MD20004 Modbus RTU 8 OUT / 12 IN (EN)

From Modig.pl Wiki

Contents

Description

Universal 8-output and 12-input card controlled via RS485 and Modbus RTU

The Modig Modbus 8 OUT / 12 IN module is equipped with 8 SPDT electromagnetic relays and 12 galvanically isolated inputs. All outputs and inputs are controlled and read using Modbus standard commands transmitted via the RS485 interface. The control interface features galvanic isolation and surge protection, ensuring stable operation even in installations exposed to severe interference. The communication and operation parameters of the module can be flexibly configured and adapted to the requirements of various applications.

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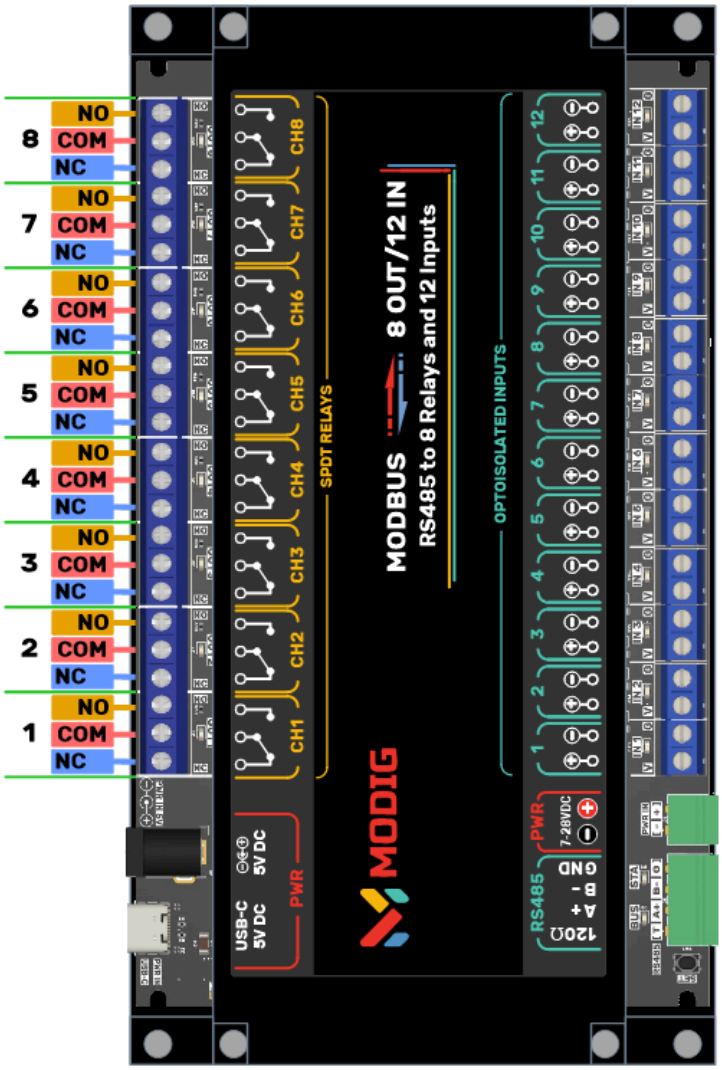
Key Features and Parameters

- 8 relay outputs – NC/NO contacts, 10 A, 250 V AC / 30 V DC
- 12 optoisolated inputs – ON/OFF type inputs, active upon applying a voltage in the range of 5.5…25 V
- Current consumption of optoisolated inputs – approx. 2…12 mA for voltages of 5.5…25 V
- RS485 interface with galvanic isolation and surge protection
- Configurable communication parameters:
  - baud rate: 1200…1000000;
  - parity: none/even/odd;
  - stop bits: 1/1.5/2
- 5 V DC power supply (4.9…5.3 V DC) with a minimum current capacity of 1 A via a USB-C connector or a 2.1/5.5 DC barrel jack
- 7…28 V power supply, min. 1 A via a 3.81 mm Phoenix MC connector
- Control and configuration of settings via Modbus commands
- Measurement of the supply voltage value (on the 5V side) and module temperature
- Dimensions: 200x110x60 mm
- Mounting on a DIN-35 rail

Relay Connectors

The relay contacts are routed to screw terminal blocks with a 5.08 mm pitch. Each of the 8 outputs offers normally closed (NC) and normally open (NO) contacts. When a given output is activated, the NO contact connects to the common contact (COM), while the NC contact disconnects from COM. The active state for a given output is indicated by an illuminated LED located next to the terminals of that connector. The layout of individual pinouts is shown in the figure.



