

5.17 MITSUBISHI MELSEC IO Server

5.17.1 Introduction

This MELSEC IO Server allows the eWON to poll tags belonging to the MITSUBISHI Q Series PLC using the MC protocol on the Ethernet interface.

To cover remote maintenance for the Mitsubishi Q series, the Ethernet routing feature or VCOM feature (serial) of the eWON has to be used.

The MELSEC IO Server is available from firmware version 6.3 onwards.

5.17.2 Setup

5.17.2.1 Topic configuration

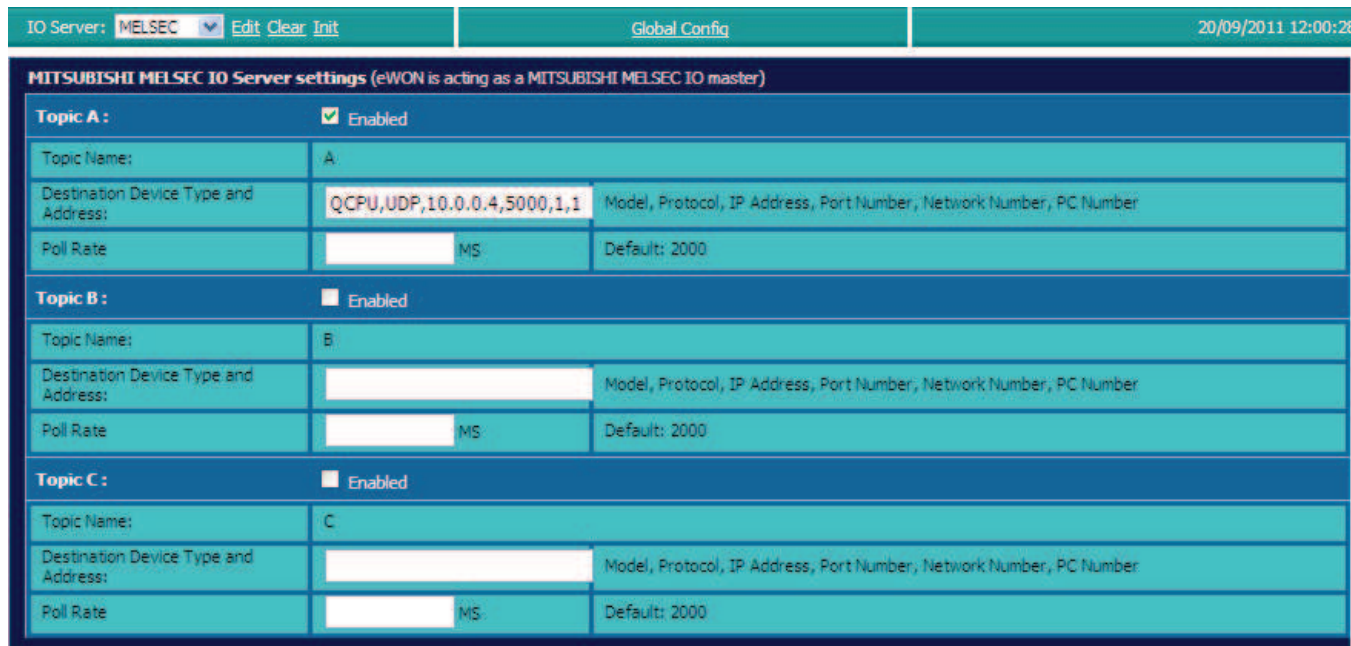


Figure 116: MELSEC IO Server: Topic configuration

Three (3) topics can be used for the IO Server. These topics are used to give a common property to a group of Mitsubishi Tags like:

- Enable/Disable
- Global Device Address
- Polling Rate

Topic configuration item	Description
Topic enabled	Enables or disables polling of all the Tags in the topic.
Global Device Address	<p>Syntax: Model,Protocol,IP Address,Port Number,Network Number,PC Number [,ReqDestModuleIOno,ReqDestModuleStationNo], where:</p> <ul style="list-style-type: none"> • Model: QCPU,QnACPU, QOCPU • Protocol: TCP, UDP • IP Address: is the IP address of the PLC • Port Number: is the Port of the PLC on which it is listening for MC protocol • Network Number: network number of the target (1..239) (0) • PC Number: Target Station Number (1..64) (FF) • Optional ReqDestModuleIOno default FF 03 • Optional ReqDestModuleStationNo default 0 <p>Example: QCPU,UDP,198.162.120.155,5000,1,1</p>
Poll rate	Defines the refresh rate of the Tag name. In a complex application, we can imagine that some Tag names must be refreshed every second - typically for digital input - and other every minute - typically: temperature-.

