

A300 Series CO₂ Transmitter User Guide



Duct-Mounted



Wall-Mounted

The A300 Series is a high-performance, maintenance-free CO₂ transmitter engineered for hassle-free installation and guaranteed precision.

The latest Senseair S12 sensors optimizes the Demand-Controlled Ventilation (DCV) system by correlating ventilation intensity with occupancy to balance both cost-performance and air quality.

Fully compliant with global standards, the A300 Series supports zero-emission goals of the EU's Energy Performance of Buildings Directive (EPBD), a ideal solution for sustainability.

Its exceptional service lifespan adapts a broad spectrum of environments from commercial offices to modern residential spaces, such as:

- Offices, Retail and Hospitality Buildings
- Personal Household
- Residential Establishments
- Underground Parking Lots
- Facilities with CO₂ Monitoring Needs

Key Features:

- Precise Monitoring via NDIR Technology
- Integration for Modbus and DCV System
- Available in Duct-Mount and Wall-Mount

Specifications:

Compliance	ANSI/ASHRAE 62.1-2022, RESET Grade A/B, WELL v2™
Operating Temperature	- 10 ~ 60°C
Storage Temperature	- 40 ~ 70°C
Operating Humidity	0 - 95% RH (Non-condensing)
Application	Smart commercial and residential buildings, hotels, cinemas, museums, underground parking lot, etc.
Expected Lifespan	> 15 years (with ABC enabled or regular maintenance)
Maintenance	Maintenance-free

Power Requirements:

Power Supply	24V AC/DC
Power Consumption	< 34 μA

CO2 Measurement:

Sensor	Senseair S12 (Latest Version)
Operating Principle	LED-based Non-Dispersive Infrared (NDIR)
Sampling Frequency	0.5Hz (Standard)
Response Time	T90: ~120s ; T63: < 30s

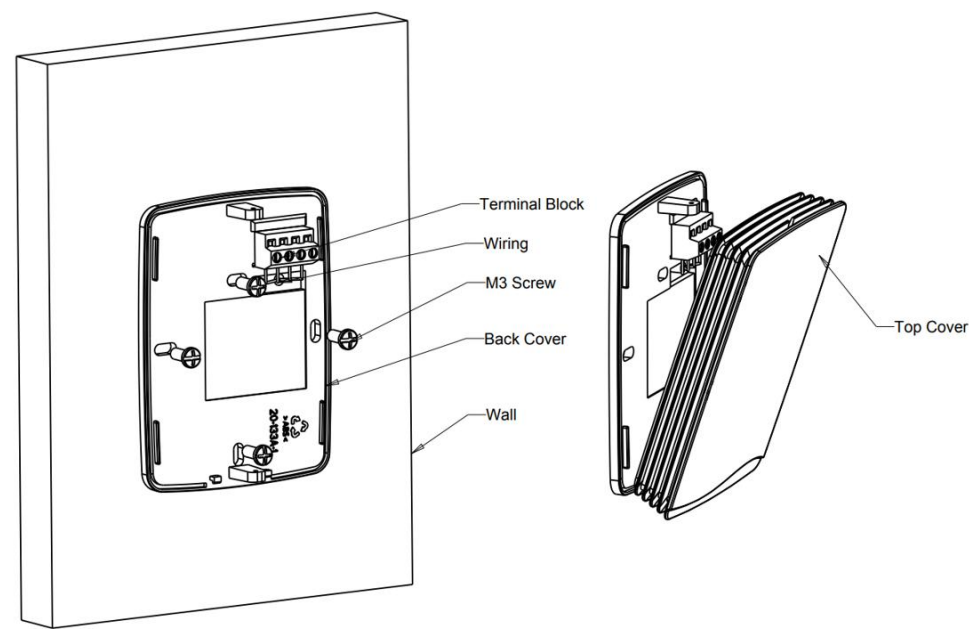
Accuracy	±30ppm ±3% of reading
Calibration	Supports ABC (Automatic Baseline Correction) and manual calibration
OUT 1	0-10V DC, 0-2,000 ppm (configurable to 0-5,000 ppm via jumper)
OUT 2	0-10V/4-20 mA, corresponding to 0–2,000 ppm

Product Models:

Model	Dimensions (L*W*H)	IP Rating	Mounting Type	Measured Gas	Modbus	Analog Output	Temp&Humidity
A300- C-W	110*82*20MM	IP30	Wall- Mounted	CO2	Yes	Yes	No
A300- CTH-W					Yes	Yes	Yes
A300- C-D	140*45*45MM, Probe Length: 140 mm	IP65	Duct- Mounted		Yes	Yes	No
A300- CTH-D					Yes	Yes	Yes

