**CONTROL AND MODBUS COMMUNICATION**
**APPENDIX TO THE CDD MANUAL**

THE FOLLOWING MANUAL ASSUMES GOOD KNOWLEDGE OF TECHNICAL DOCUMENTATION INCLUDED WITH THE AIR HANDLING UNIT (AHU).
THIS MANUAL CONSIDERS ONLY THE CONTROL AND COMMUNICATION CIRCUITS. THE INSTALLATION OF THE $CO_2$ TRANSDUCER AND INSTALLATION OF CABLES SHOULD BE DONE ACCORDING TO THE CATIC CDD MANUAL.

## 1. Technical data

Power
- 15-36 VDC
- 15-28 VAC

Output
- Analog (0-10 VDC/4-20mA)
- Modbus RTU (RS485)

## 2. Connection

**Pressure sensor**

| | |
|---|---|
| 24V | Positive DC voltage / AC~ |
| GND | Ground / AC ~ |
| A | RS485 signal A (+) |
| B | RS485 signal B (-) |
| GND | Ground |

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| | |
|---|---|
| XG | AC~ (24VAC) |
| X0 | AC~ (ground) |
| RX+/Tx+ | RS485 signal A (+) |
| RX-/Tx- | RS485 signal B (-) |

**Cable**
Use a shielded, twisted pair cable (AWG 20-22) with inter-conductor capacitance <90pF/m.

**Note:** In case of a Master–Slave network the max. allowable length is 1000 m. If the network is longer than 100 m, apply 120Ω, 1/4W terminating resistors to the first and last devices in the network.

## 3. Communication parameters in Modbus network

**Holding register**

| | Definition | Data type | Description | Data |
|---|---|---|---|---|
| 13 | Slave address | signed int. | RS485 Modbus RTU slave device address | 1-247 (**default: 21**)<br>9600,8n1 |

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