



**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 HUMIDITY TRANSDUCER AND INSTALLATION OF CABLES SHOULD BE DONE ACCORDING TO THE CATIC 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

Carel uPC

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: 31) Address: Supply: 31 Exhaust: 32 9600,8n1