BLOCK CO$_2$+ TEMP + RH

All-in-one WiFi Co$_2$ Monitoring Solution: Comprehensive Long-Term Exposure and Instant CO$_2$ Intensity Alarms with Temperature and Humidity Monitoring & Recording

The LoggerFlex BLOCK CO2 monitoring solution stands out as the only device on the market offering a unique long-term exposure monitoring capability. It records CO2 intensity, temperature, and relative humidity while providing real-time alarms via email, SMS, and phone calls for high CO2 levels or out-of-range temperature thresholds. Its advanced feature allows users to define an unlimited number of rules for long exposure level alarms. By continuously calculating the time-weighted average of CO2 intensity over the past hours, the device can trigger specific alarms for prolonged exposure, ensuring prompt actions to uphold air quality and safety standards.

What is CO2 long-term exposure?

CO2 long exposure refers to being continuously exposed to elevated levels of carbon dioxide over an extended period. Unlike short-term exposure, which may cause mild symptoms like drowsiness or headaches, long-term exposure to high CO2 concentrations can have more severe health effects, such as impaired cognitive function, increased heart rate, dizziness, and even respiratory issues. Over time, prolonged exposure to CO2 can impact overall well-being, especially in environments with poor ventilation, such as offices, classrooms, and industrial settings. Consistent monitoring and timely mitigation of CO2 levels are essential to prevent the accumulation of CO2 to hazardous levels, making long-term exposure alarms critical for maintaining healthy indoor air quality and ensuring the safety of occupants.

⭘ PORT I	Not in Use
⭘ PORT II	Digital Input (optional)
⭘ PORT III	Flood Detector (optional)

Monitoring Capabilities

🔵 Record & Send Alarm (Internal)   🟠 Record & Send Alarm (Detachable)   🟢 Only Recording

| CO2 Intensity	Temperature	Relative Humidity	Mold index	Flood Detector	Digital Input

Technical Specifications

Temperature measurement range	-10 to +60°C | +14° to +140°F
Co$_2$ measurement range and accuracy	400-1,000 ppm: ±(50 ppm + 2.5% of reading) 1,001-2,000 ppm: ±(50 ppm + 3% of reading) 2,001-5,000 ppm: ±(40 ppm + 5% of reading)
Mold index range	0 to 100

