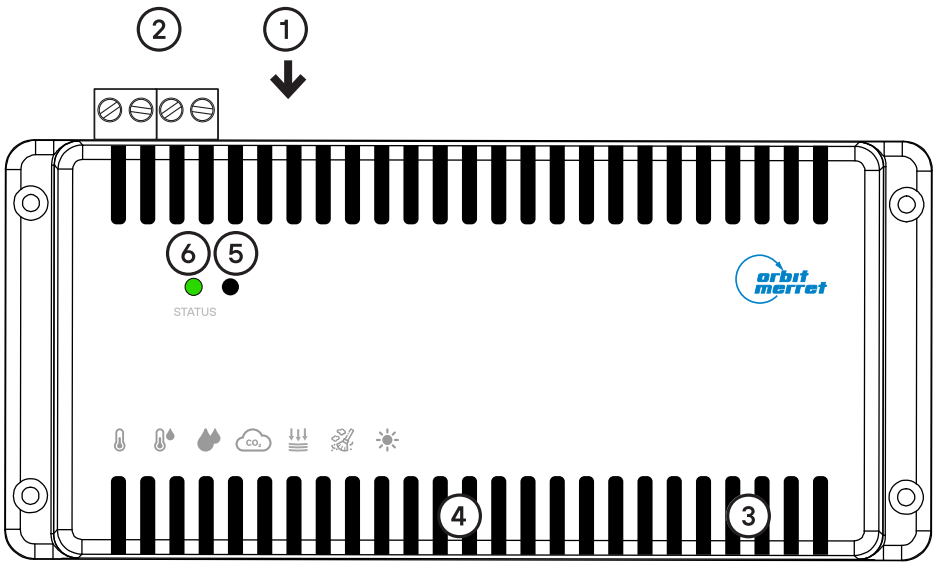
OMT 1450

Environmental monitoring

1 General description

- Indoor on-line air quality monitoring
- Measures temperature, humidity, lighting, CO2 and organic gasses, dust concentration, overall air quality and other parameters
- Monitoring of exceeded values
- Data recording into database and internal memory
- Settings from PC via web browser
- Powered over Ethernet (PoE)
- Easy installation and first start-up



1. Connector for data cable with PoE
2. Input signal connector (optional)
3. Opening for sensors
4. Opening for dust sensor
5. Ambient light sensor
6. Signaling LED

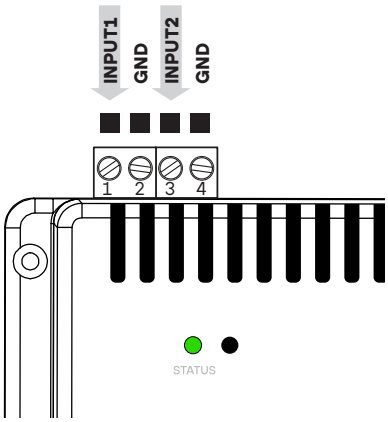
LED INDICATION

LED	Status	Description
	ON	initialization
	ON	measuring mode

⚠ DANGER ⚠	⚠ VARNING ⚠
RISK OF ELECTRIC SHOCK - Before servicing disconnect all power supplies and other supply and input lines. Failure to follow this instruction may result in death, or serious injury.	**EQUIPMENT OPERATION HAZARD** - Do not use this product in a safety critical system. - Do not disassemble, repair or modify the product. - Do not use the product outside the recommended operating conditions. Failure to follow these instructions could result in death, serious injury or damage to the equipment.

Electrical equipment may be installed, operated, and maintained only by qualified personnel.
Company ORBIT MERRET accepts no liability for any consequences arising from the use of this material.

