Metasys N2

Description

The Metasys® N2 by Johnson Controls network supports communications with a diverse range of devices. Many N2 compatible devices use their own version of the protocol and care must be taken to ensure that the device of interest is covered by the FieldServer implementation.

At present the FieldServer Metasys® N2 driver will support communications with the following devices or classes of devices when acting as a Client:

- N2Open-compliant devices – N2Open is a published N2-compatible protocol enabling 3rd party device vendors to integrate with N2
- VMA 1400 series (with restrictions)
- DX9100 and XT9100

When acting as a Server the FieldServer Metasys® N2 driver can emulate an N2Open device only.

NOTE: Metasys® and N2OPEN as used in this document are trademarks of Johnson Controls Inc.

Connection Facts

FieldServer Mode	Nodes	Comments
Client	1	Only 1 client node allowed on Multidrop systems. **Can communicate with:** N2Open, VMA 1400 series (AI, BI, AO, BO and custom types), DX9100 / XT9100
Server	255	

Formal Driver Type

Serial, Client or Server

Compatibility

FieldServer Model	Compatible
ProtoCessor	Yes
ProtoCarrier	Yes
ProtoNode	Yes
ProtoAir	Yes

FieldServer Model	Compatible
QuickServer FS-QS-10xx	Yes
QuickServer FS-QS-12xx	Yes
QuickServer FS-QS-20xx	Yes
QuickServer FS-QS-22xx	Yes

Connection Information

Connection Type: RS-485 (two wire, half-duplex)

Baud Rates: 9600 (N2 standard)

Data Bits: 8

Stop Bits: 1

Parity: None

Multidrop Capability: Yes

Devices Tested

Device	Supported	Tested (FACTORY, SITE)	N2Open Device
AHU	Yes	Site	Yes
DC-9100	Consult Factory	not tested	Consult Factory
DX-9100	Yes	Factory and Site	No
IFC	Consult Factory	not tested	Consult Factory
ILC	Consult Factory	not tested	Consult Factory
MIG	Yes	Site	Yes
NAE (FieldServer as N2Open server)	Yes	Factory and Site	Yes
NCM (FieldServer as N2Open server)	Yes	Factory and Site	Yes
PHX	Consult Factory	not tested	Consult Factory
TC-9100	Yes	Site	No
TEC1000	Consult Factory	not tested	Consult Factory
UNT	Yes	Site	Yes
VAV	Yes	Site	Yes
VMA1410, VMA1420	Yes	Factory and Site	No
VND	Yes	Site	Yes
XT-9100	Consult Factory	Site	No

Data Types Supported

FieldServer Data Type	Description (Device Data Type)
Analog_Input	Analog Input (AI)
Digital_Input	Binary Input (BI)
Analog_Output	Analog Output (AO)
Digital_Output	Binary Output (BO)
Float_Reg	Internal Float value (ADF)
Integer	Internal Integer value (ADI)
Byte	Internal Byte value (BD)

Read Operations Supported

FieldServer as a Client or Server
Read Current Value (all data types): Direct read, Change-of-State (COS) poll
Read Attribute (all data types): Direct read, specifying a legal attribute number
Identify Self command
Read All Attributes (Optional): These commands are used to read all attributes of specified (Analog Input, Binary Input, Analog Output or Binary Output) object without specifying attribute number

Write (Control) Operations Supported

NOTE: On a Metasys® network there should be only one device overriding a value at any time. Otherwise it is possible that the Metasys® Master sees a value different to the overwritten value as the FieldServer will respond to a poll with the value last read from the Slave device.

FieldServer as a Client or Server
Override Current Value (all data types): Implemented as Write on FieldServer
Override Release (all data types)
Write Attribute (all data types): Direct write, specifying a legal attribute number
Write Characterize Attributes (Optional): These commands are used to set all attributes that characterize the specified object (Analog Input, Binary Input, Analog Output or Binary Output) without specifying an attribute number
Write Internal Parameter Command (Optional): This command is used to change the value attribute of internal parameter objects without specifying an attribute number

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