

EX9043-M Quick Start

- 1. The default setting is MODBUS mode after Power On.**
- 2. Using INIT pin to contact with GND pin then Power On will enter Normal mode.**
- 3. Command: \$00P0 is set Ex9043-M to Normal mode after Repower On. On normal mode, user can set other setting like address, Baudrate, (Please check the Ex9000 user manual).**
- 4. Command: \$AAP1 is set to MODBUS mode after Repower On.**
- 5. Under Normal mode that Command: \$AAP can check which mode it is after Repower On.**

Response:

!AA10=Normal

!AA11=MODBUS

The Modbus protocol was originally developed for Modicon controllers by Modicon Inc. Detailed information can be found at <http://www.modicon.com/techpubs/toc7.html>. Visit <http://www.modbus.org> to find more valuable information.

9000M series modules support the Modbus RTU protocol. The communication Baud Rates range from 1200bps to 115200bps. The parity, data bits and stop bits are fixed as no parity, 8 data bits and 1stop bit. The following Modbus functions are supported.

01(0x01) Read Digital Output Value

Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x01
02~03	Starting channel	2 Bytes	0x0000~0x000F for DO readback value 0x0040~0x004F for DO Latch high value 0x0060~0x006F for DO Latch Low value
04~05	Output channel numbers	2 Bytes	0x0001~0x0010

Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x01
02	Byte count	1 Byte	2
03~04	Output channel readback value	2 Byte	0x0000~0xFFFF A bit corresponds to a channel. When the bit is 1 it denotes that the value of the channel that was set is ON. if the bit is 0 it denotes that the value of the channel that was set is OFF.

Error Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x81
02	Exception code	1 Byte	Refer to the Modbus standard for more details.

05(0x05) Digital Output Value (Single channel)

Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x05
02~03	Output channel numbers	2 Bytes	0x0000~0x000F 0x0100 to clear the DO latch value
04~05	Output value	2 Bytes	A value of 0xFF00 sets the output to ON. A value of 0x0000 set it to OFF. All other values are illegal and won't affect the coil.

Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x05
02~03	Output channel numbers	2 Bytes	The value is the same as byte 02 and 03 of the Request
04~05	Output value	2 Bytes	The value is the same as byte 04 and 05 of the Request

Error Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x85
02	Exception code	1 Byte	Refer to the Modbus standard for more details.

15(0x0F) Write Digital Output Value (Multi channel)

Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x0F
02~03	Starting channel	2 Bytes	0x0000~0x000F
04~05	Output channel numbers	2 Bytes	0x0001~0x0010
06	Byte count	1 Byte	2
07~08	Output value	2 Bytes	0x0000~0xFFFF A bit corresponds to a channel. When the bit is 1 it denotes that the value of the channel that was set is ON. if the bit is 0 it denotes that the value of the channel that was set is OFF.

Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x0F
02~03	Starting channel	2 Bytes	The value is the same as byte 02 and 03 of the Request
04~05	Output channel numbers	2 Bytes	The value is the same as byte 04 and 05 of the Request

Error Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x8F
02	Exception code	1 Byte	Refer to the Modbus standard for more details.