Mitsubishi Melsec – FX (MelsecQ 1E Frame)

The MelsecFX communication driver implements communication with Mitsubishi FX Series PLCs using Melsec Q 1E frame. It operates as a Master on TCP /IP networks. The communication blocks are dynamically created according to the pooling cycle defined on the AccessType for each point.

Summary Information

Communication Driver Name: MelsecFX

Implementation DLL: T.ProtocolDriver. MelsecFX.dll

Protocol: Melsec Q 1E frame

Interface: TCP/IP

PLC types supported: Mitsubishi FX Series PLCs and compatibles

Multi-threading: User defined

Max number of nodes: User defined

PC Hardware requirements: Standard PC Ethernet interface board

Supported Operands:

Operand	Read	Write	Data Type	Address Size
D - Data register	Yes	Yes	Short	2 bytes
W - Link register	Yes	Yes	Short	2 bytes
R - File register	Yes	Yes	Short	2 bytes
TN – Timer Current value	Yes	Yes	Short	2 bytes
TS – Timer Contact	Yes	Yes	Bit	1 bit
TC – Timer Coil	Yes	Yes	Bit	1 bit
CN – Counter Current value	Yes	Yes	Short	2 bytes
CS – Counter Contact	Yes	Yes	Bit	1 bit
CC – Counter Coil	Yes	Yes	Bit	1 bit
X - Input relay	Yes	Yes	Bit	1 bit
Y - Output relay	Yes	Yes	Bit	1 bit
M - Internal relay	Yes	Yes	Bit	1 bit
B - Link relay	Yes	Yes	Bit	1 bit
F - Annunciator	Yes	Yes	Bit	1 bit

Channel Configuration

Protocol Options

Maximum size of blocks: Defines the maximum number of addresses in a read block

Settings

TCP/IP:

NodeConnections: Defines the maximum number of parallel requests that will be sent to each node (asynchronous communication)

Node Configuration

Station Configuration

TCP/IP:

Station syntax: <IP address>;<Port number>

Where:

- **<IP address>** = The IP address of the slave device in the Modbus network
- **<Port number>** = The TCP port where the slave device is listening (default is 44818)

Ex: 192.168.1.1 ; 5551

Point Configuration

The syntax for the MelsecFX communication points is: <Operand><Address>

- D Data register
- W Link register
- R File register
- TN Timer Current value
- TS Timer Contact
- TC Timer Coil
- CN Counter Current value
- CS Counter Contact
- CC Counter Coil
- X Input relay
- Y Output relay
- M Internal relay
- B Link relay
- F Annunciator

Where:

- **<Operand>** = Represents the Device Memory
- **<Address>** = Address number

Troubleshoot

The status of the driver's execution can be observed through the diagnostic tools, which are:

• Trace window
• Property Watch
• Module Information

The above tools indicate if the operations have succeeded or have failed. A status of 0 (zero) means communication is successful. Negative values indicate internal driver errors, and positive values indicate protocol error codes.