

RS-CO2-001-01 / 01 Overview

RS485 CO2 Probe

Brand: ROGERSENSE

Model: RS-CO2-001-01

Document version: 1.0

Hardware / firmware revision: TBD



Product presentation. Delivered configuration: TBD.

Key functions

Parameter	Value / conditions	Rev.
Target / principle	CO2 / NDIR Not CO, combustible gas or a multi-gas detector	1.0
Range	400-5000 ppm	1.0
Accuracy	+/-50 ppm at 400-2000 ppm; +/-100 ppm above 2000 ppm Factory test conditions and drift basis TBD	1.0

Delivery configuration

Configuration and delivery contents are confirmed in the integration project; no online sample offer.

Application scope

Reference specifications for project evaluation. Final delivery is subject to the agreed hardware, firmware, accessories and acceptance conditions. Presentation imagery does not define manufacturing geometry.

RS-CO2-001-01 / 02 Technical data

Documented values and operating conditions. Conflicting or unavailable values are marked TBD.

Parameter	Value / conditions	Rev.
Target / principle	CO2 / NDIR Not CO, combustible gas or a multi-gas detector	1.0
Range	400-5000 ppm	1.0
Accuracy	+/-50 ppm at 400-2000 ppm; +/-100 ppm above 2000 ppm Factory test conditions and drift basis TBD	1.0
Supply / current	12 V DC / <10 mA	1.0
Interface / protocol	RS485 / Modbus RTU	1.0
Serial setting	9600 bit/s default; 8 data bits, no parity, 1 stop bit CRC check; confirm device address and register map	1.0
Response / stabilisation	5 s / 60 s Response definition TBD	1.0
Operating environment	-30 to +80 deg C; 5-90% RH Condensation and accuracy limits TBD	1.0
Mechanical	M18 thread; 75 x 16.5 mm; 1 m cable Mounting drawing remains authoritative	1.0
Housing / protection	Plastic / IP65 as published Not a metal explosion-proof gas probe	1.0

RS-CO2-001-01 / 03 Electrical interface

Pin / terminal definitions

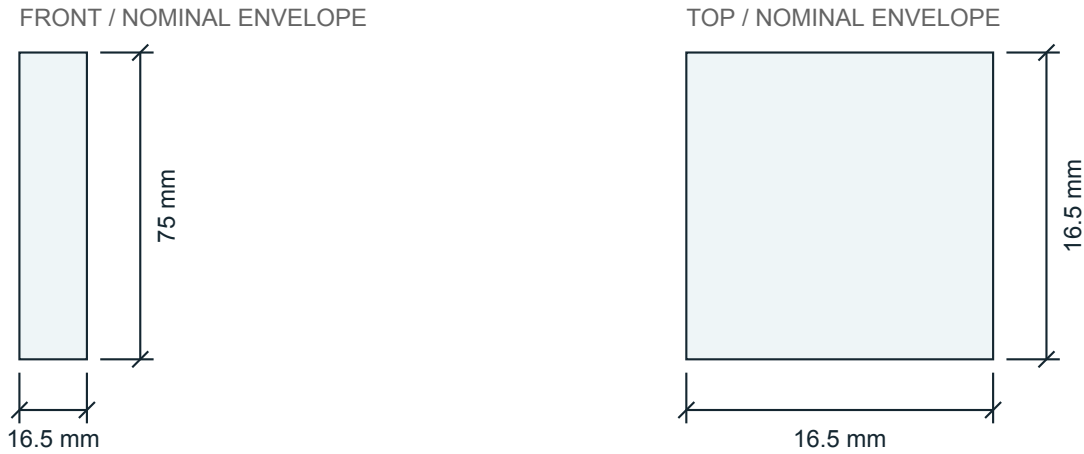
Parameter	Value / conditions	Rev.
Red	12 V VCC, selected specification	1.0
Green	GND	1.0
Yellow	RS485 A	1.0
Blue	RS485 B	1.0

Electrical conditions

Item	Value / condition	Rev.
Pin viewing orientation	TBD unless identified in the approved wiring drawing	1.0
Harness / logic compatibility	TBD; confirm against the delivered hardware before wiring	1.0
EMC / isolation / load derating	TBD; component ratings do not establish system ratings	1.0

RS-CO2-001-01 / 04 Mechanical & installation

Dimensions / unit: mm



Unit: mm. Not to scale. Holes / datum / unspecified tolerances: TBD.

