

MultiSensor-LAN (Ethernet) - MANUAL



ORDER-CODES:

KMS-LAN-B, KMS-LAN-W, KMS-LAN-B-BLE, KMS-LAN-W-BLE

[DATA SHEET MULTISENSOR-LAN](#)

KentixONE Operating mode

SiteManager Operation	Stand-alone operation

[Further information on the operating mode](#)

Overview

The MultiSensor-LAN integrates a large number of individual sensors in one compact device and

monitors their measured values. The MultiSensor-LAN is optimized for monitoring closed rooms and is typically mounted on or near the ceiling. The MultiSensor-LAN is network-compatible and is supplied with power via Power over Ethernet (PoE).

The MultiSensor-LAN can be operated as a stand-alone device (operating mode: Stand-Alone Device) or in a network (operating mode: Satellite Device) with other MultiSensor-LAN and other Kentix devices. The KentixONE software is already integrated via the integrated web server (HTTPS). Configuration is carried out via a web browser and, depending on the operating mode, locally on the MultiSensor-LAN itself (operating mode: Stand-Alone Device) or on a central instance such as the SiteManager or AlarmManager (operating mode: Satellite Device).

In addition to the Ethernet network interface, the MultiSensor-LAN has a BLE radio interface (2.4 GHz). Additional Kentix wireless sensors can be connected via these in the Satellite Device operating mode. The MultiSensor-LAN then also works as an Ethernet wireless gateway, making it very easy to set up stable sensor networks. The wireless sensors can be distributed within a radius of up to 20m, depending on the structure of the building.

Safety instructions

Installation

Installation and commissioning may only be carried out by trained specialist personnel in accordance with the instructions.

No modifications of any kind, other than those described in an appropriate manual, are permitted to Kentix GmbH products.

Certain levels of protection must be provided when installing Kentix equipment.

Observe the relevant regulations for installations in the respective environment.

Only operate the products within the defined temperature range.

The instructions should be passed on to the user by the person carrying out the installation.

Kentix accepts no liability for damage to the equipment or components resulting from incorrect installation. No liability is accepted for incorrectly programmed units.

Kentix shall not be liable in the event of malfunctions, damage to property or other damage.

Use of the products, transport and storage

Protect the device during transport, storage and operation from

Protect moisture, dirt and damage.

Battery powered products

Do not use products in potentially explosive atmospheres.

Only operate the products within the defined temperature range.

Installation and battery replacement may only be carried out by trained personnel in accordance with the instructions.

Do not charge, short circuit, open or heat batteries.

When inserting the batteries, pay attention to the correct polarity.

The devices must always be operated with the batteries intended for the product.

When changing batteries, always replace all batteries.

Dispose of old or used batteries properly.

Keep batteries out of the reach of children.

Maintenance

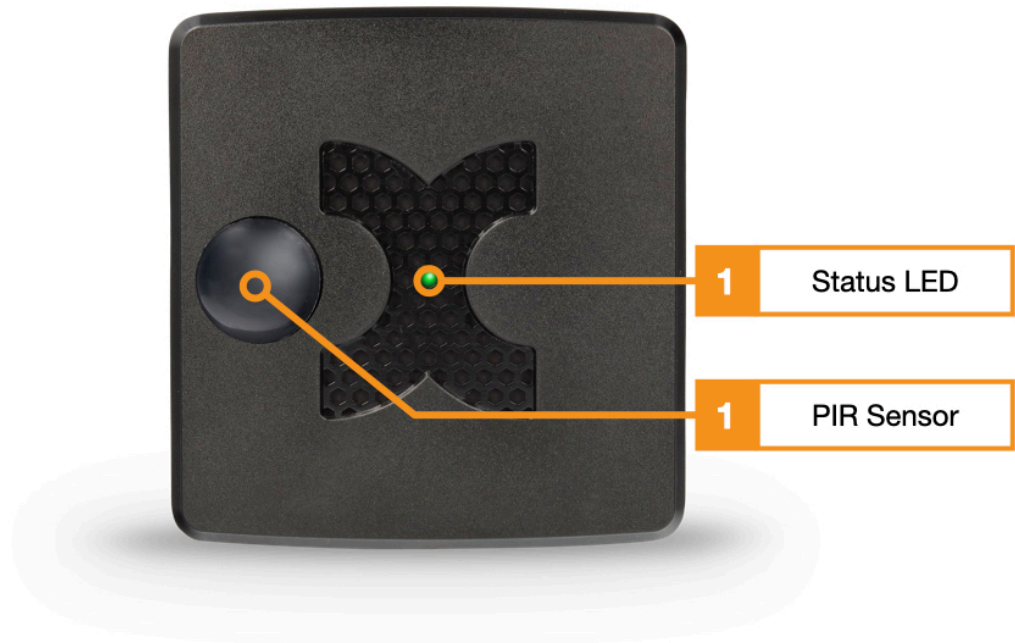
Kentix devices must be checked for functionality as part of annual maintenance.