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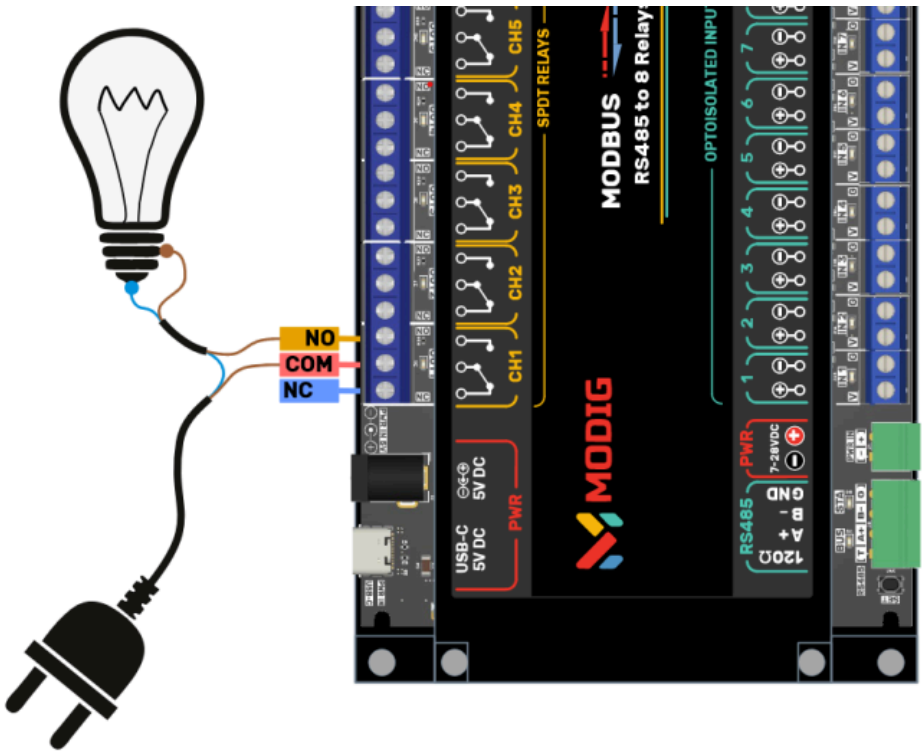
An example circuit controlled by the Modig Modbus 8 OUT / 12 IN is shown in the figure.



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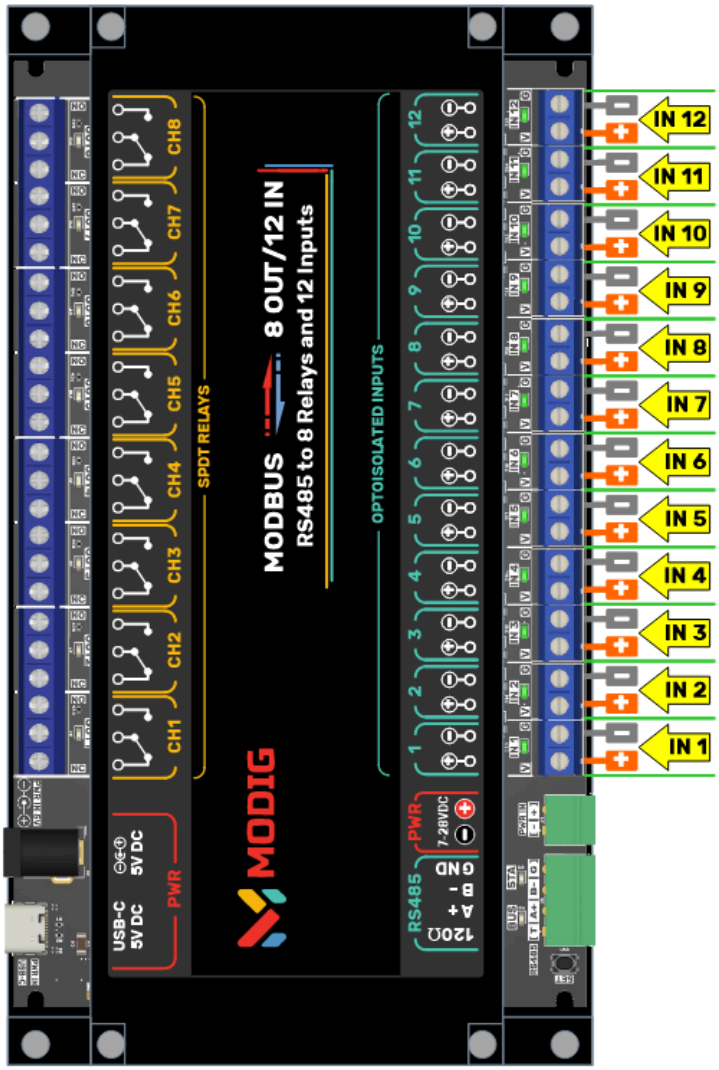
Input Connectors

The Modig Modbus 8 OUT / 12 IN module is equipped with 12 optoisolated inputs. A DC voltage ranging from 5.5…25 V with the correct polarity can be connected to the inputs, which will be read as an active state (logical 1). The current consumption in the active state is approx. 2…12 mA. The absence of voltage on the inputs will be read as an inactive state (logical 0).

Each input has '+' and '-' contacts routed to screw terminal blocks with a 5.08 mm pitch. Connecting a voltage with the correct polarity will set the active state for that input and light up the LED located next to its terminals. The layout of the individual pinouts is shown in the figure.



