAU1255

This version of the driver supports ES controllers with the following software version numbers:
V2.00, V2.01, V2.1 and later versions that conform to the data fields as per the above specification.

The data array in the server driver is set up to contain the data of the three poll commands one after the other. It therefore provides an array of size = 46 that contain the following data:



Protocol Driver



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Service and maintenance data		
Offset	Name	Units
0	Advisory	see ES controller spec
1-10	Shutdown codes	see ES controller spec
11-20	Hourmeter readings at shutdown code events	Hours
21	Total runtime hourmeter reading	Hours
22	Loaded runtime hourmeter reading	Hours
23-28	Current temp hourmeters	Hours
29-34	Stored temp hourmeters	Hours
35	Last maintenance A	Hours
36	Last maintenance B	Hours
37	Oilage	Unknown, see ES controller spec

Operating mode data		
Offset	Name	Units
0	Operating mode indication	see ES controller spec
1	Sequence number	see ES controller spec
2	Unit operating state	see ES controller spec

Operating data		
Offset	Name	Units
0	System pressure	divide by 16 for pressure in psig
1	Filter pressure	divide by 16 for pressure in psig
2	Discharge temperature	divide by 16 for temperature in degrees F
3	Reservoir temperature	divide by 16 for temperature in degrees F
4	Motor current	amps