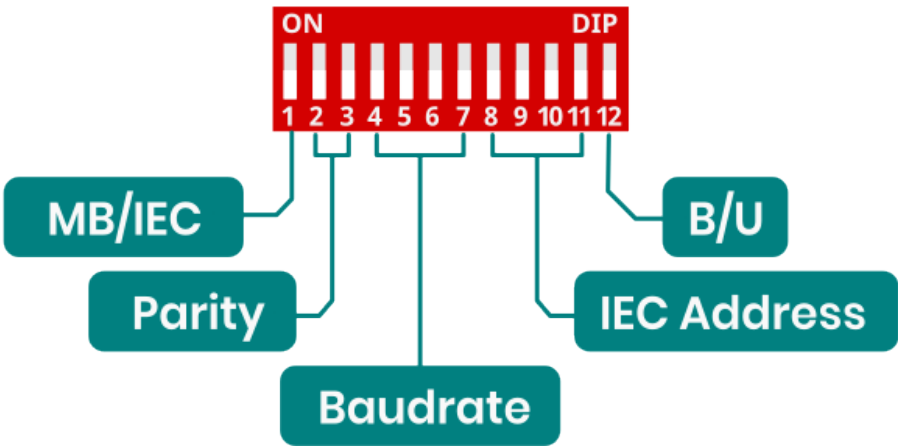


Configuration IEC60870

DIP switch configuration

This is DIP switch functions diagram for Modbus RTU configuration. For enable IEC60870 protocol 1 switch should be in ON position.



Parity configuration

Parity configuration for both Modbus and IEC.

Parity	Function
00	NONE
01	ODD
10	EVEN
11	NONE

Baudrate configuration

Baudrate configuration for both Modbus and IEC

Switch	Baudrate
0000	9600

Switch	Baudrate
0001	1200
0010	2400
0011	4800
0100	14400
0101	19200
0110	28800
0111	38400
1000	57600
1001	76800
1010	115200
1011	230400
1100	256000
1101	460800
1110	576000
1111	921600

Address configuration for IEC

Switch	Value	IEC Address
0000	0	1
0001	1	2
0010	2	3
0011	3	4
0100	4	5
0101	5	6
0110	6	7
0111	7	10

Switch	Value	IEC Address
1000	8	20
1001	9	30
1010	10	40
1011	11	50
1100	12	60
1101	13	70
1110	14	80
1111	15	90

EC60870-5-101 Implementation Guide

Protocol Overview

The device implements IEC60870-5-101 protocol with the following key functions:

Reading States (Interrogation)

- C_IC_NA_1 (100)
- Reading all inputs and outputs states
 - Inputs: 1000-1007
 - Outputs: 2000-2003

Controlling Outputs

- Function: C_SC_NA_1 (45)
- Purpose: Setting individual output states
- IOA range: 2000-2003
- Values: ON (1) / OFF (0)

Command Structure

General Interrogation Command

Type ID: 100 (C_IC_NA_1)
Qualifier: 20

Cause of Transmission: 6 (Activation)

Common Address: 1

Single Command (Output Control)

Type ID: 45 (C_SC_NA_1)

Cause of Transmission: 6 (Activation)

Common Address: 1

IOA: 2000-2003

Value: 0/1

SCADA system configuration

IEC60870-5-101 Protocol Configuration

- Common Address (ASDU): 1
- Frame format: FT1.2
- Link Layer Address: according to device configuration

I/O Points Configuration:

For inputs (8 channels):

- Type: Single Point Information (M_SP_NA_1)
- IOA addresses: 1000-1007
- Direction: Monitoring (read)

For outputs (4 channels):

- Type: Single Command (C_SC_NA_1)
- IOA addresses: 2000-2003
- Direction: Control (write)

Verification:

- Check if input states are correctly read (IOA 1000-1007)
- Confirm control operation for each output (IOA 2000-2003)
- Verify device responds to General Interrogation

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