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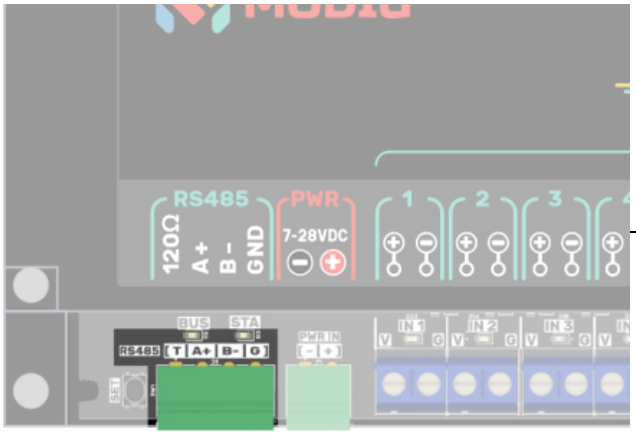
RS485 Interface

The RS485 interface is routed out as a 4-pin Phoenix Contact MC 3.81 mm connector. Depending on the installation, either only the A+ and B- lines or all T, A+, B-, G lines can be used. Their functions are described in the table.



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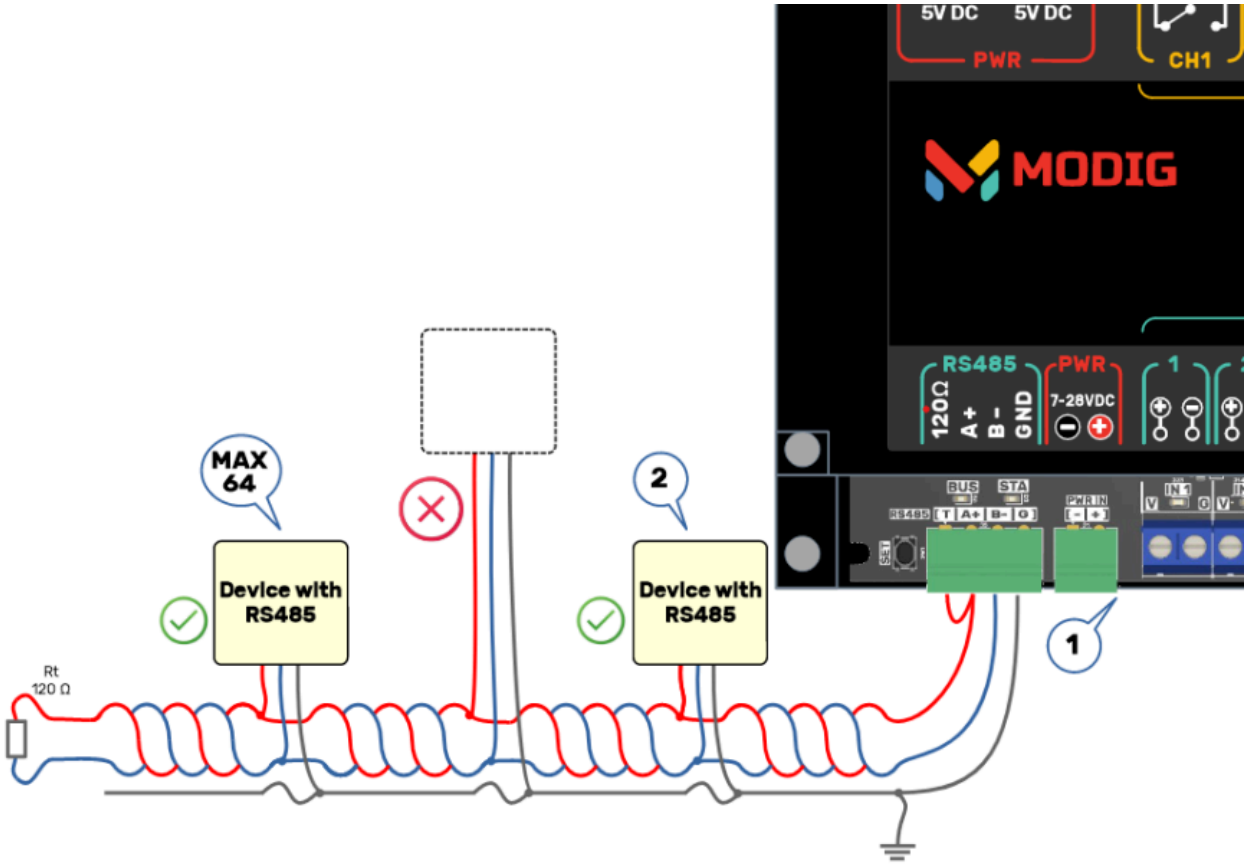
Designation	Function
120 Ω / T	Activation of the internal 120 Ω terminating resistor. The resistor is active when the **T** terminal is connected to the **A+** terminal, e.g., using a jumper installed directly inside the plug.
A+	Line **A** of the RS485 bus (positive potential)
B-	Line **B** of the RS485 bus (negative potential)
GND / G	Ground **GND** of the RS485 bus.

The RS485 interface is galvanically isolated from the other components and equipped with surge protection elements, ensuring stable operation even in installations exposed to severe interference.

The RS485 communication parameters are configured via Modbus commands; the default settings are: 19200, 8, none, 1.