Table 144: MELSEC IO Server: Topic configuration item definition

5.17.3 Tag name convention

IO Server Name	MELSEC	
Topic Name	A	
	B	
	C	
Item Name	ValueName, Global Device Address	PLC address is defined Tag by Tag
	ValueName	Topic PLC Address is used.

Table 145: MITSUFX IOserver - Tag name convention table

The Item Name can contain the PLC address where the value is polled, or not. If the address is also specified at topic level, the address specified at Tag level will be ignored.

5.17.3.1 Value Name

The syntax is the following:

<Memory Type Symbol>[<Modifier>]<address>

Symbol	Memory type	Modifier allowed (optional)	Address
X	Input		1 to 6 hexadecimal bits
DX	Direct Input		1 to 6 hexadecimal bits
Y	Output		1 to 6 hexadecimal bits
DY	Direct Output		1 to 6 hexadecimal bits
B	Link Relay		1 to 6 hexadecimal bits
SB	Special Link Relay		1 to 6 hexadecimal bits
M	Internal Relay		1 to 6 decimal digits
SM	Special Internal Relay		1 to 6 decimal digits
L	Latch Relay		1 to 6 decimal digits
F	Annunciator Relay		1 to 6 decimal digits
V	Edge Relay		1 to 6 decimal digits
S	Step relay		1 to 6 decimal digits
TS	Timer Contact		1 to 6 decimal digits
TC	Timer Coil		1 to 6 decimal digits
TN	Timer Value	W, S	1 to 6 decimal digits
SS	Integrating Timer Contact		1 to 6 decimal digits
SC	Integrating Timer Coil		1 to 6 decimal digits
SN	IntegratingTimer Value	W, S	1 to 6 decimal digits
CS	Counter Contact		1 to 6 decimal digits
CC	Counter Coil		1 to 6 decimal digits
CN	Counter Value	W, S	1 to 6 decimal digits
D	Data Register	S, W, L, D, F	1 to 6 decimal digits
SD	Special Data Register	S, W, L, D, F	1 to 6 decimal digits

Table 146: MELSEC Memory types and address scheme

W	Link Register	S , W, L, D, F	1 to 6 decimal digits
SW	Special Link Register	S , W, L, D, F	1 to 6 decimal digits
R	File Register	S , W, L, D, F	1 to 6 decimal digits
Z	Index Register	S , W, L, D, F	1 to 6 decimal digits

Table 146: MELSEC Memory types and address scheme

Note: The Modifier can be omitted, the modifier in bold will be used.

Symbol	Modifier	value range	Automatic Tag type
W	Word	0 .. 65535	DWord
S	signed Word	-32768 .. 32767	Integer
D	DWord	0 .. 4294967296 (*)	DWord
L	signed DWord	-2147483648 .. 2147483647 (*)	Integer
F	Float	+/- 3.4e38	Float

Table 147: MELSEC Modifiers

(*) Important: To avoid loss of precision due to Integer to float conversion, choose the right storage DataType for your Tag. See "DataType of Tags" on page 72

Examples

address	point to
X14	input bit at octal address 14
D3	data register at address 3 (read as Signed Word)
DD3	data register at address 3 (read as DWord)
DF3	data register at address 3 (read as Float)
D8010	special data register at address 8010 (read as Signed Word)

Table 148: MELSEC register address examples

• Status register:

The STATUS Tag is a special Tag that returns information about the current state of communication for a given device. As for the other Tags, the status Tag ValueName is composed of:

Status, Global Device Address

- You can define a status Tag for each PLC used.
- If you use the status address, the Tag must be configured as analog.

0	Communication not initialized. Status UNKNOWN. If no Tag is polled on that device address, the communication status is unknown.
1	Communication OK.
2	Communication NOT OK.

Table 149: Tag Status meaning