

Reference	MTCP_Client_IAG
Revision	1.2
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+ Support	http://support-omron.fr/

Modbus TCP Client

Function	Modbus TCP Client	
IAG		
File	MTCP_Client.iag , Sample MTCP_Client.smc2	

Conditions of use	The MTCP_Client IAG should be added to the reference library in Sysmac Studio and then inserted in the NA project.																			
Principe	MTCP_Client allow to send Modbus TCP request to a server. List of read/write functions provided : <table border="1" style="margin-left: 20px; width: 100%;"> <thead> <tr> <th>Code</th> <th>Modbus Function</th> <th>Procedure</th> </tr> </thead> <tbody> <tr> <td>0x01</td> <td>Read Coils</td> <td>Sub ReadCoils</td> </tr> <tr> <td>0x03</td> <td>Read Holding Registers</td> <td>Sub ReadRegister</td> </tr> <tr> <td>0x05</td> <td>Write Single Coil</td> <td>Sub WriteCoil</td> </tr> <tr> <td>0x06</td> <td>Write Single Register</td> <td>Sub WriteRegister</td> </tr> <tr> <td>0x10</td> <td>Write Multiple Registers</td> <td>Sub WriteNRegister</td> </tr> </tbody> </table>		Code	Modbus Function	Procedure	0x01	Read Coils	Sub ReadCoils	0x03	Read Holding Registers	Sub ReadRegister	0x05	Write Single Coil	Sub WriteCoil	0x06	Write Single Register	Sub WriteRegister	0x10	Write Multiple Registers	Sub WriteNRegister
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0x10	Write Multiple Registers	Sub WriteNRegister																		

1- Input/output variables

Input variables

Nom	type	Description
DeviceName	String	Modbus TCP Client Name

Input/Output variables

Nom	type	Description
Connected	Bool	Connection Status
RespCounter	Bool	Response counter
ErrorCounter	Bool	Error counter
MsgBox	string	Error Message
Response	string	Response receive from the server (test area only)

2- Procedures

Public Sub Connect(**ByVal** IpAddress **As String**)

Connect/disconnect the IAG to the serveur with IP IpAdress.

Ex : MTCP_Client.Connect("192.168.250.5")

Public Sub ReadCoils(**ByVal** SlaveNo **As Integer**, **ByVal** addr **As Integer**, **ByVal** qty **As Integer**, **ByRef** Data() **As Integer**)

Send a request to read multiple coils.

SlaveNo : Slave number
addr : Modbus address
qty : Number of coils
Data() : Array of integer returned

Ex : MTCP_Client.ReadCoil(1,123,8,value)
Read 8 coils at address 0123 (&h7B)
These 8 bits will be written in data(0)

Public Sub ReadRegister(**ByVal** SlaveNo **As Integer**, **ByVal** addr **As Integer**, **ByVal** qty **As Integer**, **ByRef** Data() **As Integer**)

Send a request to read registers.

SlaveNo : Slave number
addr : Modbus address
qty : Number of registers
Data() : Array of Integer receiving read values

Ex : MTCP_Client.ReadRegister(1,123,2,MyArrayValue)
Read 2 registers at address 0123 (&h7B)
Values are written in MyArrayValue(0), MyArrayValue(1), etc ...

Public Sub WriteCoil(SlaveNo **As Integer**, addr **As Integer**, **ByRef** Value **As Boolean**)

Send a request to write a coil

SlaveNo : Slave number
addr : Modbus address
value : True/False

Ex : MTCP_Client.WriteCoil(1,123,2,StatusOnOff)

Public Sub WriteNRegister(SlaveNo **As Integer**, addr **As Integer**, qty **As Integer**, **ByRef** Data() **As Integer**)

Send a request to write multiple registers

SlaveNo : Slave number
addr : Modbus address
qty : Number of registers
Data() : Array of integer

Ex : MTCP_Client.WriteNRegister(1,123,2,MyArrayValue)
Values MyArrayValue(0) and MyArrayValue(1) are written at address 0123 (&h7B)

Public Sub WriteRegister(SlaveNo *As Integer*, addr *As Integer*, ByRef Data *As Integer*)

Send a request to write 1 register

SlaveNo : Slave number

addr : Modbus address

Data : Value

Public Sub SendRequest(Request() *As Byte*)

Send a Modbus TCP request defined in array of bytes

Ex: MTCP_Client.SendRequest("0000000000060103007B0002")

Read 2 registers at address 123 (&h7B)