The Modig Modbus 8 OUT / 12 IN module can be connected to an RS485 bus that connects up to 64 devices (including the module). Each device should be connected in such a way that no bus branching occurs – any stub connections should be kept as short as possible. It is recommended to connect 120 Ω terminating resistors at both ends of the bus. Modig Modbus has such a resistor integrated, but to activate it, the A+ and T terminals must be connected together inside the plug.

The figure shows a simplified diagram of the RS485 bus, terminated on one side with a 120 Ω terminating resistor and on the other side with the terminating resistor integrated into the module. Furthermore, correct and incorrect device connections to the bus are demonstrated.



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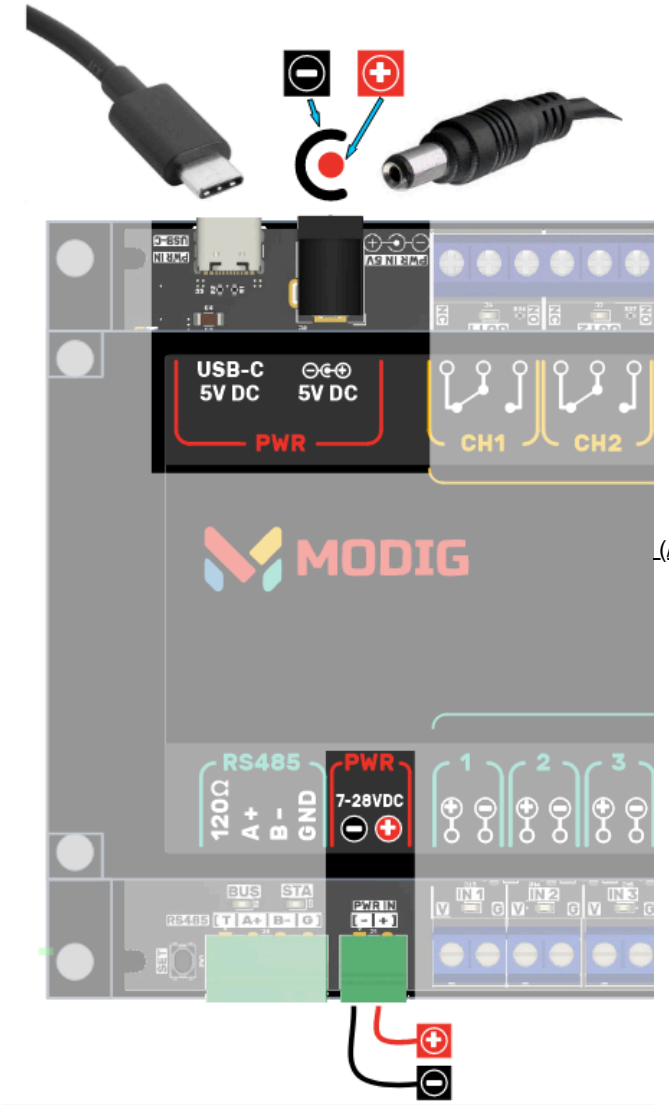
Power Supply

The Modig Modbus 8 OUT / 12 IN module is equipped with 3 different power connectors. Only one of them must be chosen to connect a power supply with the appropriate parameters and correct polarity. Detailed information can be found in the table and figure below.

Connector	Function
USB-C (J3)	Standard USB-C socket, serves solely as a power supply connector. A power adapter/charger with a voltage of 5 V DC (4.9…5.3 V) and a minimum current of 1 A must be connected.
2.1/5.5 (J2)	A 2.1/5.5 mm barrel jack compatible with "wall wart" type power supplies. A power adapter/charger with a voltage of 5 V DC (4.9…5.3 V) and a minimum current of 1 A must be connected. Pay attention to the polarity – center positive.
MC 3.81 mm (J1)	A connector with a plug for wire termination. A voltage source in the range of 7…28 V DC and a minimum current of 0.5 A must be connected. Pay attention to the polarity – positive terminal on the side facing the inputs.



(/index.php?title=File:Modbus_8OUT_12IN_PWR.png)

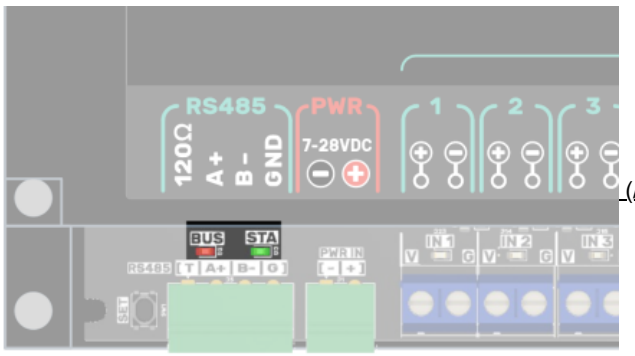
Indicator LEDs

There are two indicator LEDs on the Modig Modbus 8 OUT / 12 IN board that provide information about the device's operational status.

Indicator	Function

STA An illuminated LED with short, cyclic blanking indicates proper operation of the device.

BUS A flashing LED indicates data is being received from the RS485 bus and Modbus commands are being processed.