Refer to the BLOCK Family "General Specifications" and External sensor's dedicated pages in the catalog for more technical details.
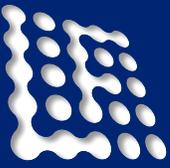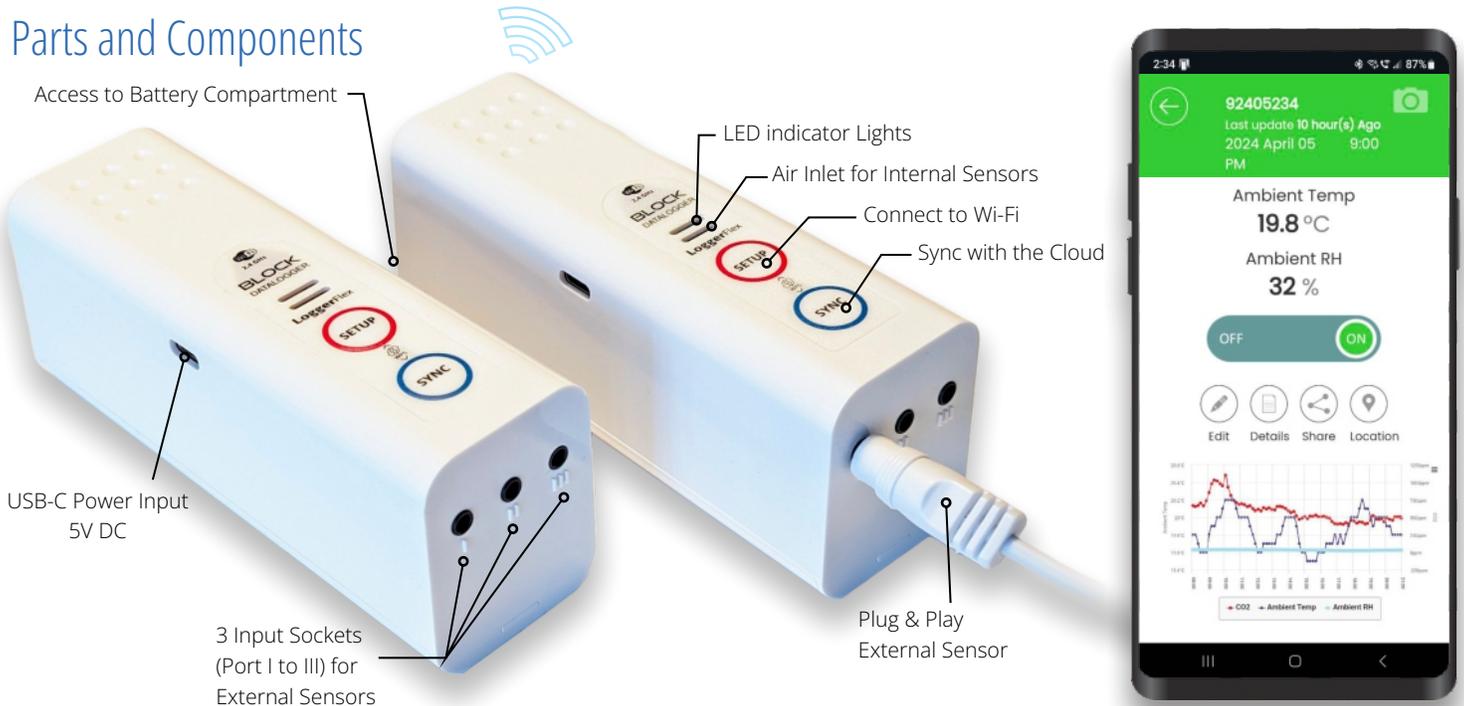
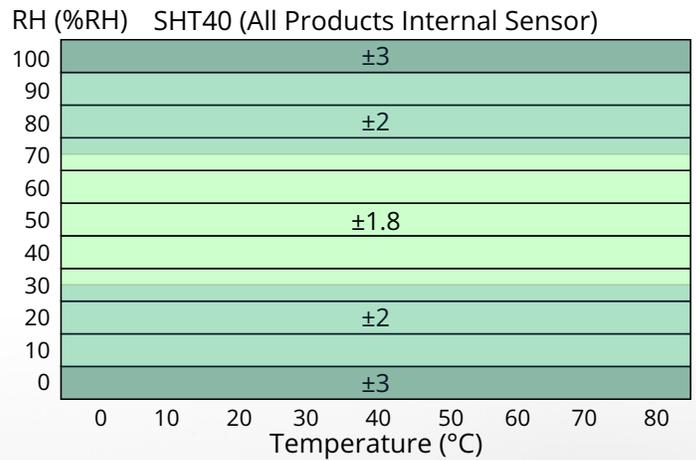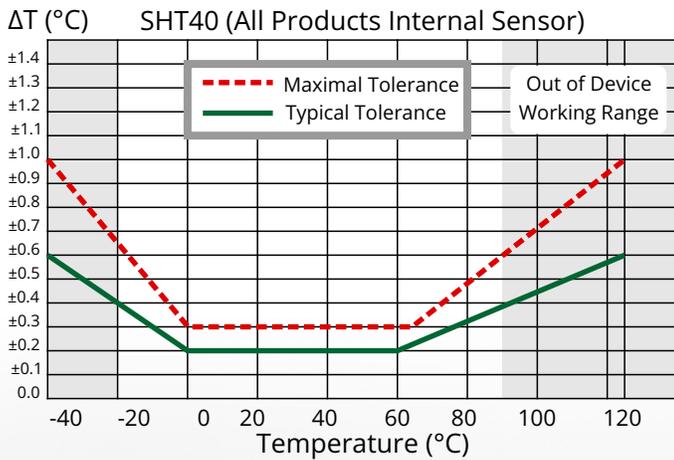# General Technical Specifications of All BLOCK Family Products