2 Connection



CONNECTION

INPUTS	TERMINALS
Input 1	1 + 2
Input 2	3 + 4

①	Connector pitch	3,5 mm	5 mm
②	mm / *in*	mm / *in.* 6 / *0.24*	mm / *in.* 7,5 / *0.3*
	mm² / AWG	0,05...1,5 / 30...14	0,05...2,5 / 30...12
③	1,5 Nm / *13.2 lb-in*	Ø 2,5 mm / *0.1 in*	Ø 3,5 mm / *0.14 in*

2 Power supply and start

Power supply

OMT 1450 is powered by Power over Ethernet (PoE) technology according to the 802.3af specification. OMT 1450 does not support PoE Auto Recovery. It is necessary to deactivate this function on the port of the network device (switch, router, etc.) to which OMT 1450 is connected (provided the conenctred device supports this functionality and it is enanbled)

Start

OMT 1450 is turned on by connecting the data cable with PoE. If OMT 1450 has free access to public NTP servers for time synchronization, it retrieves the current time, logs into the IoT hub and starts periodic measurements and sending out data.

3 Device settings

3.1 Access into configuration

Access via WiFi access point (AP)

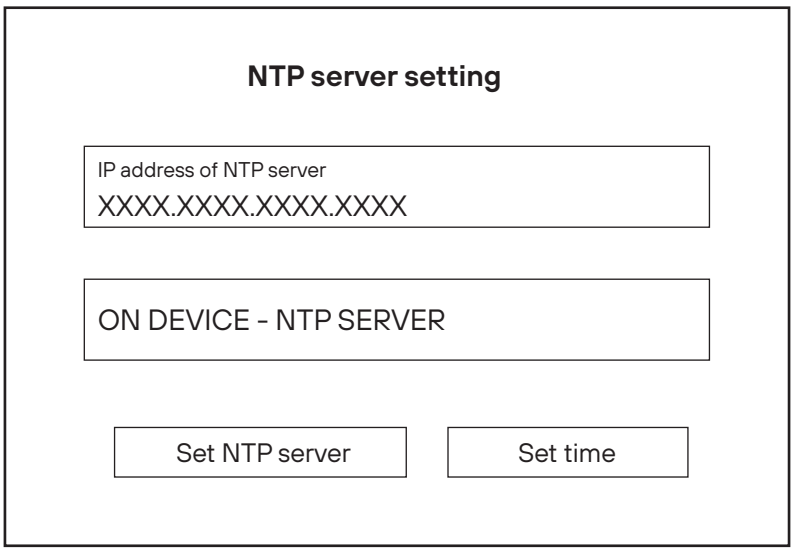
In its default configuration, OMT 1450 creates its own WiFi network to which you can connect and through which it can be configured. The name of the network is the device name i.e.: OMT1450 and the password is in the format OMT * 123456 (see the device label). Connect the superior control device to WiFi AP through a procedure that is normal for this device. Then use a web browser to go to the configuration page at 192.168.4.1.

Access via Ethernet

OMT 1450 will be assigned an IP address according to your network settings. You need to find out this IP address by using network scanning tools. Alternatively ask your IT department for assistance. Then using a web browser on a device that is connected to the same network, go to the OMT 1450 configuration page.

3.2 Time setting

To ensure its proper functionality, OMT 1450 needs to have the current time set. By default, OMT 1450 automatically synchronizes its time using public NTP servers. In case of their unavailability, it is necessary to set the address of the available NTP server manually or to set the time manually. To set the address of an available NTP server, it is necessary to open the OMT 1450 configuration according to the procedure described in 3.1. In the **NTP server settings** enter the IP address of the NTP server in the format XXX.XXX.XXX.XXX, eg: 192.168.0.1 and then confirm it by pressing the **Set NTP server** button. If OMT 1450 does not have access to the NTP server, the current time can be set manually by pressing the **Set time** button. This procedure will transfer time information from the higher-level control device, so it is necessary to have this device set to the current time