Disposal

Electrical appliances and batteries must be disposed of separately from household waste.

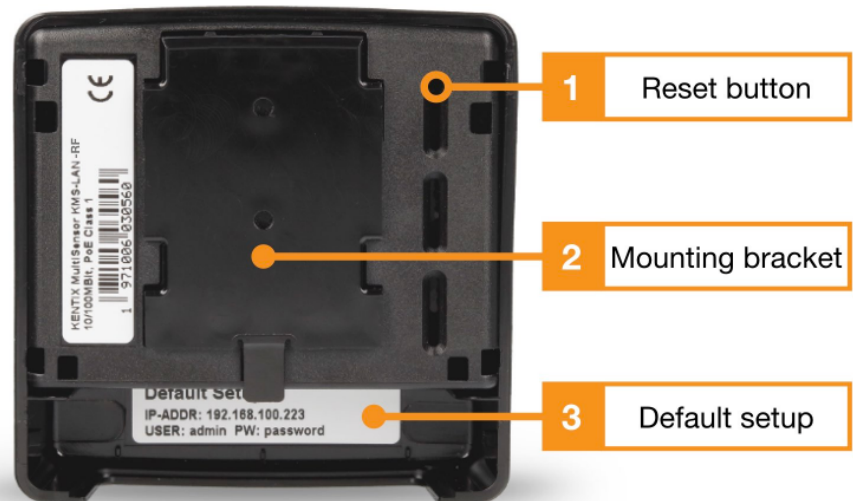
Controls

Front



1. Status LED :
GREEN: POWER OK, no alarms pending
RED: POWER OK, alarms pending
2. 360° PIR motion sensor

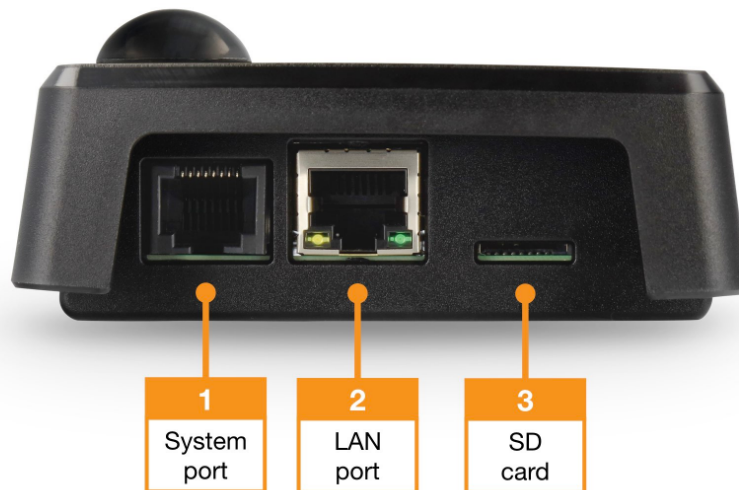
Back



MultiSensor LAN Rear view

1. Reset button
2. Mounting bracket
3. Default settings information

Connections



MultiSensor LAN View Connectors

1. Kentix system port (type A)
2. Ethernet port with Power over Ethernet (100MBit, PoE Class 2)
3. MicroSD card slot

Connection of extensions at the system port

Additional system components such as leakage sensors, door contacts or external alarms from UPS or air conditioning units can be connected via the Kentix system port. The system port has 2 digital inputs and 2 digital outputs which are available via a RJ45 socket.

