

MOD Modbus Communication Module

Quick Start

Contents

1. Purpose and Basic Description	2
2. Electrical connections	2
3. Configuration	4
3.1. Setting MODBUS Address.....	4
3.2. Communication.....	5
4. Revisions.....	5

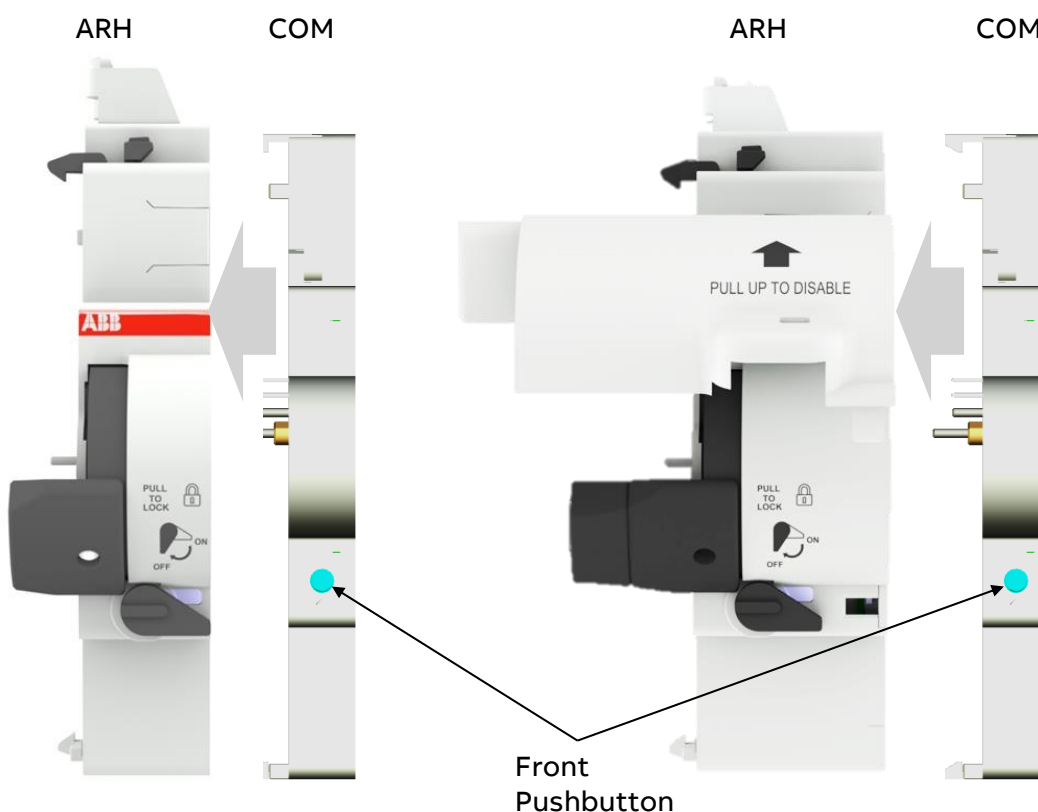
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1. Purpose and Basic Description

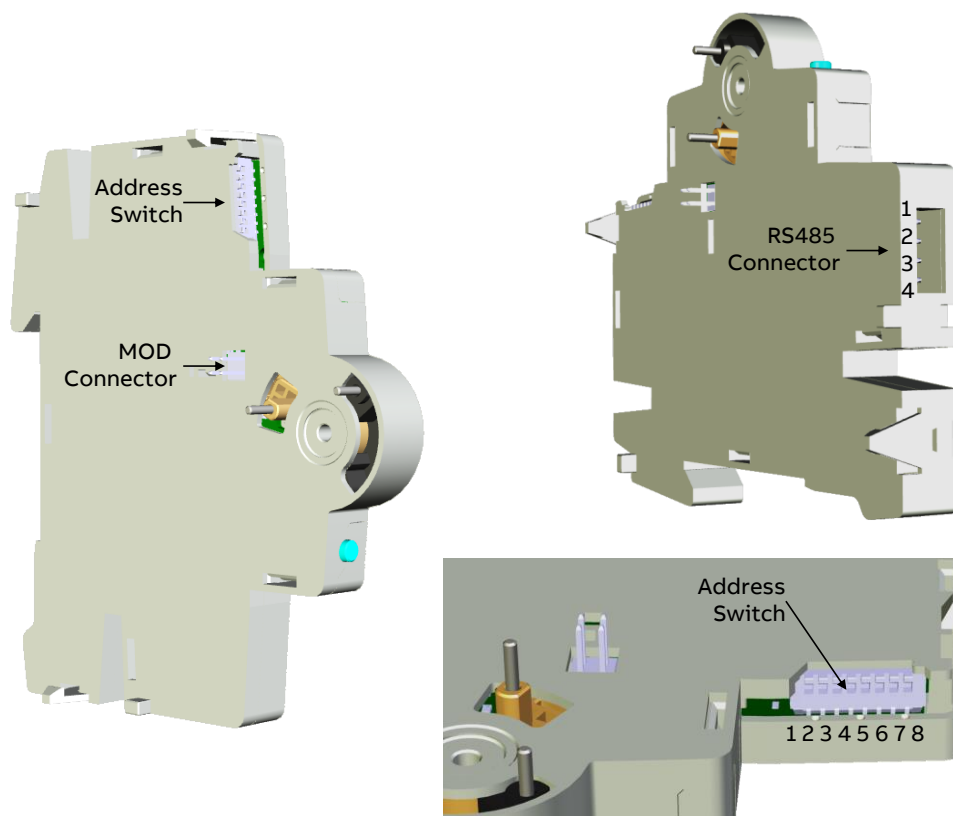
This document describes the procedure of configuration of MOD MODBUS Communication Module. The description contains basic connection diagram, setting of the MODBUS address and establishing communication.