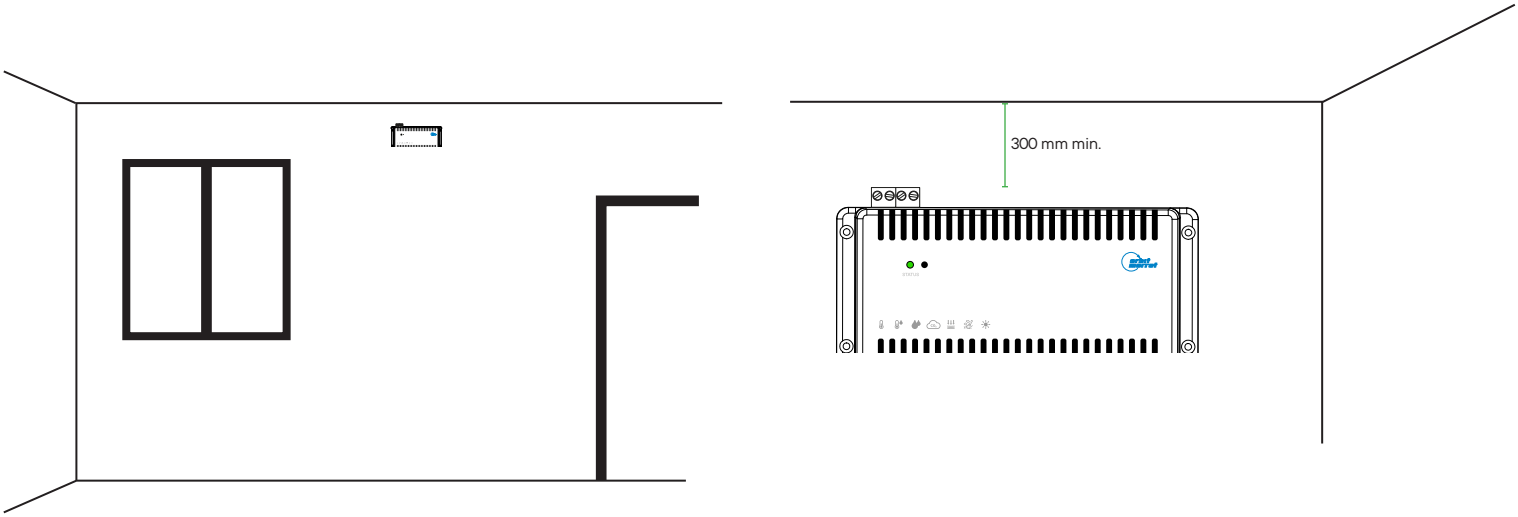
3.3 Setting of measuring parameters

Any and all changes to the measuring parameters can be set using the associated web application.

