FieldServer Driver
FS8705-18
-
Serial Driver for
Multistack Comput25 Master Controller

Description

The Compu25 protocol can be used to connect to suitably enabled legacy Multistack Inc, Chiller and Heat Pumps. This is a serial protocol using RS485. Multiple Field devices can be connected on a single trunk. The gateway supports one trunk.

The Gateway connects to the HVAC devices, reads data and stores it internally. When a remote system requests data, this data is served in a form that is appropriate to the requesting protocol. In the event that the connection to the HVAC controller is lost, or data cannot be read, the gateway can signal this to the remote data client.

The gateway requires minimal configuration and can be considered a plug and play component of a system, in that it is ready to operate out of the box with the default configuration.

Max Nodes Supported

FieldServer Mode	Nodes	Comments
Client	Many	*The FieldServer will be able to poll multiple SMA Web Boxes. One per RS232 serial port.*
Server	0	*Not supported or documented.*

Formal Driver Type

Serial RS232
Client

Compatibility Matrix

FieldServer Model	Compatible with this driver
FS-x2010	Yes,
FS-x2011	Yes,
FS-x40	Yes,
FS-x25	Yes

Connection Information

Connection type: EIA232

Baud Rates: Driver Supports : 110; 300; 600; 1200; **2400**; 4800; 9600; 19200; 28800; 38400; 57600; 115200 Baud . Comput25 supports only 2400.