Built in sensors		Temperature and Relative Humidity (RH)
Power Supply	Internal	4 x AA batteries
	External	5V DC Standard USB-Charger
Temperature measurement range	°C	-20 to +70
	°F	-4 to +160
Temperature reporting resolution		0.1
RH measurement range		0-99% non-condensing
Interface		Wi-Fi - IEEE 802.11 b/g/n – 2.4 GHz
FCC ID	WiFi	2AC7Z-ESPWROOM32
	Cellular	2AJYU-8VC0001
Max TX power		20 dBm (100 mW)
Internal Memory Capacity		64,000 Record of each measured Parameter
Record intervals		1 minute to 30 minutes (down to 5 sec. by order)
Upload intervals		1 hour to once a week (down to 1 min. by order)
Dimensions	Height	H = 133 mm (5 $^{15}/_{64}$")
	Length	L = 53 mm (2 $^{3}/_{32}$ ")
	Width	W = 43 mm (1 $^{11}/_{16}$")

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Parts and Components

Access to Battery Compartment

LED indicator Lights

Air Inlet for Internal Sensors

Connect to Wi-Fi

Sync with the Cloud

USB-C Power Input
5V DC

3 Input Sockets
(Port I to III) for
External Sensors

Plug & Play
External Sensor

Internal Sensor's Accuracy

ΔT (°C)   SHT40 (All Products Internal Sensor)

- Maximal Tolerance
- Typical Tolerance
- Out of Device Working Range

±1.4 ±1.3 ±1.2 ±1.1 ±1.0 ±0.9 ±0.8 ±0.7 ±0.6 ±0.5 ±0.4 ±0.3 ±0.2 ±0.1 0.0

-40 -20 0 20 40 60 80 100 120
Temperature (°C)

RH (%RH)   SHT40 (All Products Internal Sensor)

100 ±3
90
80 ±2
70
60
50 ±1.8
40
30
20 ±2
10
0 ±3

0 10 20 30 40 50 60 70 80
Temperature (°C)

Compliance

FC

IEEE
802.11 b/g

NIST
Traceable

FDA
CFR 21 (Part 11)

RoHS

CE
EN 61010-1 3rd edition

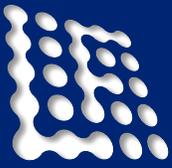LOGGERFLEX

Flood Detector Function

Certain members of the BLOCK Datalogger family feature a dedicated port for connecting a flood detection sensor. Our fully length-sensitive flood sensor cable can be extended up to 100 meters (330 feet), providing extensive coverage. In the event of a flood, the system not only triggers visible and audible alarms but also instantly sends alerts via call, text, and email to an unlimited number of recipients. Advanced algorithms intelligently filter out false alarms caused by routine activities like mopping, ensuring reliability and minimizing unnecessary disruptions.

Flood Detector Installation Strategies

Pipe Leak Detection: Couple the detector cable along the entire length of pipes to detect and address leaks at the earliest possible moment.

