

### TDS12263WH / TDS12265WH / TDS12266WH **MULTISENSOR**

The three TELETASK MULTISENSORS with type names ESSENTIAL, SAFE and PURE contain up to 6 room sensors in one compact **AUTOBUS** interface.

They continuously measure **temperature, relative humidity, VOCs, CO<sub>2</sub>, air pressure, and three types of particulate matter**, and support visualisation, ventilation control, heating and cooling, and messaging and alarms.

The TDS12263WH has **3 built-in sensors** and is named **ESSENTIAL**.

The TDS12265WH has **5 built-in sensors** and is named **SAFE**.

The TDS12266WH has **6 built-in sensors** and is named **PURE**.

## APPLICATION

Depending on the type selected, the MULTISENSORS TDS12263WH/TDS12265WH/TDS12266WH continuously measure the temperature, humidity, VOCs, CO<sub>2</sub>, air pressure and particulate matter (fine dust) in the room.

With the TELETASK MULTISENSOR's measured values, you can develop many applications for both visualisation and active management.

1. Firstly, the measured values can be used to visualise the status of the general air quality of the room by means of the built-in **multi-colour LED** (green, yellow, orange and red). The measured values can also be viewed on the TELETASK AURUS-OLED, PENTUS, OPUS, and MAIOR screens, and in the ATMOS mobile app.
2. Secondly, the readings such as room CO<sub>2</sub>, VOC and fine dust can be used for ventilation control.
3. As a third application, the TDS system can trigger specific actions when adjustable limits are exceeded. This can be, for example, sending a 'message' or a technical 'alarm' to a display. The text is then visualised on one or more of the displays mentioned above, along with a preset number of beep signals. The latter is intended to attract residents' attention to the message.
4. As a fourth possibility, when adjustable thresholds are exceeded, the system can take pre-set actions. This option has almost unlimited potential. This can be, for example, managing:
  - the lighting (switching on, flashing, changing colour).
  - sending a motorised awning/shade to a specific position.
  - the door or gate system.
  - motorised roof domes (for passive ventilation of the polluted spaces).
  - turning on audio or PA systems to attract attention.
  - send an e-mail and/or SMS message.
  - other appliances, on/off (whether or not connected via a wall socket).

For example: an air humidifier or dryer

  - trigger contact outputs or analogue output signals to other systems.

! Note: The TDS system will be down in the event of a mains power failure, as the functions to be controlled, such as ventilation and the control of motorised blinds, domes, etc., will also be de-energised at that time.

## Other sensors

We therefore do not include life-threatening parameters and measured values, such as CO and other gases, in the

TELETASK sensor range, as these can also be the subject of specific local certifications, such as the obligation to remain operational in the event of a power failure, which is not the case with a home automation system as standard. If you use a UPS system, this is possible. Still, it usually makes little sense because, as mentioned above, the controlled devices and systems (e.g. the ventilation) still lack electric power.

## FEATURES

### General

The MULTISENSOR is available in three different versions: **TDS12263WH (type name 'ESSENTIAL')**: T° (°C), Relative Humidity (%) and VOC (index 0-500),

**TDS12265WH (type name 'SAFE')**: Same as the TDS12263WH, plus air pressure (hPa) and CO<sub>2</sub> (ppm) measurement.

**TDS12266WH (type name 'PURE')**: Same as TDS12265WH, supplemented with a particulate matter (fine dust) sensor (µg/m<sup>3</sup> of three different fractions).

### Start-up time

The waiting time after start-up before measurements are reliable is 5 seconds (T°, RH, CO<sub>2</sub>, PM, and bar) for all sensors except the VOC index, which stabilises after 1 minute.

In practice, this is fast enough, given that a G3 central unit has a start-up time of slightly more than one minute.

The sensors used are of industrial quality. As a result, the lifespan is expected to be 10 years, up to multiple decades.

### Sensor range, precision and drift:

**Temperature: -10 to 50°C:**

(precision ± 0.2 °C; at -10 to -1 °C: ± 0.3 °C)

**Relative Humidity: 0-100%**

(precision 10-80%: ±2%; 0-10% and 80-100%: ±3%)

**VOC air quality index: 0 to 500**

(at -10 to 50°C and RH 0 to 90%)

**Bar (air pressure): 300 – 1250 hPa**

(precision at -10 to 50 °C: ±0.5 hPa)

**CO<sub>2</sub>: 0-4000 ppm**

(at -10 to 50 °C and 0-95% RH).

### Particulate matter:

The particulate matter sensor in the TDS12266WH measures three concentrations of flying particulate matter fractions: ultra-fine (**U**), fine (**F**), and coarse (**G**) dust particles.

**PM-U** (ultra-fine dust particles **up to 1.0 µm**): 0-3000 µg/m<sup>3</sup> (precision 0-100µg/m<sup>3</sup> ± 5µg/m<sup>3</sup>; 100-1000µg/m<sup>3</sup> ± 10%).

Note: The WHO does not provide a quantitative health limit for ultrafine particles as for PM2.5 and PM10 (see below), because there is insufficient quantitative evidence for this. Moreover, a mass measurement does not take into account, among other things, the particle numbers and the physicochemical properties of the particles. For the user, checking the trend and comparing the values between different rooms is probably more important.

**PM-F** (fine dust particles from **1.0 to 2.5 µm**): 0-3000 µg/m³ (precision 0-100µg/m³ ± 5µg/m³; 100-1000µg/m³ ±10%).

! Note: WHO guideline value for PM2.5: 5 µg/m³ averaged over one year and 15 µg/m³ averaged over 24 hours. An actual measured value of the sensor may therefore not be directly assessed as healthy or unhealthy on the basis of these WHO guideline values.

**PM-G** (coarse dust particles from **2.5 to 10 µm**): 0-3000 µg/m³ (precision 0-100µg/m³ ± 25µg/m³; 100-1000µg/m³ ±25%).

! Note: WHO guideline value for PM10: 15 µg/m³ averaged over one year and 45 µg/m³ averaged over 24 hours. An actual measured value of the sensor may therefore not be directly assessed as healthy or unhealthy on the basis of these WHO guideline values.

### **Ventilation and healthy air:**

Not every ventilation system improves air quality by default. A (central) extraction system that sucks in the air from the outside through window grilles only filters very coarse air particles (insects and the like). To filter particulate matter and very fine particulate matter, you need a ventilation system (with heat recovery) with a central particulate filter on the suction side. This can filter a lot of the three measured dust particles. Consult your ventilation supplier for this.

### **Some rules of thumb:**

With an **ePM10 50% filter** (old name: M5) a lot of PM10 is blocked.

With an **ePM1 50-80% filter** (old name F7-F9), a significant part of PM2.5 and PM1 is also blocked.

Also for wood smoke, which contains particulate matter down to 0.1 µm, we strongly recommend at least an ePM1 filter (F7 or better).

Indicator LED, buzzer and operating example

### **Indicator LED:**

A three-colour LED on the housing indicates the measured air quality. The MULTISENSOR's internal processor combines the VOC (all types), CO<sub>2</sub> (TDS12265WH and TDS12266WH only), and particulate matter sensor (TDS12266WH only) measurements and determines the LED colour. The operation is adjustable via PROSOFT. Example operation: If the CO<sub>2</sub> and particulate matter values are good, but the VOC index is bad, the LED will be RED until the VOC value drops back to a better level. Then the LED will change from red to orange, then yellow, and finally green. Meanwhile, the climate control will also reduce the ventilation speed from high to low or may even switch it off completely.

### **Colours of the LED:**

LED off: the interface has no voltage

Green: very good air quality

Yellow: good air quality

Orange: the air quality is moderate

Red: the air quality is poor

Red flashing (and buzzer ON): the air quality is very poor, and additional action should be taken.

### **Built-in buzzer:**

This is active as soon as the air quality in the room is poor or very poor (adjustable in PROSOFT). In any case, the buzzer stops after 10 minutes. However, if the air quality remains very poor, the buzzer will turn on again to warn the residents.

The buzzer has a sound level of 85 dB at a distance of 10 cm.

### **Heartbeat LED:**

There is also a small internal heartbeat LED (for support purposes only; not visible from the outside):

Indicates whether the interface is powered, operational and communicates with the central unit via the AUTOBUS.

The system will automatically address lower air quality by activating the integrated ventilation system. In this case, it would normally be temporary and therefore not pose a risk to residents (humans and animals) in this area.

### **Operation example:**

A VOC sensor will fairly quickly detect air pollution from alcohol that has been released into the air by spraying an alcohol-based perfume. Depending on the ventilation system's intensity and capacity, it will try to remove this pollution as quickly as possible (extract it to the outside and replace it with fresh outside air). Initially, it may ventilate at the highest speed, then gradually slow as pollution decreases, and possibly stop completely when air quality (for all set signals) is again 'very good'.

With the ventilation engine (from PROSOFT), you can also influence this operation, for example by setting the system to 'silent' mode when residents are asleep.

! IMPORTANT: For specific rooms/homes, TELETASK recommends installing additional alarm sensors, such as for smoke and fire detection, gas detection, CO detection... Especially when combustion processes apply in the home, such as a (gas) fireplace, gas fires, gas hot water boiler, etc.

## **SETTINGS**

### **Configuration**

With PROSOFT Suite 5.0 version of November 2026 or later.

### **AUTOBUS address**

With rotary wheel switches "Tens" + "Units".

### **Jumper**

AUTOBUS terminating resistor (supplied with the central unit). Only needs to be installed if this interface is located at the physical end of the AUTOBUS cable.

