

# Function Bloc



OMRON ELECTRONICS S.A.S.  
14 Rue de Lisbonne  
93561 Rosny-sous-Bois cedex

Référence	MRTU_CPU_Master
Révision	1.0
Auteur	JP Viskovic
Date	22/12/2011
+ Support	<a href="http://support-omron.fr/">http://support-omron.fr/</a>

## Function Bloc Modbus RTU Master serial port Hostlink

Function	Modbus RTU master on serial port Hostlink															
Symbols																
File	<a href="#">MRTU_CPU_Master.zip</a>															
PLC	<ul style="list-style-type: none"> <li>- serial port of CJ1/CS1 et CJ2H/M</li> <li>- serial port of CP1E-N14/N20</li> <li>- serial port of CP1L-J14/J20/L14/L20</li> <li>- Left serial port of CP1E-N30/N40/N60</li> <li>- Right serial port of CP1H-X/XA/Y</li> <li>- Right serial port of CP1L/M20/M40/M60</li> </ul>															
Condition of use	<p>The Modbus RTU CPU Master function block is offered 'as is' and may serve as a basis for development.</p> <p>Users should previously test its adequacy to the final application.</p> <p>Omron could not be held responsible in case of malfunction.</p>															
Principe	<p>The serial port should be setup to RS232C mode using 8 data bits</p> <p><b>Front switch related to serial port should be on « Setup » (User configuration).</b></p> <p>List of Read/write command implemented</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Code</th> <th>Modbus Function</th> <th>Function block</th> </tr> </thead> <tbody> <tr> <td>0x03</td> <td>Read Holding Registers</td> <td>MRTU_CPU_Fn03</td> </tr> <tr> <td>0x05</td> <td>Write Single Coil</td> <td>MRTU_CPU_Fn05</td> </tr> <tr> <td>0x06</td> <td>Write Single Register</td> <td>MRTU_CPU_Fn06</td> </tr> <tr> <td>0x10</td> <td>Write Multiple Registers</td> <td>MRTU_CPU_Fn10</td> </tr> </tbody> </table>	Code	Modbus Function	Function block	0x03	Read Holding Registers	MRTU_CPU_Fn03	0x05	Write Single Coil	MRTU_CPU_Fn05	0x06	Write Single Register	MRTU_CPU_Fn06	0x10	Write Multiple Registers	MRTU_CPU_Fn10
Code	Modbus Function	Function block														
0x03	Read Holding Registers	MRTU_CPU_Fn03														
0x05	Write Single Coil	MRTU_CPU_Fn05														
0x06	Write Single Register	MRTU_CPU_Fn06														
0x10	Write Multiple Registers	MRTU_CPU_Fn10														

Note: Modbus frames could be checked using the utility software [Multiway](#)

## 1- Input variables of function block MRTU\_CPU\_Fn03

Name	type	range	Description
EN	Bool	OFF, ON	FB Activation
Slave_No	UINT	0-00FF	Slave number
Register_Address	UINT	0-FFFF	Address of 1rst register
Register_Qty	UINT	0-00FF	Number of registers
RespData_DM	UINT	0-FFFF	Address of received read data (DM)
Cmd_Read	Bool	OFF, ON	Execute the read command

## 2- Input variables of function block MRTU\_CPU\_Fn05

Name	type	range	Description
EN	Bool	OFF, ON	FB Activation
Slave_No	UINT	0-00FF	Slave number
Coil_Address	UINT	0-FFFF	Coil Address
Value	Bool	OFF, ON	Value to write
Cmd_Write	Bool	OFF, ON	Execute the write command

## 3- Input variables of function block MRTU\_CPU\_Fn06

Name	type	range	Description
EN	Bool	OFF, ON	FB Activation
Slave_No	UINT	0-00FF	Slave number
Register_Address	UINT	0-FFFF	Address of the register
Value	Bool	OFF, ON	Value to write
Cmd_Write	Bool	OFF, ON	Execute the write command

## 4- Input variables of function block MRTU\_CPU\_Fn10

Name	type	range	Description
EN	Bool	OFF, ON	FB Activation
Slave_No	UINT	0-00FF	Slave number
Register_Address	UINT	0-FFFF	Address of 1rst register
Register_Qty	Bool	OFF, ON	Number of registers
DataAddress_DM	UINT	0-FFFF	Data Source address in the DM area
Cmd_Write	Bool	OFF, ON	Execute the write command

## Output variables of function block MRTU\_CPU\_FN03, FN05, Fn06 and Fn10

Name	type	Range	Description
ENO	Bool	OFF, ON	ON : Hostlink port available
Busy	Bool	OFF, ON	Executing
Error	Bool	OFF, ON	Error flag
Done	Bool	OFF, ON	Command executed