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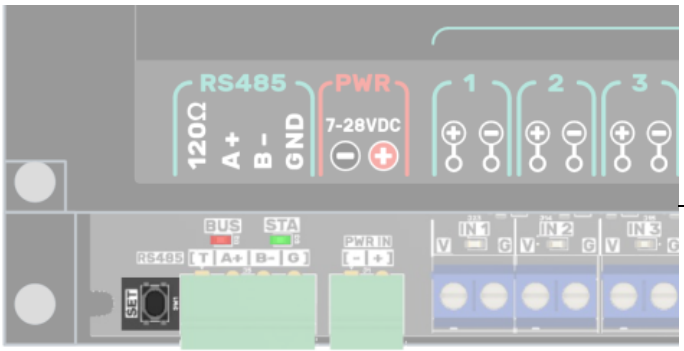
Restoring Default Settings

There is a SET micro-button located on the module board. Pressing and holding it for approximately 5 seconds will restore all settings (configuration register values) to their defaults. This function is useful in situations where incorrect parameter configuration prevents sending Modbus commands to the module. Restoring default settings will reset the RS485 communication parameters to: 19200, 8, none, 1, and the module address to "1".



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Configuration Registers (Holding Registers)

All device parameters are defined by the values of configuration registers, known as Holding Registers. These registers can be read and written via Modbus commands, allowing the operation of the device to be modified. The list of registers and their functions are described in the table below.

Register Number (hex)	Name	Description	Default Value / Value Range
x4000	Address	Specifies the module address for control via Modbus commands.	1 (x0001) 1…255
x4002	Coils	Contains a value specifying the number of outputs (Coils) available in the module. Read-only value.	16 (x0010)
x4004	Inputs	Contains a value specifying the number of inputs (Discrete inputs) available in the module. Read-only value.	0 (x0000)

x4006	Baud	Specifies the RS485 communication speed (baud rate). Value without the last 2 zeros, e.g.: 1200 = 12 = x000C; 2400 = 24 = x0018 4800 = 48 = x0030; 9600 = 96 = x0060 19200 = 192 = x00C0; 57600 = 576 = x0240 115200 = 1152 = x0480; 256000 = 2560 = x0A00	192 (x00C0) 12…10000
x4008	Parity	Specifies the parity for RS485 communication. 0 - none; 1 - even; 2 - odd	0 (x0000) 0…2
x400A	Stop	Specifies the stop bits for RS485 communication. 1 - 1 stop bit; 2 - two stop bits	1 (x0001) 1…2
x400C	Broadcast	Defines whether the device executes broadcast commands with an address value of 0 (x00). 0 - no, 1 - yes.	1 (x0001) 0…1
x400E	CRC	Defines whether the device verifies the checksum in Modbus commands. 0 - no, 1 - yes.	0 (x0000) 0…1
x4010	Response	Allows sending responses to Modbus commands. 0 - does not send any responses, 1 - sends responses to Modbus commands	1 (x0001) 0…1
x4012	IO Offset	Specifies the base value from which inputs (Discrete inputs) and outputs (Coils) are indexed. 0 - inputs/outputs start from 0 (0…15) 1 - inputs/outputs start from 1 (1…16)	1 (x0001) 0…1
x4014 and x8000	Version	Contains the firmware version. A value of 10 represents version 1.0, etc. Read-only value.	10 (x00A0)
x2000	ExBaud	Allows setting communication parameters using one of the predefined values. The lower byte corresponds to the baud rate: 0 - 4800, 1 - 9600, 2 - 19200, 3 - 38400 4 - 57600, 5 - 115200, 6 - 12800, 7 - 256000 8 - alternative value The upper byte specifies the parity: 0 - none, 1 - even, 2 - odd	x0002 x0000… x0208

Measurement Input Registers (Input Registers)

The device is equipped with supply voltage and temperature measurement circuits, which allow monitoring the module's operating conditions and preventing failures. The measurement results are available in measurement input registers, known as Input Registers. These measurement registers can be read using Modbus commands.

Register Number (hex)	Name	Description	Value Range
x3000	Voltage	Measurement of the supply voltage value. A value of 495 = 4.95 V, etc.	330…550

x3002	Temp	Measurement of the module temperature. A temperature value of 24 (x0018) indicates 24 degrees C. The temperature range -20…-1 is stored as xFF14…xFF01. The temperature range 0…70 is stored as x0000…x0046.	-20…-1 °C = xFF14…xFF01 0…70 °C = x0000…0046

Modbus Standard Control Commands

Each command in the Modbus standard has the form of a data frame, the structure of which is shown in the figure:

Slave Address	Function Code	Data	CRC
1 byte	1 byte	0 up to 252 byte(s)	2 bytes CRC Low | CRC Hi

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Consecutive frames must be separated by an interval of at least 3.5 characters (the time required to transmit a full ASCII character), while the interval between the transmission of one character and the start of transmission of the next character within the same frame must not exceed 1.5 characters. These rules apply to communication speeds (baud rates) up to 19200.

If the communication speed is set above 19200, the minimum interval between frames has a constant value equal to 1.75 ms. Meanwhile, the interval between consecutive characters of the same frame must not exceed 0.75 ms.

