



E-Senza[®]
Technologies

Leveraging Power of Wireless[®]

SenzaBlock SB110-C

Wireless CO₂-Sensor

The SenzaBlock SB110-C is a wireless sensor in the growing SenzaBlock family. This sensor can measure CO₂ concentration and send it over wireless. Its integrated radio provides seamless wireless connectivity.

Based on our industry leading SenzaNET mesh networking protocol, the SB110 family delivers reliable performance even in harsh environments to ensure delivery of critical CO₂ measurements.

The integrated NDIR sensor is self-calibrating and provides high stability and repeatability over the complete measurement range.

SB110-C will automatically sample, log and transmit sensor readings in fully user-configurable intervals. Bi-directional communication is also supported, allowing set points to be configured wirelessly.

The sensor enables very flexible monitoring of air quality levels in many different application areas providing the basis for ventilation control.



Features and Benefits

- Self-calibrating NDIR sensor technology enables high repeatability and stability over long measurement periods
- Self-forming, self-healing mesh network topology for maximum resilience and ease of deployment
- Up to 90% installation and commissioning cost savings over traditional cable-based solutions
- Time synchronization of all nodes assures accurate time stamping of individual measurements
- Autonomous data logging and reporting, triggers, condition monitoring, over-the-air configuration and many other capabilities are given

Ideal for Monitoring CO₂ concentration in:

- Commercial Buildings
- Homes
- Data Centers
- Hospitals
- Greenhouses
- Warehouses for perishable goods
- Production Halls
- Clean Rooms
- Schools



Antenna type	External
Antenna connector	Reverse-SMA
Enclosure rating	IP40
Dimensions	88 x 120 x 45 mm (3.5 x 4.7 x 1.8")
Weight	280 grams (9 oz)
Operating conditions	0 °C to +50 °C (32 °F to +122 °F) 0 - 95% rH
Order code	SB110-C-E40

Specifications

Wireless		General	
Radio type	IEEE 802.15.4 compliant	Sample rate (max.)	10 s
Frequency band	2.4 GHz	Scan cycle (typical)	10 s - 1 day
Standby current	20 µA	Scan cycle (min.)	100 ms
Active measurement current	90 mA	Sensor range ¹	0 - 2.000 ppm CO ₂
Transmit current	55 mA		0 - 5.000 ppm CO ₂
Receive current	50 mA		0 - 10.000 ppm CO ₂
Node-to-node hops (max.)	3	Resolution	10 ppm
Line of sight range (max.)	250 m (750') node-to-node	Accuracy	± 4% FS ± 3%
In-building range (typical)	70 m (200') node-to-node		
Receiver sensitivity	-92 dBm	Response Time	40 sec
Output power (max.)	2 dBm	Power source	24V
Output power (typical)	0 dBm		110 - 220V / 50-60 Hz
			Power adapter included
		Data log buffer	98 readings
		EMC noise immunity	According to DIN-EN61000
		EMC compatibility	According to EN55011, Class A
		Certifications	R&TTE 1995/5/EC, EN300 440-2
			V1.1.2, ETSI EN301 489-03 V1.4.1, EN60950-1:2001 + A11:2006, EN50371:2002, CE, FCC Title 47 Part 15 authorized for use in Europe & USA

¹ Specify with order; Further measurement ranges on request

Complementary E-Senza Products and Accessories

A SenzaGate device is required to establish and manage the wireless mesh network and to provide connectivity to backend systems.

Accessory	Order Code	Accessory	Order Code
Antenna extension cable, 1 m (3')	ACC-RC-S-100	External power adapter	ACC-PS-SG
Antenna extension cable, 3 m (10')	ACC-RC-S-300		
2 dB dipole antenna, IP54	ACC-AT-S-54		
2 dB dipole antenna, IP65	ACC-AT-S-65		
5 dBi dipole antenna, IP54	ACC-AT-H-54		
9 dBi dipole antenna, IP54	ACC-AT-H9-54		
2-way Antenna Splitter	ACC-AT-SP		

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