HRQ-ERGO-SENS-CO2-W

Function Introduction

Main function of HRQ-ERGO-SENS-CO2-W sensor is room CO2 concentration detection. HRU-CONT-TPAD is needed for operation.

Technical specification

Sensor technology: NDIR infrared CO2 detection

Measurement range 400-2000ppm CO2

Maximum drift: ±2%

Resolution: 10ppm

Temperature influence: ＜0.5% FS per ° C

Response time (T90): ＜120S

Accuracy: 75ppm

Repeatability: ＜2%

Sample mode: diffussion

Power supply: DC5V±5%

Operating current : average 70mA, peak value 120mA

PWM linear output

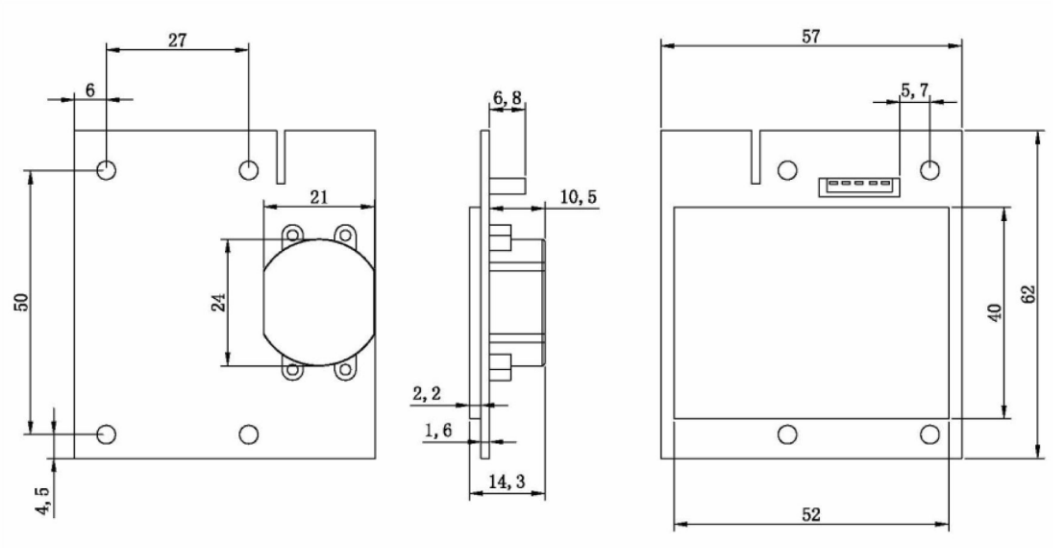
UART: data bits 8; stop bit 1; check bit: No

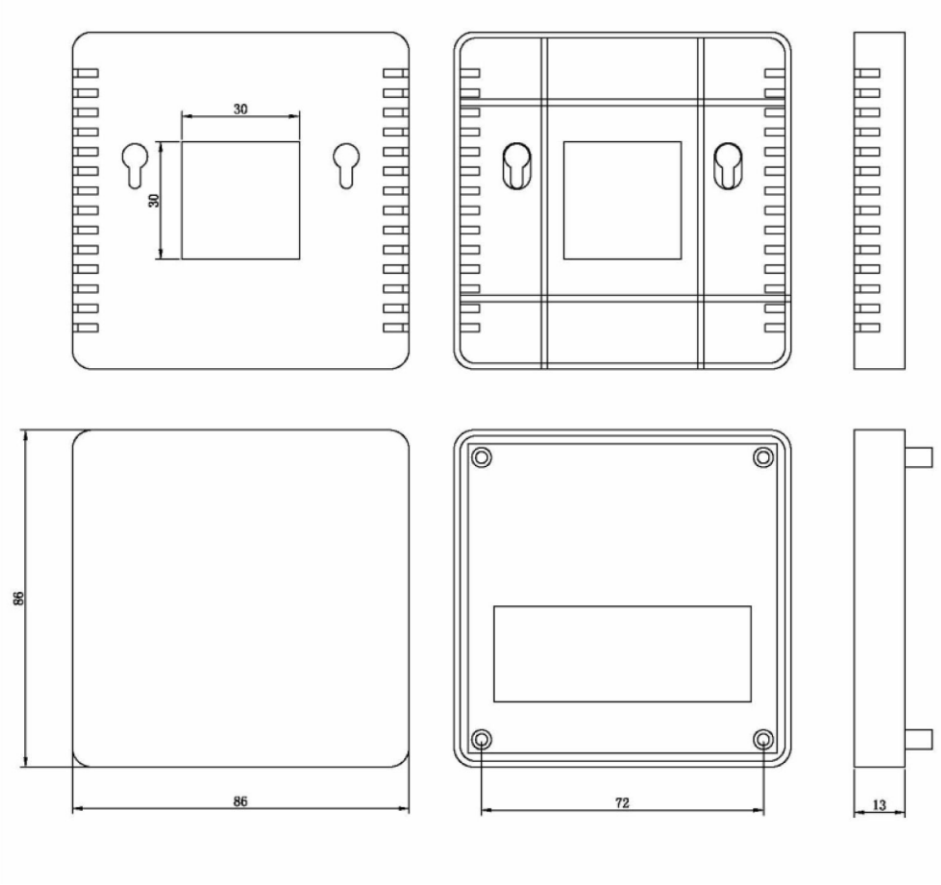
Standard baud rate: 9600bps

Operating temperature: -10 to 50° C

Operating humidity: 0-95%

Dimmensions:





Connection to ERGO (from User Manual):

User Manual

HRU-ERGO

4.2 CO_2 and humidity sensors

The HRU-ERGO unit can be controlled via external CO2 or humidity sensors.
To activate the CO_2 sensor, set the switch 3 on the SW4 switch block at the OFF (default setting) and connect the sensor to the „CO2" connector on the main control board (see diagram No. 4 in the section 12. Diagrams).