Each device connected to the Modbus bus must be assigned a unique address. The address field is located in every transmitted frame, has a size of 1 byte, and can have a value in the range of 1…255. An address value of 0 is the so-called broadcast address and allows a command to be directed to all devices connected to the bus. In some systems, it is not recommended to set addresses above a value of 247.

By default, outputs and inputs are numbered starting from 1. In this case, the first output is output number 1 (x01), and the last is number 16 (0x10). The command descriptions and command examples refer specifically to this variant. However, the device can be configured so that outputs and inputs are numbered starting from 0. In that case, the first output is output number 0 (x00), and the last is number 15 (0x0F). If the output number to which the control/read command refers exceeds the number of outputs contained in the device (15 or 16, depending on the configuration), the command will not be executed and will remain without response.

There are several standard commands in the Modbus standard. Each of them, along with example commands and device responses, is described in the subsequent sections of this manual.

List of Supported Modbus Commands

Command Name	Command Code	Function
Write Single Coil	**x05**	Allows controlling the state of an output or outputs
Write Multiple Coils	**x0F**	Allows controlling the state of multiple outputs simultaneously, both turning specific outputs ON and OFF.
Read Coils	**x01**	Allows reading the state of an output or outputs

Read Discrete Inputs	**x02**	Allows reading the state of inputs. Since the Modig Modbus 16R device does not have inputs for reading states, it reads the state of the outputs in response to this command, similarly to the “Read Coils” command - x01.
Read Input Registers	**x04**	Allows reading values from the measurement input registers
Read Holding Registers	**x03**	Allows reading values from the configuration registers
Write Single Holding Register	**x06**	Allows setting a value in a configuration register
Write Multiple Holding Registers	**x10**	Allows setting values in several configuration registers

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“Write Single Coil” Command - x05

The x05 command allows controlling the state of an output or outputs.

Data frame with x05 command		**01 05 00 00 FF 00 8C 3A**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x05	“Write Single Coil” command - controlling a single output
3…4	x0000	Number of the output to be controlled: 0 - none of the outputs, 1 - output 1 (first), 8 - output 8 (last) x00FF - controls all outputs - from 1 to 8
5…6	xFF00	Value specifying the task to be executed: x0000 - turn off (OFF), xFF00 - turn on (ON), x5500 - toggle the state to its opposite (TOGGLE) ON->OFF / OFF->ON
7…8	x8C3A	CRC16 checksum
Response		**The device that reads and executes the command will send an identical frame in response: 01 05 00 00 FF 00 8C 3A**

Similar commands:

- A5 05 00 08 55 00 6A 7C - x05 command to the device with address 165 (xA5), output no. 8 (x0008) will toggle its state to the opposite (x5500)

  Response: A5 05 00 08 55 00 6A 7C

- 14 05 00 01 00 00 9E CF - x05 command to the device with address 20 (x14), output no. 1 (x0001) will be turned OFF (x0000)

  Response: 14 05 00 01 00 00 9E CF

- 29 05 00 FF FF 00 BA 22 - x05 command to the device with address 41 (x29), all outputs (x00FF) will be turned ON (xFF00)

  Response: 29 05 00 FF FF 00 BA 22

“Write Multiple Coils” Command - x0F

The x0F command allows controlling the state of multiple outputs simultaneously, both turning specific outputs ON and OFF.

Data frame with x0F command		**01 0F 00 01 00 03 02 00 05 27 76**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x0F	“Write Multiple Coils” command - controlling multiple outputs
3…4	x0001	Number of the output from which control will begin: 0 - none of the outputs will be controlled, 1 - from output 1 (first), 8 - from output 8 (last)
5…6	x0003	Number of outputs to be controlled: 0 - none of the outputs will be controlled 1 - one output, 8 - up to 8 outputs to be controlled
7	x02	Number of data bytes containing the control sequence - must be 2
8…9	x0005	Control sequence, LSB -> output No. 1. Bits with a value of 0 turn the outputs OFF, bits with a value of 1 turn the outputs ON. x0005 = 00000000 00000101 - outputs 1 and 3 are turned ON
10...11	x27 76	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response:** **01 0F 00 01 00 03 44 0A**
1	x01	Address of the responding device
2	x0F	“Write Multiple Coils” command - controlling outputs
3...4	x0001	Number of the output from which control was initiated
5...6	x0003	Number of outputs that were actually controlled
7...8	x440A	CRC16 checksum

If the number of outputs to be set exceeds the number of outputs available in the device (taking into account the starting output number), the command will be executed correctly for the existing outputs. The response will return the number of outputs that were actually controlled.

Similar commands:

- A5 0F 00 03 00 04 02 00 07 6C E6 - x0F command to the device with address 165 (xA5), controls 4 (x0004) outputs starting from output No. 3 (x0003), the control sequence is x0007 (00000000 00000111), which will turn ON outputs 3, 4, 5 and turn OFF output 6.

  Response: A5 0F 00 03 00 04 2C BD

- 14 0F 00 06 00 05 02 00 00 14 DA - x0F command to the device with address 20 (x14), controls 5 (x0005) outputs starting from output No. 6 (x0006), the control sequence is x0000 (00000000 00000000), which will turn OFF outputs 6, 7, 8.