Data Bits: Driver Supports : 7,**8**

Stop Bits: Driver Supports : **1**,2

Parity: Driver Supports : Odd, Even, **None**

Hardware interface: N/A

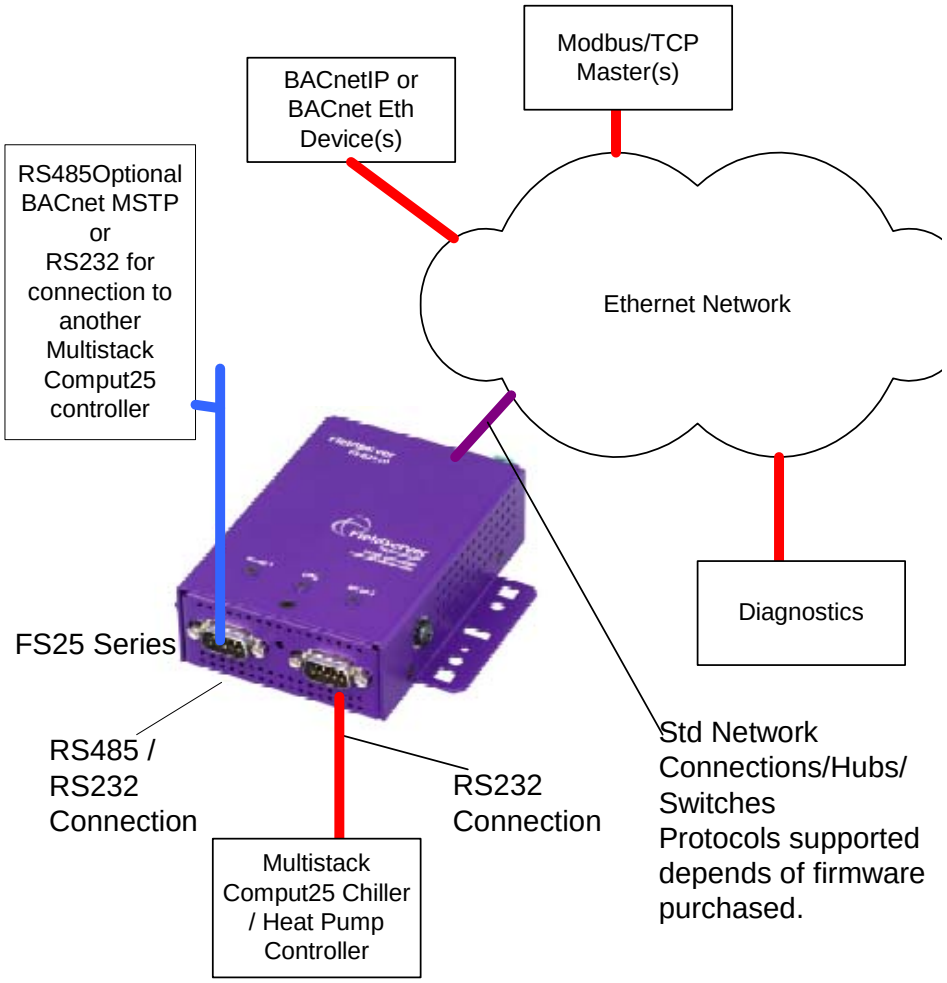
Multidrop Capability No

Devices tested

Device	Tested (FACTORY, SITE)
Comput25 Water Cooled	Vendor testing. Dec2011, Jan2012 Customer site Jan2012
Comput25 Heat Pump	Vendor testing. Dec2011, Jan2012 Customer site Jan2012

Connection configurations

Multiple upstream protocols and connection supported. See list of FieldServer Drivers.



Communications functions

Supported Functions	Implementation Variations / Notes
Read	Can read single byte and double byte memory locations. Only one memory location can be read in a single message.
Write	Can write single byte and double byte memory locations. Only one memory location can be written in a single message. A mandatory delay is required between write messages. This is controlled by the poll_delay parameter.

Driver Operation

The driver can be configured to read or write any of the addresses documented for these devices. The data sent is stored internally in the Gateway and is made available to other protocols (Modbus TCP, BACnet IP and HTML) .

The frequency with each data point is read is configurable. The driver retries on errors or timeouts. If the data cannot be read then after some configurable time it is marked as out of service.

Exception Handling

If communications to the HVAC are lost a number of methods of reporting this loss to the Building Management System are provided.

Support

This driver was developed by Chipkin Automation Systems (CAS), a FieldServer Approved Integrator®. CAS are proud to provide support for the driver. For support please call CAS at (866) 383-1657.

Selected Data Points

This list is not comprehensive. Contact us for the full list. Binary points and others have been omitted. (AI=Read Only, AV=Read/Write)

```
MFLAGS - OnOff Status              , ai
PRESLD - Capacity                  , ai
ECHWD - Entering Load Temp         , ai
LCHWA - Leaving Load Temp          , ai
DEMAND - Demand                    , ai
ECWA - Ent. Cond. Temp             , ai
LCWA - Lev. Cond. Temp             , ai
TDTMR - Delay Timer (Hi Byte)      , ai
TDLOTMR - Delay Timer (Lo Byte)    , ai
CURFLT - Current Faults            , ai
LEDCOMP - Lead Compressor          , ai
DEMLIM - Load Limit                , ai
DISMES2 - Display Message          , ai
DISMES3 - Display Message          , ai
EXIN - Ext and Flow Inputs         , ai
PATEST - Flush Options Status      , ai
DIPS - Dip Switch Data             , ai
S1COM - Slave 1 Command            , ai
S1HISA - Comp 1 Suct. Temp         , ai
S1LOCA - Comp 1 LLW Temp           , ai
S1HISB - Comp 2 Suct. Temp         , ai
S1LOCB - Comp 2 LLW Temp           , ai
S1CONA - Comp 1 LSW Temp           , ai
S1LIM - Slave 1 limit switches     , ai
S1CONB - Comp 2 LSW Temp           , ai
....
S12COM - Module 12 Command         , ai
S12HISA - Comp 23 Suct. Temp       , ai
S12LOCA - Comp 23 LLW Temp         , ai
S12HISB - Comp 24 Suct. Temp       , ai
S12LOCB - Comp 24 LLW Temp         , ai
S12CONA - Comp 23 LSW Temp         , ai
S12LIM - Slave 12 limit switches   , ai
S12CONB - Comp 24 LSW Temp         , ai
UPSETPT - Cool Upper Setpoint (R)  , ai
LOSETPT - Cool Lower Setpoint (R)  , ai
VSP - Cool Var Setpoint (R)        , ai
LOTD - Cool TDIFF Time (R)         , ai
HUPSET - Heat Upper Set Point (R)  , ai
HLOSET - Heat Lower Set Point (R)  , ai
HVSP - Heat Var. Set Point (R)     , ai
HTDIFF - Heat TDIFF Time (R)       , ai
DEMLIM - Load Limit (R)            , ai
```