4 Dimensions and installation

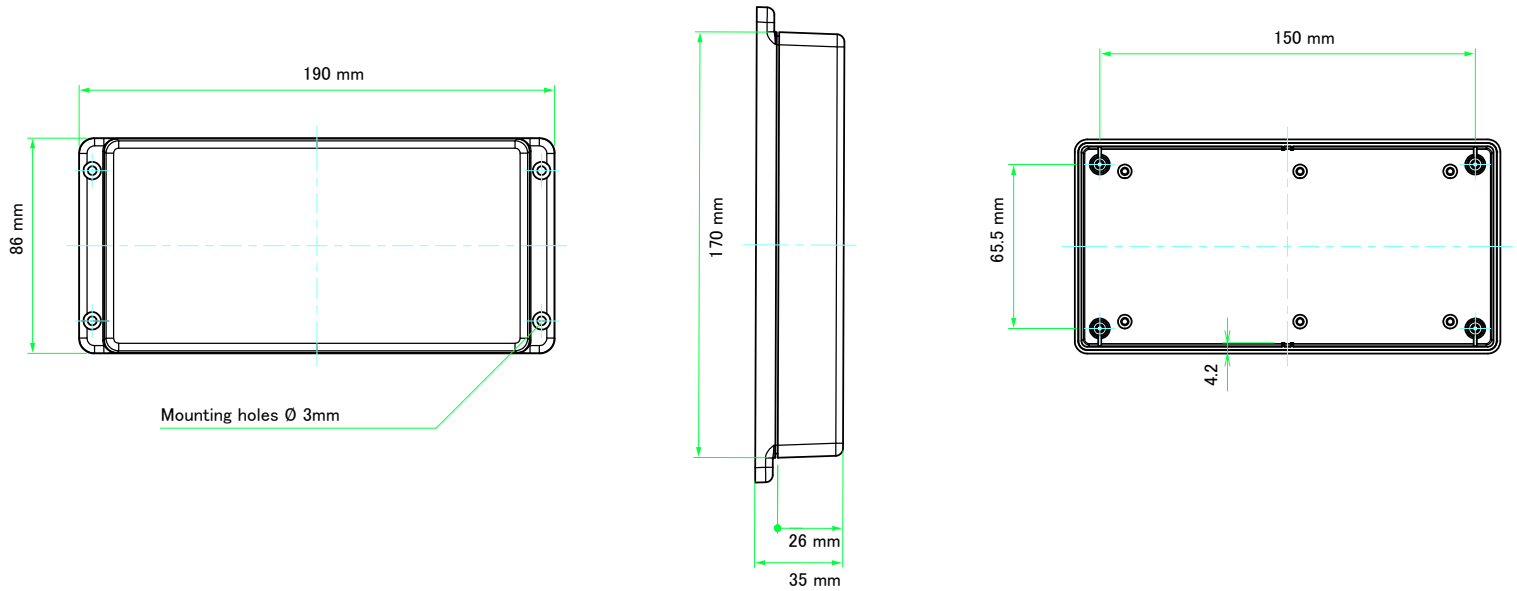
Desired position of the device

To obtain accurate values, OMT 1450 needs to be mounted in a horizontal position at least one meter above the ground and 300 mm below the ceiling, see the figures below. Do not place the device in spaces and locations where sudden changes in air flow can be expected, such as near windows, doors, etc. In case of large rooms, it is advisable to use several devices to obtain a more accurate information about conditions in the entire room..



Do not place the device in direct sunlight. There is a risk of the device being heated by the Sun and thus measurement being inaccurate.
Do not place the device in an area with the possibility of sudden changes in the air flow.
Measured values can be affected and measurement distorted.
DANGER OF INCORRECT MEASUREMENT

Dimensions



5 Technical data

SENSORS

Thermometer	0 °...60 °C ±1 °C
Dew point	0...85°C
Humidity meter	20....70% ±3% (for temperature range of 20...60°C)
Gases	0...60000 ppb TVOC NO_2 0...1000ppb CO_2 Acetone, Ethanol, Ethane, Isopropene

Light sensor	ambient light intensity + RGB, IR dynamic range 18.000.000:1
Dust concentration	**By mass:** PM1.0, PM2.5, PM4 and PM10 **Numeric:** PM0.5, PM1.0, PM2.5, PM4 and PM10
Air quality index	0 -500
Pressure	300...1100 hPa

CONNECTION

Ethernet	10/100 Mbps
WiFI	AP/STA 2,4Ghz internal antenna
Bluetooth	BLE4.1 2,4Ghz internal antenna

POWER SUPPLY

Power supply	PoE, class 0 44...57 V, 802 3af
Consumption	2...5 W

INPUTS

2x digital input	24V, isolated

MECHANICAL PROPERTIES

Material	ABS
Dimensions	190 x 85 x 35 mm
Mounting	4x mounting holes ø 3mm

OPERATING CONDITIONS

Settling time	up to 3 minutes after power-on
Operating temperature	-20°...60°C
Storage temperature	-20°...60°C
Protection class	IP30
El. safety	EN 61010-1, A2

6 Order code

OMT 1450 - [ ][ ][ ][ ] - [ ][ ]

Temperature / Humidity	no	**0**					
	Standard (± 1°C, ±3% r.h.)	**1**					
	Higher accuracy (± 0,2°C, ±1,8% r.h.)	**2**					
Gases	**no**		**0**				
	CO_2		**1**				
	NO_x		**2**				
	CO_2 + NO_x		**3**				
Dust	no			**0**			
	yes			**1**			
Digital inputs	**no**				**0**		
	yes				**1**		
Specification	**not specified by default**					**0**	**0**

OMT 1450 devices comply with EU regulations 2014/30 / EU and 2014/25 / EU

This product must be installed connected and used in accordance with applicable standards and / or with installation regulations.
As standards specifications and designs evolve over time, always ask for confirmation of the information provided in this document.

ORBIT MERRET, spol. s r.o.
Vodnanska 675/30
198 00 Prague 9
+420 - 281 040 200 orbit@merret.cz