Response: 14 0F 00 06 00 03 F7 0E (3 outputs controlled instead of 5)

- 29 0F 00 01 00 10 02 FF FF 1C 40 - x0F command to the device with address 41 (x29), controls 16 (x0010) outputs starting from output No. 1 (x0001), the control sequence is xFFFF (11111111 11111111), which will turn ON all outputs from 1 to 8.

  Response: 29 0F 00 01 00 08 03 E5

“Read Coils” Command - x01

The x01 command allows reading the state of an output or outputs.

Data frame with x01 command		**01 01 00 02 00 04 9C 09**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x01	“Read Coils” command - reading the state of outputs
3…4	x0002	Number of the output from which the status reading will begin: 2 - read starting from output No. 2
5…6	x0004	Value specifying how many outputs will be read: 4 - reading 4 outputs, i.e.: 2, 3, 4, and 5
7…8	x9C09	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response: 01 01 02 00 0C B9 F9**
1	x01	Address of the responding device
2	x01	“Read Coils” command - reading the state of outputs
3	x02	Number of data bytes containing the response - 2
4…5	x000C	State of outputs: 2 - OFF (0), 3 - OFF (0), 4 - ON (1), 5 - ON (1) Binary: 00000000 00001100
6…7	xB9F9	CRC16 checksum

Similar commands:

- A5 01 00 06 00 02 44 EE - x01 command to the device with address 165 (xA5), reading the state of 2 (x0002) outputs, starting from output 6 (x0006).

  Response: A5 01 02 00 02 49 E4 - only output No. 7 is active (x0002)

- 14 01 00 08 00 01 7E CD - x01 command to the device with address 20 (x14), reading the state of one (x0001) output, starting from output 8 (x0008).

  Response: 14 01 02 00 00 B4 3F - output turned OFF (x0000)

- 29 01 00 20 00 08 3A 2E - x01 command to the device with address 41 (x29), reading the state of 8 (x0008) outputs, starting from output 32 (x0020).

Response: no response - cannot read status starting from output 32

If the number of outputs to be read exceeds the number of outputs available in the device (taking into account the starting output number), non-existent outputs in the response will always have an OFF (0) state.

“Read Discrete Inputs” Command - x02

The x02 command allows reading the state of inputs. Inputs with voltage connected will have an active state - 1, unconnected inputs will have a state of 0.

Data frame with x02 command		**01 02 00 02 00 04 D8 09**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x02	“Read Discrete Inputs” command - reading the state of inputs
3…4	x0002	Number of the input from which the status reading will begin: 2 - read starting from input No. 2
5…6	x0004	Value specifying how many inputs will be read: 4 - reading 4 inputs, i.e.: 2, 3, 4, and 5
7…8	xD809	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response: 01 02 02 00 0C B9 BD**
1	x01	Address of the responding device
2	x02	“Read Discrete Inputs” command - reading the state of inputs
3	x02	Number of data bytes containing the response - 2
4…5	x000C	State of inputs: 2 - inactive (0), 3 - inactive (0), 4 - active (1), 5 - active (1); Binary: 00000000 00001100
6…7	xB9BD	CRC16 checksum

Similar commands:

- A5 02 00 02 00 06 40 EC - x02 command to the device with address 165 (xA5), reading the state of 6 (x0006) inputs, starting from input 2 (x0002).

  Response: A5 02 02 00 02 49 A0 - only input No. 3 is active (x0002)

- 14 02 00 08 00 01 3A CD - x02 command to the device with address 20 (x14), reading the state of one (x0001) input, starting from input 8 (x0008).

  Response: 14 02 02 00 00 B4 7B - input inactive (x0000)

- 29 02 00 20 01 00 7E 78 - x02 command to the device with address 41 (x29), reading the state of 16 (x0010) inputs, starting from input 32 (x0020).

  Response: no response - cannot read status starting from input 32

If the number of inputs to be read exceeds the number of inputs available in the device (taking into account the starting input number), non-existent inputs in the response will always have an inactive (0) state.

“Read Input Registers” Command - x04

The x04 command allows reading values from the measurement input registers. In the Modig Modbus device, it is possible to measure the supply voltage on the 5 V input (it does not measure the voltage on the 7…28 V input) and the module temperature.

Data frame with x04 command		**01 04 30 00 00 02 7E CB**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x04	“Read Input Registers” command - reading measurement input registers
3…4	x3000	Number of the register from which the reading will begin. x3000 - reading the supply voltage measurement x3002 - reading the module temperature measurement
5…6	x0002	Value specifying how many registers will be read: 1 - one, e.g., only voltage; 2 - both measurement registers
7…8	x7ECB	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response: 01 04 04 02 06 00 18 1A 37**
1	x01	Address of the responding device
2	x04	“Read Input Registers” command - reading measurement input registers
3	x04	Number of data bytes containing the response - 4
4…5	x0206	Voltage value - x0206 = 518, which means 5.18 V
6…7	x0018	Temperature value - x0018 = 24, which means 24 degrees C The temperature range -20…-1 is stored as xFF14…xFF01 The temperature range 0…70 is stored as x0000…x0046
8…9	x1A37	CRC16 checksum

Similar commands:

- A5 04 30 00 00 01 27 EE - x04 command to the device with address 165 (xA5), reading one register (x0001) numbered x3000, which is the supply voltage measurement register.