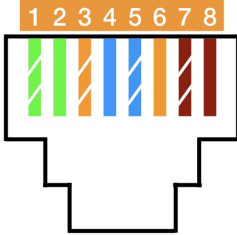
An extension module (ORDER CODE: KIO3) is required to connect external alarms. Above this, 2 potential-free contacts and 2 changeover relays can be wired.

A commercially available network patch cable (unshielded/shielded) with a length of up to 20 m can be used as the cable connection between the Kentix system port and the system component.

The Kentix system port is not a network port. Avoid connecting to network ports, especially PoE devices. The port is a Kentix specific expansion port and is only expandable with components designed for it.

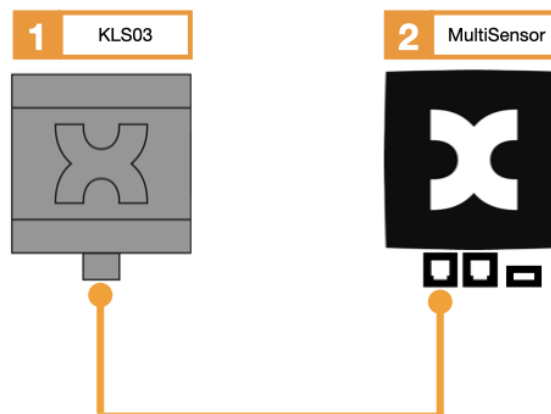
Pins 4/5/8 are only enabled for internal use and must not be wired.

The assignment of the system port

System port (type: RJ45)	Assignment of the contacts
	<ol style="list-style-type: none"> 1. internal system voltage (GND) - Not for external use* 2. output 1 (open collector, max. 100mA) 3. output 2 (open collector, max 100mA) 4. external voltage / BUS (depending on device type) 5. external voltage /BUS (depending on device type) 6. input 1 (potential-free circuit) 7. input 2 (potential-free circuit) 8. internal system voltage (5/24VDC) - not for external use* <p>* These connections are for internal use only</p>

Kentix system port assignment

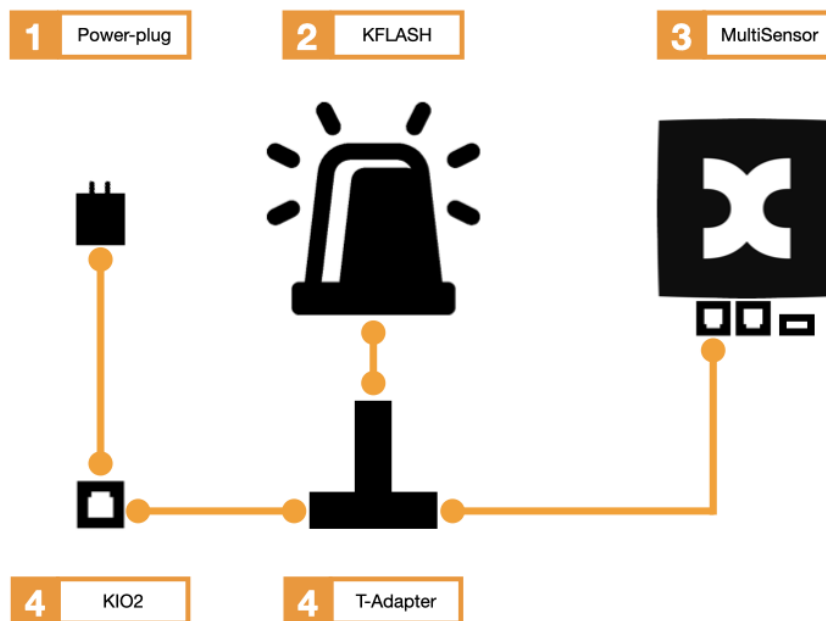
Connection of a leakage sensor to the system port



1. Leakage sensor
2. MultiSensor

The leakage sensor is connected directly to the system port of the MultiSensor.

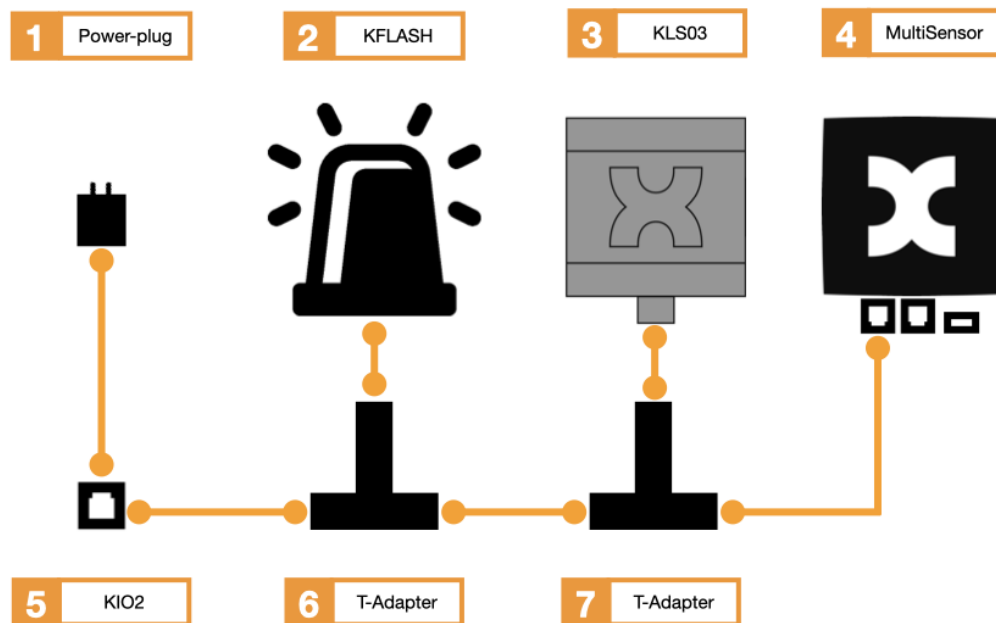
Connection of an alarm siren to the system port



1. 24V DC power supply unit
2. Alarm siren
3. MultiSensor
4. KIO2
5. RJ45 T-adaptor

The alarm siren is supplied with 24V DC via the KIO2 expansion module and a power supply unit. The alarm siren is also connected to the MultiSensor via the RJ45 T adapter.

Connection of a leakage sensor and an alarm siren to the system port



1. 24V DC power supply unit
2. Alarm siren
3. Leakage sensor
4. MultiSensor
5. KIO2
6. RJ45 T-adapter
7. RJ45 T-adapter

The alarm siren is supplied with 24V DC via the KIO2 expansion module and a power supply unit. The alarm siren is also connected to the MultiSensor via two RJ45 T-adapters. The leakage sensor is also connected to the second T-adapter.

Factory settings

For initial configuration, use the IP address printed on the device or the address assigned via DHCP in a web browser (HTTPS). Please note the network settings of your connected PC.

The factory IP addresses at a glance:

SiteManager and AlarmManager	192.168.100.222
MultiSensor	192.168.100.223
AccessManager	192.168.100.224
PowerManager	192.168.100.225
SmartPDU	192.168.100.226

Factory IP addresses, subnet mask: 255.255.255.0

For devices with a firmware version lower than 8.x.x, the login data for the preset administrator account are: admin / password

Reset to factory settings

1. Restart the device (disconnect and reconnect the power supply).
2. The status LED lights up briefly and then goes out.
3. As soon as the status LED lights up green continuously, press and hold the reset button for 15 seconds until the device emits an acoustic feedback.
4. The device loads the factory settings and performs a restart.
5. After approx. 2 minutes, the device can be reached with the factory settings.

All existing settings and data will be irrevocably deleted !

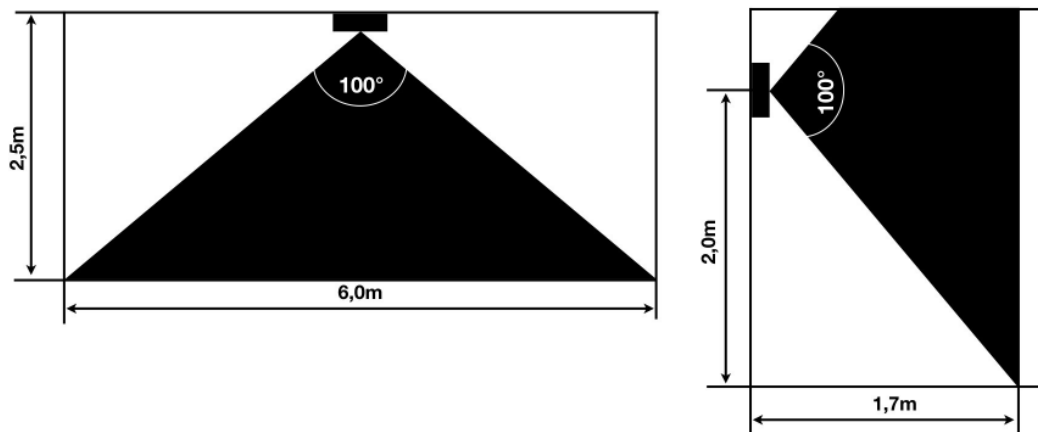
We recommend regular backup of the system.

Assembly instructions

Kentix MultiSensors are equipped with various individual sensors. To ensure optimum evaluation and functional cooperation of the sensors, please observe the following basic installation instructions:

- Do not mount over radiators or air outlets or direct sources of heat/cold.
- Avoid moving objects such as fans, plants, trees, flags or similar in the detection field.
- Do not cover the sensor. The PIR sensor always requires direct visual contact for detection
- Do not mount in the direct air flow of air conditioning outlets

Detection range of the integrated PIR motion detector



Detection range of the PIR

[More information about mounting MultiSensors here.](#)

Calibration of the room temperature measurement

Kentix MultiSensors record all important environmental values of a room, including the room temperature. In order to achieve the most accurate temperature possible and to trigger an alarm if the room temperature exceeds the limit value, we recommend calibrating the temperature measurement at the final installation location. This is especially necessary for sensors with Ethernet (PoE) connection, since a certain intrinsic heat falsifies the measurement. For MultiSensors with radio and battery supply, the influence of the intrinsic heat is not present.

Kentix MultiSensors are not calibrated measuring devices, but alarm devices whose measuring accuracy is completely sufficient for reliable reporting and documentation of limit value violations. The accuracy of the sensors is $\pm 1\%$ for temperature measurement and $\pm 5\%$ for humidity.

However, in order to obtain a good measurement result with reproducible measured values in the event of an alarm, the MultiSensor should be calibrated to the respective installation location after installation. To do this, the temperature in the immediate vicinity (approx. 5-10 cm away) of the

MultiSensor must be measured comparatively with a room thermometer that is as accurate as possible. If there is a deviation in temperature between the MultiSensor and the thermometer, the temperature value can be corrected. This is done by entering the determined temperature difference between the MultiSensor and the room thermometer as a correction offset in the KentixONE software. The correction also has a direct influence on the measurement of the relative humidity and on the dew point calculation of the MultiSensor.

Step	Note
Install MultiSensor at the destination.	The position and orientation of the sensor should not be changed afterwards. Keep the following in mind: - Mounting with X air opening downwards - Do not mount in air stream - Ventilation vent openings of the sensor must be free
Perform configuration of the MultiSensor with Kentix ONE.	
Earliest 30 minutes after startup match the temperature of the MultiSensor with the room temperature.	To do this, measure the temperature with an external reference thermometer in the immediate vicinity, approx. 5-10 cm from the MultiSensor. It should be noted that this thermometer also acclimatizes to the room and displays the correct room temperature only after a few minutes.
If a difference between the MultiSensor and the thermometer is detected, this can be entered in the "Offset" field in the KentixONE configuration of the MultiSensor. After saving, the sensor then provides the corrected measured value.	The offset can only be specified by whole degrees, i.e. without decimal places. This results in an accuracy for the temperature of +/- 0.5 degrees.

Configuration with KentixONE

The device is configured via the web browser in KentixONE. The device must be accessible to the central KentixONE instance on the network side. Depending on the device type, a communication key and the IP address or DHCP name of the central KentixONE instance must also be set on the device (MultiSensors, AccessManager, SmartPDU). IP cameras or IO modules, on the other hand, can be integrated directly into KentixONE.

All information about the software is available in the [KentixONE](#) section and the related documentation.

Before starting the configuration, make sure that the software on all network-compatible Kentix devices is up-to-date. The version status must match on all devices.

You can perform a software update for your KentixONE main instance and all connected satellites at any time via “System - Update”.