Fully length-sensitive

Protecting Important Assets: Secure the perimeter around valuable items by encircling them with the detector wire, ensuring immediate detection of any approaching water.
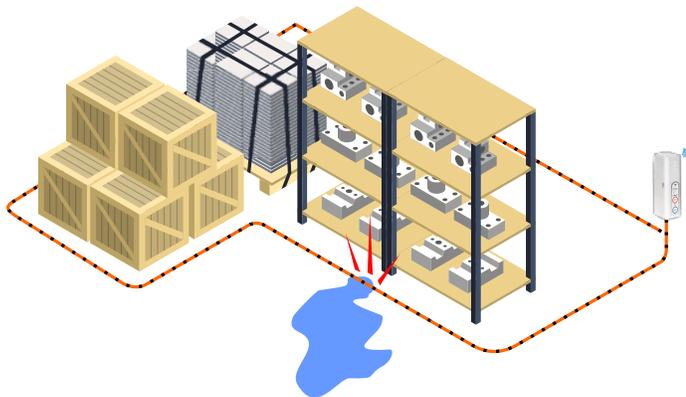
Containing the Risk Source: Surround potential risk sources with the detector cable to promptly identify and contain leaks.
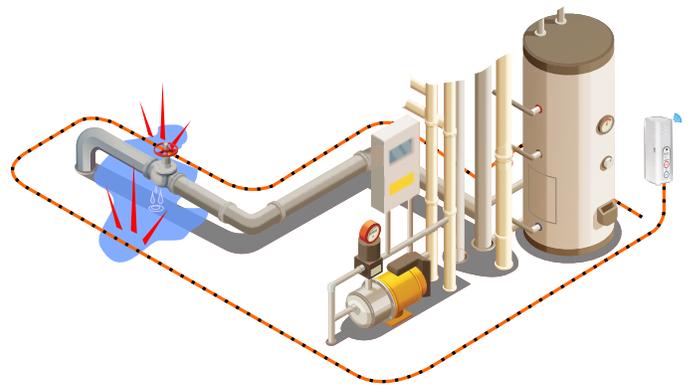
Alarm Dialer (Digital Input) Function

Some members of the BLOCK Datalogger family are equipped with a dedicated digital input port, enabling seamless integration with a wide range of digital input sources, such as switches or PLC digital outputs. This functionality allows the system to relay alarms from connected devices remotely and instantly to an unlimited number of recipients via call, SMS, and email. For example, in the event of a fire alarm activation, the system can immediately notify all residents of a building, ensuring rapid awareness and response. Additionally, it serves as an industrial-grade dialer, eliminating the need for a landline or the ongoing cost of maintaining a cellular service, making it a highly cost-effective and reliable alarm communication solution. Furthermore, the system can document alarm events with a secure, non-manipulatable timestamp, providing reliable records for compliance and analysis.

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Your Shield Against Mold Growth

BLOCK Essential is an advanced environmental monitoring device designed to safeguard your property and health by continuously tracking temperature and relative humidity (RH). Equipped with state-of-the-art sensors, it calculates the Mold Index in real time, providing an early warning system to prevent mold growth before it becomes a problem.

What is the Mold Index?

The Mold Index is a precise, scientific measure of mold growth potential, represented on a scale from 0% to 100%, where 0% indicates no risk of mold and 100% represents severe, widespread mold contamination. It serves as a critical tool in understanding and preventing mold growth, helping you take timely action to protect your space.

Mold Index Levels:

0% - 15% (No Growth): The environment is safe, and conditions are unfavorable for mold growth. Regular monitoring ensures these conditions are maintained.

16% - 33% (Initial Signs of Mold): Mold spores begin germinating, though growth may only be detectable under a microscope. These early stages require monitoring to prevent visible growth.

34% - 50% (Visible Mold): Small mold spots start appearing, visible to the naked eye. These conditions call for immediate attention to mitigate the risk.

51% - 66% (Moderate Growth): Mold begins to spread, covering localized areas. Ventilation, dehumidification, and cleaning are necessary to stop further development.

67% - 83% (Extensive Growth): Mold growth is widespread, affecting significant portions of surfaces. Structural damage and health risks increase, demanding professional remediation.

84% - 100% (Severe Mold Contamination): Mold has heavily colonized the area, covering the majority of surfaces. Immediate action is critical to address the contamination and prevent further health and structural damage.