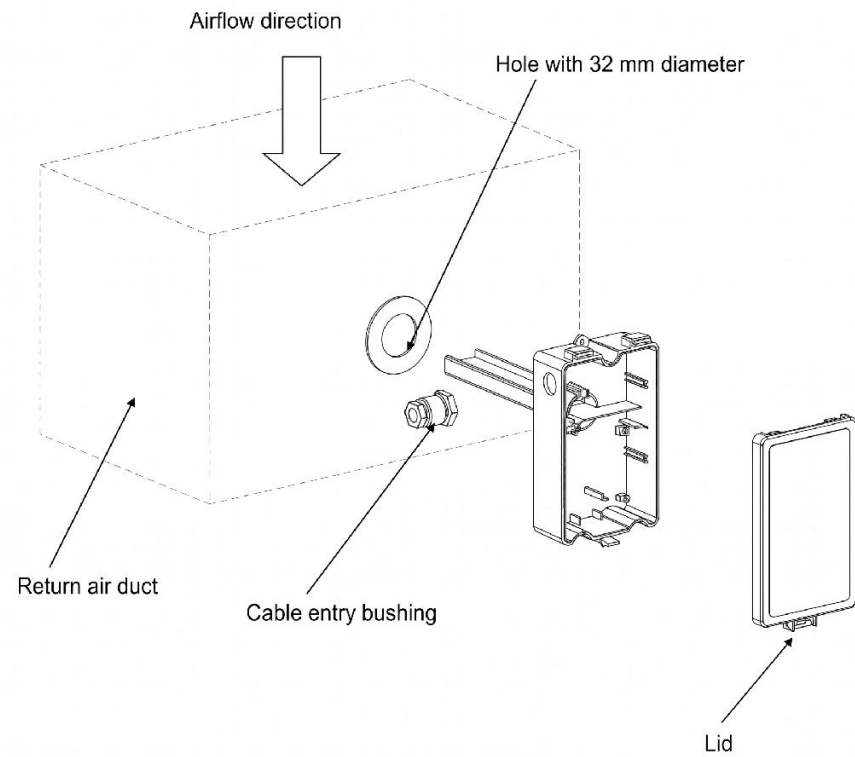
Installation Guide:

A300-C-W / A300-CTH-W: Refer to the diagram below



A300-C-D / A300-CTH-D: Refer to the diagram below

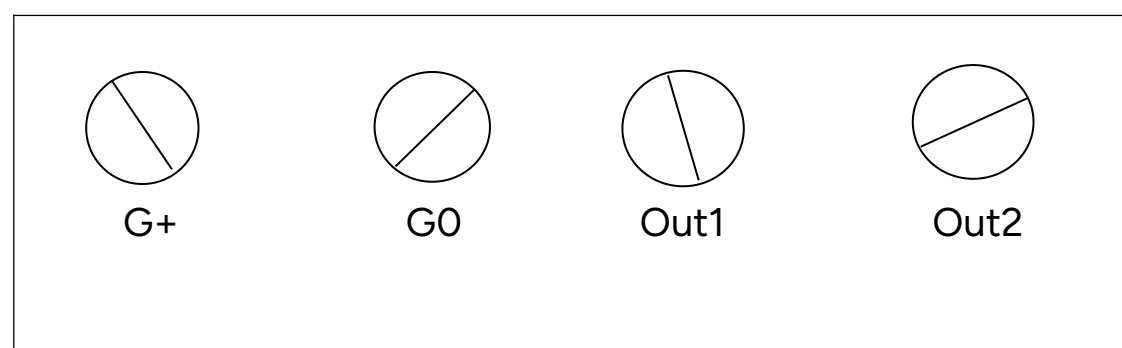
Mounting of A300 on to the duct



Wiring and Terminal Connections:

Terminal	Function	Electrical Data	Remarks
G+	Power Supply (+)	24 VAC/DC ($\pm 20\%$)	Reference for System Voltage
G0	Power Ground (-)	24 VAC/DC	
OUT1	Analog Output 1 (+)	0 - 10 V (0 - 2000 ppm)	0-2000 PPM CO ₂
OUT2	Analog Output 2 (+)	2 - 10 V / 4 - 20 mA (0 - 2000 ppm)	0-2000 PPM CO ₂

A300-C-W / A300-CTH-W Wiring:



A300-C-D / A300-CTH-D Wiring:

