



BLACK BOX 

GUARD YOUR MISSION-CRITICAL IT EQUIPMENT

ALERTWERKS™ WIRED INTELLIGENT SENSORS

00800-2255-2269



BLACK-BOX.EU/ALERTWERKS

PROTECT AND CONTROL YOUR INFRASTRUCTURE AGAINST THREATS – SAVE ENERGY AND MONEY

WHAT IS ALERTWERKS WIRED?

AlertWerks Wired is a state-of-the-art IoT solution. You can actively monitor conditions in your server room or any room, enabling you to protect and ensure the stability of your business. Living in today’s world means relying on working infrastructure for your communication needs. It also means respecting the environment, seeking ways to save energy and money, and preparing for unexpected threats like pandemics.

AlertWerks Wired enables you to measure environmental values, provide control over your IT and IP systems, and switch things on or off when needed. Using AlertWerks Wired means knowing what is happening or not happening. Measure temperature in certain rooms to know heating is still on and consuming energy. Monitor humidity to identify water leaks before equipment or infrastructure is damaged.

Your IT infrastructure is the heart of your business communication and your goal is to ensure availability of the services your IT provides. Through predictive maintenance, AlertWerks Wired detects faults before they impact your business.

It is up to you to start today – let AlertWerks Wired take actions automatically or send you a notification message. Black Box ensures that your hardware is online with AlertWerks Wired in minutes. It is easy to set up. No special knowledge is needed. If you are familiar with PCs, you can set up AlertWerks Wired in minutes.

To get started, you need a Gateway. The Gateway is the base unit of your new modern IoT system. See page 4. Connect a Gateway to your network and start using Virtual Sensors out of the box.

We offer a full line of physical sensors as well. Physical sensors digitize our analog world. Get a physical temperature sensor and connect it to your Gateway. See page 5 for physical sensors.

The embedded Web Interface of AlertWerks Wired Gateway auto-detects the sensor and allows you to configure the sensor, set up dashboards, and watch things happening live. You can also configure notifications and alerts, allowing the AlertWerks Wired system to perform actions automatically or bring the problem to your attention via email.



DATA CENTERS



INDUSTRIAL & MANUFACTURING



ENERGY



OIL & GAS



HEALTHCARE



GREENHOUSES

FEATURES

Physical sensors

These are connected through RJ-45 ports directly to the gateway. Physical sensors digitize our analog world. Examples are sensors for temperature, humidity, airflow, status of dry contact, door, motion detector, and other sensors.

Virtual sensors

By means of IP/IT methods and protocols, you can retrieve information from your systems. This, for example, can be an SNMP GET command to report the remaining battery capacity percentage of your UPS. A Virtual Sensor can also be configured to ping a device, ensuring that an important piece of equipment is online.

Data measurement (see chart)

The gateway displays the values measured by the attached sensors, e.g. temperature, humidity, airflow, status of dry contact, door, motion detector, and other sensors.

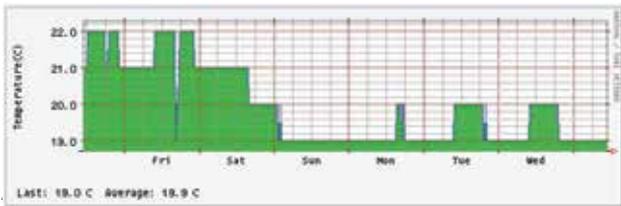
Temp Rack 03	66°F (19°C)
Humidity Rack 03	34%



ENVIRONMENTAL, POWER & SECURITY MONITORING

Data collecting and graphing (see chart below)

The measurements are periodically stored in the internal memory and can be exported and displayed as graphs.



Users can define warnings and critical alarm states. Depending on these conditions, either a notification (SMS, Email, etc.) is sent or actions are executed. This includes SNMP traps, SNMP SET commands, or using the relays or an IP-controlled PDU to switch on and off DC or AC power.

Easy setup and management

Simple, accurate, and rugged, the AlertWerks monitoring appliance is ready to run right out of the box. Plug the sensors into the RJ-45 ports and they do automatically configure and go online, ready to report any status change.

Web-based management interface

A Java™-based web UI enables access to the gateways over any IP network – even the internet.

Protocols

AlertWerks Wired is a perfect fit for your IT infrastructure. Through SNMP and MQTT, AlertWerks Wired can interact with cloud and centralized software solutions.

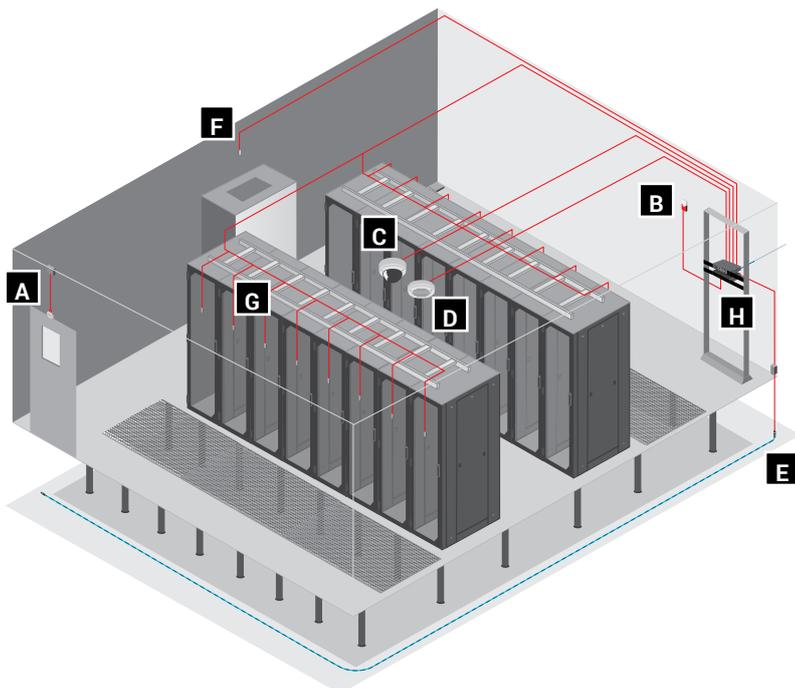
BENEFITS

- Reduces downtime and increases equipment reliability
- Saves energy and money
- Reduces OPEX
- Integrates perfectly with your IT infrastructure

APPLICATIONS

From data center device monitoring to remote management of proprietary equipment where physical access is difficult, environmental monitoring applications are essential to generating information about the conditions that affect your mission-critical IT equipment

MONITORING GATEWAYS AND INTELLIGENT SENSORS



KEY	DESCRIPTION
A	Door Sensor
B	Siren and Strobe Light
C	IP Surveillance
D	Smoke/Fire
E	Rope Water
F	Dual Temperature Humidity
G	Front-Rear Temperature String
H	AlertWerks™ Gateway

ENVIRONMENTAL, POWER & SECURITY MONITORING

ALERTWERKS PLUS GATEWAYS

(page 5)

High speed, intelligent environmental monitoring system

- Supports 2 to 8 Intelligent Sensors
- Mounting dependent on unit
EME160A / EME161A-R2: Desk top or Din-rail
EME164A / EME168A: Standard 1U rackmount
- Front and rear thermal mapping for any server cabinet
(This is only if a sensor is added, not native to the Gateway)
- Optional LCD display
- MQTT Support



EME161A-R2



EME168A

ALERTWERKS™ PLUS GATEWAYS

Configuration	Software utility for IP setup, then over web browser
Encryption	SL 128 bit (HTTPS)
Environmental	Temperature: -31 to 158° F (-35 to +70° C); Humidity: 20 to 80%, noncondensing
Monitoring and Alarms	Via web browser, email, SNMP trap
Security	SNMP v1/2, optionally license code for v3 available
Protocols Supported (Client)	DHCP, SMTP, (S) NTP, SNMP, MQTT
CE Approval	Yes
Connectors	All: (1) RJ-45 Ethernet 10/100 port; EME164A, EME168A: Basic Expansion Bus (BEB) connector; EME164A, EME160A/ EME161A-R2 also: (4) RJ-45 sensor ports; EME168A also: (8) RJ-45 sensor ports
Expansion Port	(1) EXP port for connecting EME164A or EME168A expansion hubs
Power	All: 5 VDC, 3A
Size	EME164A, EME168A: 1.6"H x 18.7"W x 1.9"D (4.1 x 47.5 x 4.9 cm); EME160A / EME161A-R2: 1.3"H x 4.5"W x 2.5"D (3.2 x 11.4 x 6.4 cm)

ARTICLE #	DESCRIPTION
EME160A	2 active Sensor Ports with Ethernet/LAN, Desktop/DIN-Rail
EME160-UC	Unlock License Code for 2 additional Sensor Ports on EME160A
EME161A-R2	4-Port with Ethernet/LAN, Desktop/DIN-Rail
EME164A	4-Port with Ethernet/LAN, Modbus/RS-485 and Expansion Bus Interfaces
EME168A	8-Port with Ethernet/LAN, Modbus/RS-485 and Expansion Bus Interfaces





EME1LCD

ALERTWERKS™ LCD DISPLAY

Programmable LCD display for sensor data

- Works only with Plus Gateway
- Display sensor readings for up to 8 sensors
- Can be programmed to show data from any Intelligent or virtual sensor
- Built-in temperature sensor

ARTICLE #	DESCRIPTION
EME1LCD	AlertWerks™ LCD Display, with Temp. Sensor



EME1T1SNMP

ALERTWERKS™ TEMPERATURE SENSORS

Ensures a correct temperature reading up to 100 feet

- Includes (1) plastic mounting clip
- Calibrated sensors on request

ARTICLE #	DESCRIPTION
EME1T1SNMP	Temperature Probe with 1-ft. (0.3-m) Cable
EME1T5SNMP	Temperature Probe with 5-ft. (1.5-m) Cable
EME1TWRSNMP	Temperature Probe, water resistant, with 15-ft (4,5m) Cable



EMERW-020-R2

ALERTWERKS™ WATER SENSORS

Alerts you to water in your data center

- Accurate enough to measure distilled water

ARTICLE #	DESCRIPTION
ALERTWERKS™ SPOT WATER SENSORS	
EME1W1-015	15-ft. (4.5-m) Cable
ALERTWERKS™ ROPE WATER SENSOR	
EMERW-020-R2	20-ft. (6.0-m) Cable
EMERWE-010-R2	10-ft. (3.0-m) Extension



EME1TS

ALERTWERKS™ THERMAL MAP SENSORS

- Talk to your Black Box representative for compatibility
- Temperature and Temp/Humidity options
- Sensor reading from 6 locations (top, middle and bottom / Front and Back) provides a clear picture of your intake and exhaust air temperatures.

ARTICLE #	DESCRIPTION
EME1TS	Temperature (6) Sensor String with 20-ft. (6-m) Cable
EME1THS	Temperature/Humidity (6) Sensor String with 20-ft. (6-m) Cable

ENVIRONMENTAL, POWER & SECURITY MONITORING



ALERTWERKS™ AIRFLOW SENSOR
Monitors airflow remotely

- Thermistor sensor
- On/off alarm signal for airflow
- Two LEDs indicate the status

ARTICLE #	DESCRIPTION
EME1F1-005-R2	5-ft. (1.5-m) Cable



ALERTWERKS™ 4-20 mA CONVERTER
Add a third-party, industrial sensor to AlertWerks™ Gateway

- Enables you to communicate with equipment in industrial settings

ARTICLE #	DESCRIPTION
EME1C1-005	4-20 mA Converter



ALERTWERKS™ PHOTOELECTRIC SMOKE DETECTOR
Adept at detecting smoldering fires

- More effective than ionization smoke detectors at sensing smoldering fires
- Auto resets when smoke clears

ARTICLE #	DESCRIPTION
EME1S2-005-R2	5-ft. (1.5-m) Cable



ALERTWERKS™ DRY-CONTACT SENSOR
Open/closed contact switch indicates Alarm or Normal