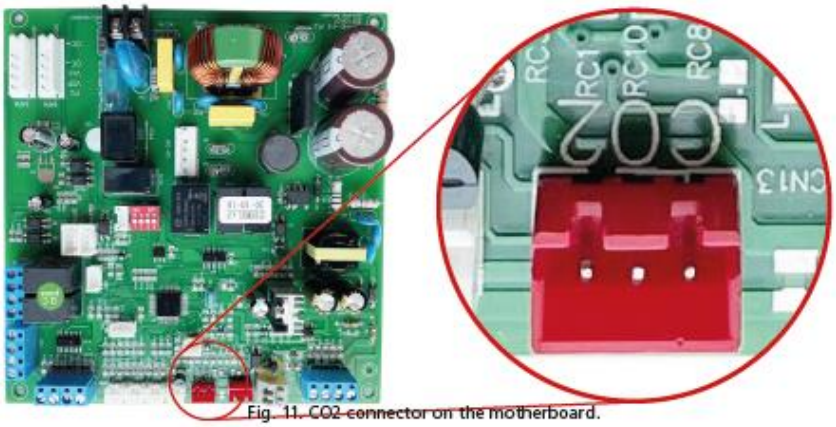


Fig. 11. CO2 connector on the motherboard.

To activate the humidity sensor, set the switch 3 on the SW4 switch block to the ON position and connect the sensor to the „CN25" connector on the main control board (see diagram No. 5 in the section 12. Diagrams).

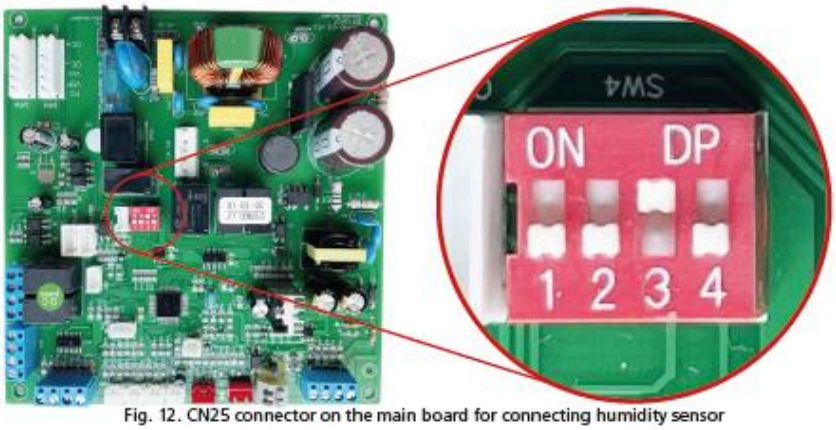


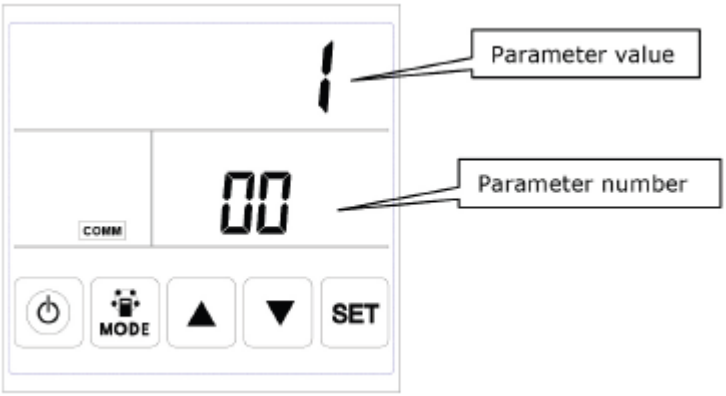
Fig. 12. CN25 connector on the main board for connecting humidity sensor

When connecting both CO2 and RH sensors leave the SW4-3 switch in „ON" position.
The CO_2 and HUM sensors work only if connected with the HRU-CONT-TPAD touch panel.

Configuration in HRU-CONTR-TPAD:

Please refer to User Manual for TPAD.

Parameter setting
Keep pressing the MODE button for 6 seconds, after buzzing to enter the parameter setting interface.



After entering the parameter setting interface, press SET button shortly to change the parameter number, every pressing will increase 1 parameter number (until number 24 then repeat again). After choosing the correct parameter number, press Mode button for short, parameter value flashes at the top right corner, at this time to change the value by UP and DOWN buttons. After parameters setting then press SET button to save.
Attention:
1) After parameters setting, system need around 15 seconds to record, during this period power should not be off.
2) Please refer to the parameters table to set the suitable parameters according to different requests.

Values of parameter no. 07	PPM Value
28	392
33	500
3E	607
48	705
52	803
5C	902
66	**1000 (default value)**
71	1107
7B	1205
85	1303
8F	1401
99	1500
A4	1607
AE	1705
B8	1803
C2	1901
C8	1960

Control Algorithm of CO2 sensor

After connecting the optional CO2 sensor, the CO2 symbol will display on the screen. If CO2 concentration is higher than setting value (default 1000 PPM), then ERGO runs at highest speed automatically, after CO2 concentration is lower than setting value, then ERGO returns back to the previous speed, if the unit is already in highest speed when CO2 concentration is higher than set value, then unit keeps the highest speed running.


CO2
COMM
10 20
MODE
SET