  Response: A5 04 02 01 F0 49 A0 - voltage is 4.96 V (x01F0 = 496)

- 14 04 30 08 00 02 FD CC - x04 command to the device with address 20 (x14), reading two (x0002) measurement registers starting from number x3008.

Response: no response - there is no measurement register numbered x3008.

- 29 04 30 02 00 02 7E 78 - x04 command to the device with address 41 (x29), reading two (x0002) measurement registers starting from number x3002.

  Response: A5 04 02 00 18 C8 E3 - the device has no measurement registers higher than x3002, therefore only one register numbered x3002 was read - module temperature = 24 (x0018) and there are only two data bytes (x02) in the response.

“Read Holding Registers” Command - x03

The x03 command allows reading values from the configuration registers.

Data frame with x03 command		**01 03 40 00 00 01 91 CA**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x03	“Read Holding Registers” command - reading configuration registers
3…4	x4000	Number of the register from which the reading will begin. Available registers are in the ranges x4000…x4014 as well as x2000, x8000
5…6	x0001	Value specifying how many registers will be read: 1 - one, etc., up to a maximum of 8
7…8	x91CA	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response: 01 03 02 00 01 79 84**
1	x01	Address of the responding device
2	x03	“Read Holding Registers” command - reading configuration registers
3	x02	Number of data bytes containing the response - 2
4…5	x0001	Register numbered x4000 contains the address for Modbus commands, which in this case is 1 (x0001)
6…7	x7984	CRC16 checksum

Similar commands:

- A5 03 40 06 00 04 28 EE - x03 command to the device with address 165 (xA5), reading four configuration registers (x0004), starting from number (x4006).

  Response: A5 03 08 00 C0 00 00 00 01 00 01 C5 DB - values of 4 configuration registers, i.e., 8 data bytes

- 14 03 80 00 00 01 AF 0F - x03 command to the device with address 20 (x14), reading one (x0001) configuration register numbered x8000, which is the firmware version.

  Response: 14 03 02 00 A0 B5 FF - response of 2 bytes (x00A0) = 10, which means firmware version 1.0

“Write Single Holding Register” Command - x06

The x06 command allows setting a value in a configuration register.

Data frame with x06 command		**01 06 40 00 00 01 5D CA**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x06	“Write Single Holding Register” command - writing a configuration register
3…4	x4000	Number of the register to which the new value will be written. Available registers are in the ranges x4000, x4006…x4012, and x2000
5…6	x0001	Value to be written into the register
7…8	x5DCA	CRC16 checksum
Response		**The device that reads and executes the command will send an identical frame in response: 01 06 40 00 00 01 5D CA**

Similar commands:

- A5 06 40 00 00 04 84 ED - x06 command to the device with address 165 (xA5), writing configuration register numbered x4000 with a value of 4 (x0004), i.e., assigning a new address of 4.

  Response: A5 06 40 00 00 04 84 ED

- 14 06 40 0C 00 00 5E CC - x06 command to the device with address 20 (x14), writing configuration register numbered x400C with a value of 0 (x0000), i.e., disabling broadcast command handling.

  Response: 14 06 40 0C 00 00 5E CC

“Write Multiple Holding Registers” Command - x10

The x10 command allows setting values in several configuration registers.

Data frame with x10 command		**01 10 40 0C 00 03 06 00 01 00 00 00 01 8F 7E**
Byte Number	**Value (hex)**	**Meaning**
1	x01	Target device address
2	x10	“Write Multiple Holding Registers” command - writing several configuration registers
3…4	x400C	Number of the register from which writing will begin. Available registers are in the ranges x4000, x4006…x4012, and x2000
5…6	x0003	Value specifying how many registers will be written: 1 - one, etc., up to a maximum of 8
7	x06	Number of data bytes containing the values to be written

	x0001	
8…13	x0000 x0001	Three values to be written into the configuration registers
14…17	x8F7E	CRC16 checksum
Response		**The device that reads and executes the command will send the following frame in response: 01 10 40 0C 00 03 55 CB**
1	x01	Address of the responding device
2	x10	“Write Multiple Holding Registers” command - writing several configuration registers
3	x400C	Number of the register from which the value writing was initiated
4…5	x0003	Value specifying how many registers were successfully written
6…7	x55CB	CRC16 checksum

Similar commands:

- A5 10 40 00 00 01 02 00 03 6D 52 - x10 command to the device with address 165 (xA5), writing one (x0001) configuration register starting from number x4000 with data of two bytes in length (x02) equal to x0003, i.e., assigning a new address of 3.

  Response: A5 10 40 00 00 03 8C EC

- 14 10 40 0C 00 02 04 00 01 00 00 D6 F5 - x10 command to the device with address 20 (x14), writing two (x0002) configuration registers starting from number x400C with the values x0001 and x0000, i.e., enabling broadcast command handling and disabling CRC checksum verification.

  Response: 14 10 40 0C 00 02 96 CE