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FLTALM - Fail Indicator (R)         , ai
LEDCOMP - Lead Compressr (R)        , ai
FLUHRS - Flush Time (Hours) (R)     , ai
FLUTIME - Flush Duration (HI) (R)   , ai
FLUTMLO - Flush Duration (LO) (R)   , ai
MONTH - Current Month (R)           , ai
DATE - Day of Month (R)             , ai
YEAR - Current Year (R)             , ai
HRS - Current Hours (R)             , ai
MIN - Current Minutes (R)           , ai
CMONTH - Commission Month (R)       , ai
CDATE - Commission Date (R)         , ai
CYEAR - Commission Year (R)         , ai
LP0HR - HRS Cooling -00-09          , ai
....
LP9HR - HRS Cooling -90-100         , ai
HLP0HR - HRS Heating - 0-9          , ai
....
HLP9HR - HRS Heating - 90-100       , ai
FLTCNT - Fault Count                , ai
F1COMP - Fault 1 Compressor Num     , ai
F1NUM - Fault Number                , ai
F1TYP - Type Of Fault               , ai
COMP01STA - Compressor 01 Status    , ai
....
COMP24STA - Compressor 24 Status    , ai
F1HIS - Hi Suction Temp (Comp)      , ai
F1LOC - Lev. Ch. H2O (Comp)         , ai
F1ECHW - Ent. Ch. H20 Temp          , ai
F1LCHW - Lev. Ch. H20 Temp          , ai
F1ECW - Ent. Con. H20 Temp          , ai
F1LCW - Lev. Con. H20 Temp          , ai
F1HRS - Hour Of Fault               , ai
F1MIN - Minute Of Fault             , ai
F1DATE - Day Of Month Of Fault      , ai
F1MONTH - Month Of Fault            , ai
F1YEAR - Year Of Fault              , ai
F1COND - LSW Temp (Comp)            , ai
F1MODE - Mode Of Fault              , ai
....
F20COMP - Fault 20 Comp. Num        , ai
F20NUM - Fault Number               , ai
F20TYP - Type Of Fault              , ai
F20HIS - Hi Suction Temp (Comp)     , ai
F20LOC - Lev. Ch. H2O (Comp)        , ai
F20ECHW - Ent. Ch. H20 Temp         , ai
F20LCHW - Lev. Ch. H20 Temp         , ai
F20ECW - Ent. Con. H20 Temp         , ai
F20LCW - Lev. Con. H20 Temp         , ai
```

```
F20HRS - Hour Of Fault              , ai
F20MIN - Minute Of Fault            , ai
F20DATE - Day Of Month Of Fault     , ai
F20MONTH - Month Of Fault           , ai
F20YEAR - Year Of Fault             , ai
F20COND - LSW Temp (Comp)           , ai
F20MODE - Mode Of Fault             , ai
RONOFF ON - OFF STATUS              , av
UPSETPT - Cool Upper Setpoint (RW) , av
LOSETPT - Cool Lower Setpoint (RW) , av
VSP - Cool Var Setpoint (RW)        , av
LOTD - Cool TDIFF Time (RW)         , av
HUPSET - Heat Upper Set Point (RW) , av
HLOSET - Heat Lower Set Point (RW) , av
HVSP - Heat Var. Set Point (RW)     , av
HTDIFF - Heat TDIFF Time (RW)       , av
DEMLIM - Load Limit (RW)            , av
FLTALM - Fail Indicator (RW)        , av
LEDCOMP - Lead Compressr (RW)       , av
FLUHRS - Flush Time (Hours) (RW)    , av
FLUTIME - Flush Duration (HI) (RW) , av
FLUTMLO - Flush Duration (LO) (RW) , av
MONTH - Current Month (RW)          , av
DATE - Day of Month (RW)            , av
YEAR - Current Year (RW)            , av
HRS - Current Hours (RW)            , av
MIN - Minutes (RW)                  , av
CMONTH - Commission Month (RW)      , av
CDATE - Commission Date (RW)        , av
CYEAR - Commission Year (RW)        , av
```

Revision History

Date	Resp	Format	Driver Ver.	Doc. Rev.	Comment
18 Oct 2011	PMC		0.00	0	Created