2. Electrical connections

The MODBUS COM module is designed to be used with MOD, ARI or ARH device. It shall be installed on the right side of MOD/ARI/ARH. Communication to MOD and power supply for COM module will be provided using board to board connector.



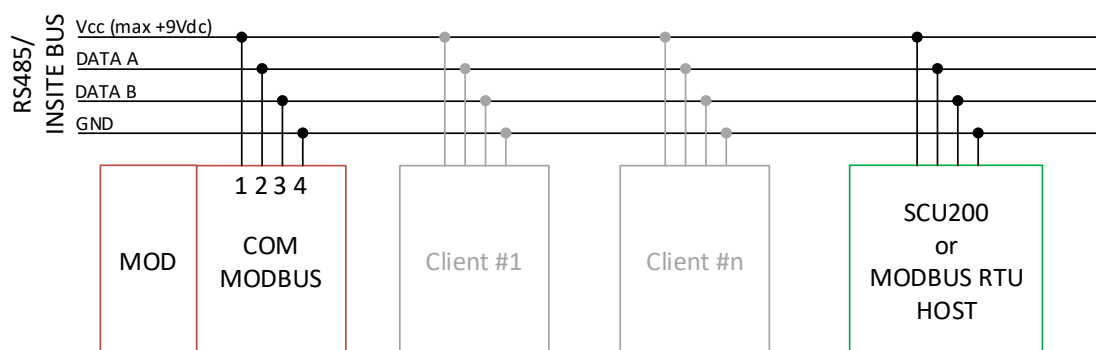
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Draft	Internal	PLCTC/50013735/TN/74/2022	1.1		2/5



For the purpose of communication to ABB SCU200 or external RS485 system the RS485 connector is used. The pin description is presented in table below:

1	Vcc or GND
2	DATA A
3	DATA B
4	Vcc or GND

The device supports reversing of the connector, i.e. the correct communication will be maintained when the pins are connected in order: 1.Vcc/GND, 2.A, 3.B, 4.Vcc/GND or 1.Vcc/GND, 2.B, 3.A, 4.Vcc/GND.

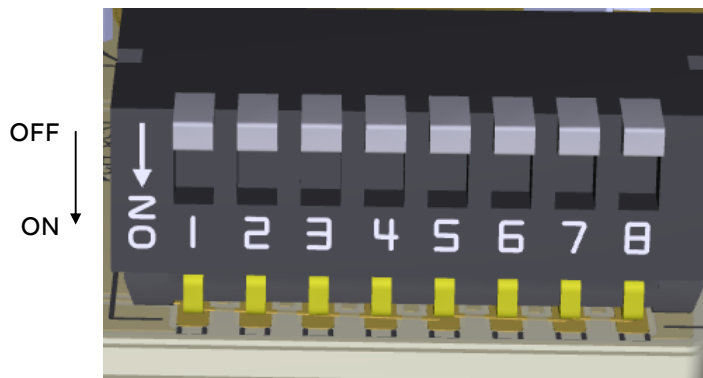


STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Draft	Internal	PLCTC/50013735/TN/74/2022	1.1		3/5

3. Configuration

3.1. Setting MODBUS Address

The MODBUS address is set manually using physical 8-position Address Switch.



CAUTION!

Address needs to be set when device is powered-off.

The address is set in binary code. Position 1. corresponds to LSB (Least Serious Bit), position 8. corresponds to MSB (Most Serious Bit). Example settings are shown in table.

Modbus Address (decimal/binary)	1	2	3	4	5	6	7	8
Auto Assign (for ABB SCU200)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1 / 00000001	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2 / 00000010	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3 / 00000011	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
...								
100 / 01100010	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
...								
247 / 11110111	ON	ON	ON	OFF	ON	ON	ON	ON

Address 000 is reserved for SCU200 auto-assign function. For details refer to SCU200 manual.

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Draft	Internal	PLCTC/50013735/TN/74/2022	1.1		4/5

3.2. Communication

The MODBUS Communication Module works as Modbus Client, using standardized MODBUS RTU protocol based on RS485 physical layer.

To establish the connection following serial port parameters has to be set:

Baud rate	19200
Data bits	8
Parity	Even
Stop bits	1

The device responds to standard MODBUS RTU telegrams.

The MODBUS MAP (definitions of available registers) is described in separate document.

4. Revisions

Rev.	Page (P) Chapt. (C)	Description	Date Dept./Init.
1.1		Errors corrected	2022-11-09
1.0		1 st revision	2022-11-08

STATUS	SECURITY LEVEL	DOCUMENT ID.	REV.	LANG.	PAGE
Draft	Internal	PLCTC/50013735/TN/74/2022	1.1		5/5