

## **EX9067-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 Ex9067-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 Input/Output Value

### Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x01
02~03	Starting channel	2 Bytes	0x0000~0x0006 for DO readback value 0x0044~0x004B for DO Latch high value 0x0064~0x006B for DO Latch low value
04~05	Output channel numbers	2 Bytes	0x0001~0x0007

### Response

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x01
02	Byte count	1 Byte	1
03	Output channel readback value	1 Byte	0x00~0x7F 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) Write Digital Output/Clear DI count Value (Single channel)

### Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x05
02~03	Output channel number	2 Bytes	0x0000~0x0006
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/Clear DI count Value (Multi channel)

### Request

00	Address	1 Byte	1-247
01	Function code	1 Byte	0x0F
02~03	Starting channel	2 Bytes	0x0000~0x0004 for DO output
04~05	Output channel numbers	2 Bytes	0x0001~0x0007
06	Byte count	1 Byte	1
07	Output value	1 Byte	0x00~0x7F 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.