

FieldServer VADD Driver FS-8705-07 MITSUBISHI CHC-MF

Description

This driver is used to exchange data between a FieldServer and a Mitsubishi Heavy Industries Air Conditioning System communication interface known as a CHC-MF

The driver is a serial driver using a RS-232 serial port to connect between the FieldServer and the CHC-MF. An RS485 port together with a converter can also be used for the connection.

The driver provides client and server functionality.

As a client the driver can poll for data from Air Conditioning Units via the CHC-MF interface as well as writing some control and set points.

Server functionality is provided only to support our ongoing quality assurance program by facilitating automated testing of the driver. It is not documented or supported. If required please contact the sales group to discuss your requirements.

Fieldserver Mode	Nodes	Comments
Client	1	A maximum of 1 Mitsubishi CHC-MF device per FieldServer Port. UP to 100 Air Conmditioning Groups can be connected to a CHC.
Server	1	A maximum of 1 Mitsubishi CHC-MF device per FieldServer Port.

Formal Driver Type

Serial
Client or Server

Compatibility Matrix

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

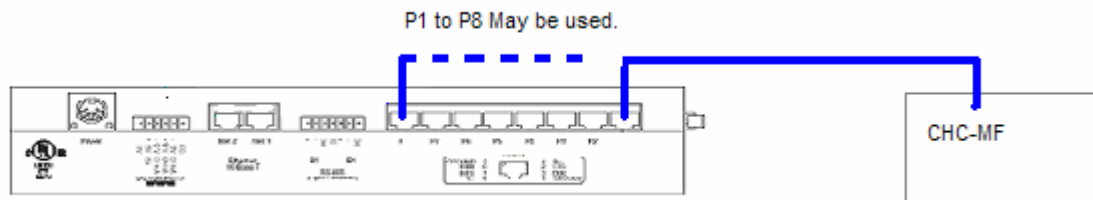
Connection Information

Connection type: RS-232
Baud Rates: Driver Supports : 110; 300; 600; 1200; 2400; 4800; **9600**; 19200; 28800; 38400; 57600; 115200 Baud
 Vendor Equipment Supports : 4800 Baud
Data Bits: Driver Supports : 7, **8**
 Vendor Equipment Supports : 7
Stop Bits: Driver Supports : 1, 2
 Vendor Equipment Supports: 1
Parity: Driver Supports : Odd, **Even**, None
 Vendor Equipment Supports: Even
Hardware interface: N/A
Multidrop Capability No

Devices tested

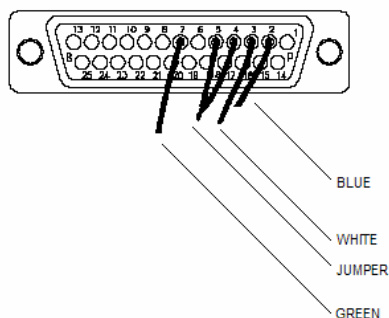
Device	Tested (FACTORY, SITE)
Mitsubishi CHC system with 54 air conditioning groups.	Site (Costa Rica)

Connection configurations



Connection Notes

Part of RJ45 Connector Kit



The CHC appears to require wiring as if it were a DTE device. As the FieldServer is A DTE device this implies the cable is NULL Modem like.

Pins 4 & 5 are connected internally in the CHC end. This is used to defeat the CTS/RTS Handshaking.

Communications functions - Supported functions at a glance:

Read / Write Operations supported

FieldServer as a Client	FieldServer as a Server
Start / Stop Operation	Digital Start/Stop Response
One Point Request	Digital Start/Stop Point
Parameter Setting Operation	Start / Stop Operation
	Analog Point Response
	Parameter Point Response
	Add Up Point Response

When the connection is first opened to the CHC unit or when the driver is recovering a connection (after a loss of connection) then the driver will wait for an Initial Data Request and respond appropriately. Thereafter, normal polling will occur. In the event that the driver does not receive the Initial Data Request from the CHC within a specified time it will default to normal polling behavior.

Unsupported Functions and Data Types

Function	Reason
Initial Data Request Processing	Completion of parameter Setting operation
Forced Shutdown in a Fire	System Clock Time Notification

Data Points

The following Data can be read and/or written from the FieldServer to the Air Conditioning Units attached to the CHC-MF.

Point Number	Point	Read/Write	Notes
1	Start/Stop	RW	
2	Temp. Setting	R	
3	Automatic temperature control mode setting	RW	
4	Temperature control mode setting	RW	
5	Room Temperature	R	
6	Remote control mode, setting 1	RW	
7	Remote control mode, setting 2	RW	
8	Remote control mode, setting 3	RW	
9	Filter sign reset	RW	
10	Forced Thermo off	RW	
20	Electrical Energy	R	

Unsupported Devices or Protocol Options

Device	Details

Revision History

Date	Resp	Format	Driver Ver.	Doc. Rev.	Comment
4/25/04	PMC		0.00	0	Initial Draft issued for customer review.
				1	Notes about server side not being supported or documented.
10/20/04	PMC		0.00dA	2	Removed note on auto configuration. Moved some functions to the unsupported function list.
12/24/04	PMC		1.00aA	3	Minor Corrections