

RIO-2017 Modbus Function List

1 01 (0x01) Read Coils(Outputs)

1.1 Request

Function code	1 Byte	0x01
Starting Address	2 Bytes	0x0000
Quantity of coils	2 Bytes	0x0001

1.2 Response

Function code	1 Byte	0x01
Byte count	1 Bytes	0x01
Coil Status	1 Bytes	

1.3 Error

Function code	1 Byte	0x81
Exception code	1 Bytes	01 or 02

2 03 (0x03) Read Holding Registers

2.1 Request

Function code	1 Byte	0x03
Starting Address	2 Bytes	0x0100
Quantity of Registers	2 Bytes	

2.2 Response

Function code	1 Byte	0x03
Byte count	1 Bytes	N
Register value	N x 1 Bytes	

2.3 Error

Function code	1 Byte	0x83
Exception code	1 Bytes	01 or 02

2.4 Register address

Start address	Stop address	
0x0100	0x0105	AI1
0x0106	0x010B	AI2
0x010C	0x0111	AI3
0x0112	0x0117	AI4

0x0118	0x011D	AI5
0x011E	0x0123	AI6
0x0124	0x012B	AI7
0x012A	0x012F	AI8

2.5 Register Value

Register[0] Hi	AI enable/disable	0x01:enable 0x00:disable
Register[0] Lo	AI Value flag	0x00: + 0x01: -
Register[1] Hi	AI integer Hi	
Register[1] Lo	AI integer Lo	
Register[2] Hi	AI decimal Hi	
Register[2] Lo	AI decimal Lo	

3 05 (0x05) Write Single Coil(Output)

3.1 Request

Function code	1 Byte	0x05
Output Address	2 Bytes	0x0000
Output Value	2 Bytes	0x0000 or 0xFF00

0xFF00:ON:Relay energized

0x0000:OFF:Relay de-energized

3.2 Response

Function code	1 Byte	0x05
Output Address	2 Bytes	0x0000
Output value	2 Bytes	0x0000 or 0xFF00

3.3 Error

Function code	1 Byte	0x85
Exception code	1 Bytes	01 or 02