Rectangular envelope reference: first two dimensions represent the documented body diameter. The actual product is cylindrical.

Item	Value / condition	Rev.
Body length / diameter	75 / 16.5 mm	1.0
Thread / nut dimension	M18 / 23 mm as labelled	1.0
Cable length / housing	1 m / plastic	1.0
Mounting tolerance / seal condition	TBD / TBD	1.0

Installation control

Confirm mounting datum, clearance, connector access and the exact delivered revision. Drawing spans listed in the table require an approved drawing to establish orientation. Unspecified geometry and tolerances: TBD.

RS-CO2-001-01 / 05 Protocol & software

Native interfaces and protocol

Item	Value / condition	Rev.
Serial framing	8-N-1; default 9600 bit/s	1.0
Baud choices	2400 / 4800 / 9600 / 19200 / 38400 / 115200	1.0
Slave address	Default 0x01; range 1-249	1.0
Function codes	0x03 read; 0x06 write single register	1.0
Data / CRC order	16-bit data high byte first; Modbus CRC16 low byte first	1.0
Polling timing	Manufacturer guidance: interval + response wait >200 ms	1.0
Warm-up / response	60 s stabilisation / 5 s response	1.0

ROGERSENSE integration services

MQTT connectivity, OTA firmware updates, gateways and cloud platform are available for delivery. Model-specific controllers, interfaces and adaptation are agreed per project. These services do not imply native MQTT or OTA support inside every sensor.

Platform: <https://iot.rogersense.com>

Item	Value / condition	Rev.
Gateway / firmware build	TBD	1.0
MQTT topic / payload / credentials	TBD	1.0
OTA signing / rollback / access control	TBD	1.0

RS-CO2-001-01 / 06 Delivery & verification

Configuration and acceptance record

Item	Value / condition	Rev.
Document version	1.0	1.0
Brand / model	ROGERSENSE / RS-CO2-001-01	1.0
Hardware / firmware revision	TBD	1.0
Serial number / calibration report	TBD	1.0
Approved mechanical drawing	TBD	1.0
Inspection / acceptance report	TBD	1.0
Packing / harness / accessories	TBD; confirm the ordered configuration	1.0
Certification / compliance evidence	TBD unless identified in the delivery agreement	1.0

Open items

Every TBD item and any conflicting supply, accuracy, dimensional or revision requirement must be resolved in the approved delivery configuration. Calibration conditions, wiring orientation, installation datum and application suitability require project verification.

After-sales

After-sales follows the existing ROGERSENSE policy and the approved order. <https://rogersense.com/returns>

RS-CO2-001-01 / 07 Appendix A

Modbus registers and read example

Item	Value / condition	Rev.
0x0000	CO2 concentration, ppm; read function 0x03	1.0
0x0066	Device address; supported 1-249	1.0
0x0067	Baud selection encoding 1-6, in the listed baud order	1.0
0x006B	Measurement offset +/-1000 ppm; negative encoding confirmation TBD	1.0
Read request	01 03 00 00 00 01 84 0A	1.0
Read response example	01 03 02 02 FC B9 65; value 0x02FC = 764 ppm	1.0
Calibration / long-term drift	TBD; no invented compensation curve or verification result	1.0

Reference information from the existing ROGERSENSE specification. Use the approved hardware, firmware, harness and calibration revision; unlisted implementation details remain TBD.