- Input voltage range of 0 to 5 VDC

ARTICLE #	DESCRIPTION
EME1K1-015	15-ft. (4.5-m) Cable



ALERTWERKS™ MOTION DETECTION SENSOR
Detects motion in a 60° angle

- Detection speed of 0.15–3 m/sec
- Temp. range of -4 to +144° F (-20 to +50° C)

ARTICLE #	DESCRIPTION
EME1M1-005-R2	5-ft. (1.5-m) Cable



ALERTWERKS™ SIREN AND STROBE LIGHT
Siren sounds at 100 ± 3 dB at 100 cm

- Maximum cable runs of 1000 feet (304.8 m)
- Can be triggered by any other Intelligent sensors connected to the Gateway

ARTICLE #	DESCRIPTION
EME1SS-005	5-ft. (1.5-m) Cable



ALERTWERKS™ VOLTAGE SENSORS
AC Voltage Sensor detects voltage from 50 to 250 VAC

- DC Voltage Sensor is user programmable

ARTICLE #	DESCRIPTION
EME1A1-005	AC, 5-ft. (1.5-m) Cable
EME1D1-005-R2	DC, 5-ft. (1.5-m) Cable



ALERTWERKS™ DIGITAL I/O SENSORS
Provides eight dry contacts on one sensor port

ARTICLE #	DESCRIPTION
EME1J8-005	(8) Dry Contacts with 5-ft. (1.5-m) Cable
EME1KJ8-005	(2) RJ-45 to (8) Dry Contacts with 5-ft. Cable



ALERTWERKS™ RACKMOUNT KITS
Convenient mounting of AlertWerks™ hubs and sensors

ARTICLE #	DESCRIPTION
EMEDIN	Rackmount DIN Rail
EMEDRMK	Dual Rackmount Bracket
EMESDIN	Split Rackmount DIN Rail Bracket
EMESMB	Din-Rail mounting bracket





EME1TH2-005-R2



EME1P20-005



EME1PDCC-005

ALERTWERKS™ DUAL TEMPERATURE/HUMIDITY SENSORS

Monitor temperature and humidity

- Measurement range of -40 to +167° F (-40 to +75° C) in 1° F increments; accuracy of ±0.2° C
- Measure 0 to 100% relative humidity

ARTICLE #	DESCRIPTION
EME1TH1-001-R2	Dual Temperature/Humidity Sensor with 1-ft (0.3-m) Fixed Cable
EME1TH2-005-R2	Dual Temperature/Humidity Sensor with 5-ft. (1.5-m) Fixed Cable
EME1TH3-015-R2	Dual Temperature/Humidity Sensor with 15-ft. (4.5-m) Fixed Cable

ALERTWERKS™ POWER SWITCHES

Control electric power over the Internet or local IP network

- Metal oxide varistors and snubber circuits provide protection from electrical disturbance
- Monitors power and load
- Disconnect alarm sends a signal back to the sensor hub if the unit is unplugged
- Includes a 5-ft. (1.5-m) CAT5e cable, which can be replaced with up to 100-ft (30-m) of CAT5e for longer distances

ARTICLE #	DESCRIPTION
EME1P20-005	220V, Normally Open
EME1PDCC-005	48 VDC, Normally Closed



EME1Y1

ALERTWERKS™ SECURITY SENSORS/CONTACTS

Monitor doors remotely

- Disconnect alarm alerts you when doors to secure areas have been opened
- Open/closed contact switch indicates Alarm or Normal

ARTICLE #	DESCRIPTION
EME1Y1-015	15-ft. (4.5-m) Cable
EME1Y1-060	60-ft. (18.2-m) Cable

© Copyright 2021 BLACK BOX corporation. All rights reserved.

WHY BLACK BOX?

Black Box® is a trusted IT solutions provider delivering cutting-edge technology products and world-class consulting services to businesses across the globe in every industry. The breadth of our global reach and depth of our expertise accelerate customer success by bringing people, ideas, and technology together to solve real-world business problems.

00800-2255-2269



[BLACK-BOX.EU/ALERTWERKS](https://black-box.eu/alertwerks)