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Modbus over TCP in Poseidon2 and Damocles2 – Interface description v2

Modbus is a communication protocol designed for measuring devices that communicate over RS-485 or RS-232 (sometimes named Modbus RTU). The Modbus protocol itself allows to share the **memory area for variables**, e.g. the readings, over one of the physical interfaces. Modbus/TCP is an extension of this protocol for communication over Ethernet.
Its advantages include easy implementation in industrial visualization systems.

Mapping of variables for the Modbus/TCP protocol

Analog quantities				
Address	I/O	Type	Functions	Units
100	int	4		Current number of installed (configured in Setup) sensors
101-10x	int	4	0,1°C	Current value of the sensor No. 1 through x, where x is the value at address 100. Units are configured in WEB Setup.
200	int	4	-	Current banknote counters
201 - 2xx	int	4	-	The current counter value, the first counter is at the address 201(H)-202(L), second on 203(H)-204(L) ….
201 - 2xx	int	16	-	Set the current counter value, the first counter is at the address 201(H)-202(L), second on 203(H)-204(L) ….
Digital values				
Address	I/O	Type	Functions	Description
100 - 1xx	bit	2	0 - open, 1 - close	Current values of binary inputs
200 - 2xx	bit	1	0 - open, 1 - close	Reads the current value of the output
200 - 2xx	bit	5	0 - open, 1 - close	Sets the value of the output

Inputs registers
Outputs registers

Remote INPUTS

Poll Definition	
Slave ID:	**2**
Function:	**02 INPUT STATUS**
Adress:	**100**
Length:	**24**
Scan Rate:	**1000**
Auto Read Enable:	**Checked**

Remote OUTPUTS

Poll Definition	
Slave ID:	**2**
Function:	**01 Coil Status**
Adress:	**200**
Length:	**4**
Scan Rate:	**1000**
Auto Read Enable:	**Checked**

Ssensors

Poll Definition	
Slave ID:	**2**
Function:	**04 INPUT REGISTER**
Adress:	**100**
Length:	**2**
Scan Rate:	**1000**
Auto Read Enable:	**Checked**

The Poseidon2 and Damocles2 works as a TCP Server at port 502 (Modbus standard). The Modbus/TCP communication takes place using the given addresses. For details, see http://www.modbus.org.

Caution: *Modbus/TCP implementation support requires setting the "**Slave ID**" variable to number 2. Check the setting of this variable in case you are enable to establish a connection. (The actual name may differ in your software – it used to be an address to distinguish multiple devices on a RS-485 line in case of Modbus/RTU).*