BLOCK Essential continuously monitors temperature and humidity, two key drivers of mold growth, and calculates the Mold Index in real time. This empowers you to detect mold risk early and take preventative measures before it becomes visible or causes harm.

What actions should I take if I receive a mold alarm?

When you receive a mold alarm from BLOCK Essential, it means environmental conditions are promoting mold growth, and immediate action is needed. Start by reducing humidity using a dehumidifier, improving ventilation, and fixing leaks or water intrusion. Regulate temperature by lowering it to disrupt mold-friendly conditions. Inspect the area for visible signs of mold or dampness, especially in hidden spots like behind furniture or under carpets. Clean small mold patches on non-porous surfaces with a mild detergent or mold remover while wearing protective gear. For severe or widespread growth, consult a professional mold remediation specialist to address the issue thoroughly. Taking prompt action prevents health risks, structural damage, and costly repairs.

LF Cloud (LoggerFlex Online Application) is a powerful, cloud-based platform that streamlines data collection and monitoring. Its primary functions include continuous, high-resolution monitoring and 24/7 data access from anywhere, enabling remote, multi-user oversight across different time zones. The application generates industry-specific, customizable reports tailored to the unique requirements of sectors such as pharmaceuticals, food safety, and HVAC. LF Cloud also supports multi-parameter monitoring of various environmental and system parameters, with shared access capabilities for collaborative monitoring among multiple users. As a progressive web application, it is accessible on any device with internet connectivity, requiring no installation and providing a consistent experience across platforms. This comprehensive platform empowers users with actionable insights, robust data management, and enhanced decision-making.

Access from Anywhere, on Any Device, for Multiple Users

Neat Mobile View

Geographical Based Display

Professional Reports

Our alarms will reach you, no matter how far you are.

Phone Call Alarm

Text Message Alarm

Email Alarm

Advance Alarm Function

1
Momentary Minimum & Maximum value Alarms

As the most basic alarm function, 'LF CLOUD' can immediately push an alarm via email, SMS, or phone call if any measured parameter exceeds the defined maximum or falls below the adjustable minimum threshold. This instant alerting ensures that users are promptly informed.

2
Adjustable "Persistent Condition" Alarm

To filter out possible momentary fluctuations, users can adjust the persistence duration of the condition before the alarm goes off. Using this feature, the system only triggers the alarm if the out-of-bounds measured parameter remains beyond defined limits for a certain duration.

3
Adjustable Time-Weighted Average Long-term Alarms

"LF CLOUD" can constantly monitor the parameters to ensure compliance with multiple long-term exposure rules. Rules can be defined by the measured level and duration of exposure, and the system will send an alarm if long-term exposure is detected based on time-weighted average values.

4
Trend change (Drift) detection alarm

The "LF Cloud" can monitor the trend of changes or drift in the measurements and push notifications if the average measured values show a certain percentage higher or lower than previous records at adjustable intervals.

LF Cloud Key Functionality Highlights

Data Security and Privacy: End-to-end encryption.
Activity Logging: Digital tracing of user actions and alarm events.
Frequent Data Backups: Multiple daily backups ensure data integrity.

Multi-channel notifications: Email, SMS, and phone calls.
Alarming: Threshold, persistent condition, and trend-based alarms.

Cross-Platform Access: Compatible with Windows, iOS, Android.
Global Accessibility: Multi-language and multi-time zone support.
Role-Based Sharing: Access controls for collaborative use.

Graphing & Visualization: Customizable data visualization tools.
Custom Reporting: Industry-specific report generation.
Geographic Data Insights: Location-based data visualization.

Utility Billing: Automated cost allocation and submetering.

API Integration: Real-time data access and alerts through API.

Industry-Specific Report Segments in LF Cloud

HVAC Systems   Property Management   Agriculture   Industrial Monitoring   Preservation   Pharmaceutical   Food Safety

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