## **INSTALLATION**

### **Wall selection and mounting:**

Correct sensor placement is very important. Given the built-in sensors, choose a location where the measured parameters can be measured effectively and correctly. Air pressure is the same everywhere in the room, but room



temperature is not. These must be measured on an **internal** wall and away from the influence of the sun (windows, domes, thin walls...). At the edge of a door that is usually closed is pretty good. You don't place the sensor in an (inner) corner in the room. Don't place it behind a piece of furniture, a large plant, or above or below heating/cooling elements. Placement in the immediate vicinity of a suction or exhaust grille of ventilation is also not good. The enclosure must never be modified, nor may any openings be made or closed.

Placing the MULTISENSOR in the middle of an inner wall seems ideal, but it removes the possibility of hanging or placing a piece of furniture or work of art on it. The installer must therefore choose a good installation location very carefully, preferably in consultation with, and after approval from, the (interior) architect and the end user. Often, a good place on an inner wall is just next to a doorway, where the sun cannot reach.

#### **Selection of the type of wall box:**

The connection cabling must be done in a wall box with **airtight** cable/tube provisions. You must avoid air currents running to or from the tube of the AUTOBUS cable that can affect the measurements.

#### **Placement height:**

We recommend installing the MULTISENSOR approximately 150 cm above the floor surface. For your information: pure CO<sub>2</sub> is about 1.5 times as heavy as air. In a completely stationary space, CO<sub>2</sub> will therefore slowly sink downwards. In normal homes and offices, however, air is constantly in motion due to ventilation, convection from heating and cooling, and the movement of people and open doors... As a result, the CO<sub>2</sub> concentration in living and working spaces is usually quite homogeneous. Therefore, we recommend placing the MULTISENSOR in the so-called 'breathing zone' (about 0.9 to 1.8 m height), typically at the same height as a thermostat.

#### **To click the housing onto the wall bracket:**

The installation is done with the included wall bracket, which you first place over the wall box and then secure with 2 or 4 screws (not included). After connecting the miniature connector of the supplied AUTOBUS connector kit, place the housing over the bracket and click it into place (see the drawings at the bottom of this datasheet).

It is also absolutely recommended to **NEVER TOUCH the sensors** (during the installation, when the MULTISENSOR enclosure is open). Therefore, close the housing immediately after installation to prevent third parties from doing so.

In that context, we also recommend installing the MULTISENSOR only when no dusty work is being done on site, such as sanding during joinery and painting, or heavier work like grinding floor tiles, walls, concrete, etc. If this is not possible, you should temporarily shield the sensor with a dust-proof shield (e.g. apply a plastic film over the entire sensor and stick it to the wall with painting tape).

#### **Fine dust measurement in quiet rooms:**

To ensure proper operation of the particulate matter sensor, it cleans itself **once a week**. In doing so, it will hum softly

for **10 seconds**. Placing the 'PURE' version with a particulate matter sensor in a bedroom is therefore not recommended. In other rooms, this usually won't be a problem given the low noise level and the short cleaning duration.

#### **SUPPLY VOLTAGE**

12 V supplied via the AUTOBUS socket (at least 9 V). This Voltage can be checked in the PROSOFT - Diagnostics menu, at the corresponding interface.

#### **Important note on installation:**

! Follow the safety regulations of the local authorities to be in accordance with all applicable regulations.

#### **CONNECTIONS**

##### **AUTOBUS**

AUTOBUS connector set (included with the interface).

#### **POWER CONSUMPTION**

##### **BUS**

| Type:      | Minimum | Maximum |
|------------|---------|---------|
| TDS12263WH | 8 mA    | 15 mA   |
| TDS12265WH | 8 mA    | 30 mA   |
| TDS12266WH | 42 mA   | 71 mA   |

#### **DIMENSIONS NET | GROSS (PACKED)**

Sensor Housing: 100 Wide x 100 High x 33.7 Deep (mm)  
Packed (Box): 126 Wide x 114 High x 56 Deep (mm)

#### **WEIGHT NET | GROSS (PACKED)**

TDS12263WH: 0.12 kg | 0.19 kg  
TDS12265WH: 0.12 kg | 0.19 kg  
TDS12266WH: 0.16 kg | 0.23 kg

#### **PACKAGE CONTENTS**

1 x TDS12263WH or TDS12265WH or TDS12266WH  
1 x Wall Mounting bracket  
1 x AUTOBUS connector set  
1 x datasheet (this document) multilingual EN, NL and FR

#### **ENVIRONMENTAL CONDITIONS**

##### **Storage (without condensation or icing)**

Temperature: -20°C to +65°C  
Relative humidity: 5% to 85%

##### **Usage (without condensation or icing)**

For indoor use only  
Temperature: 0°C to +50°C max.  
Relative humidity: 5% to 80%  
See also the specific data per sensor in this datasheet.

#### **IP PROTECTION RATE**

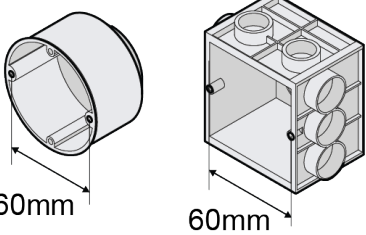
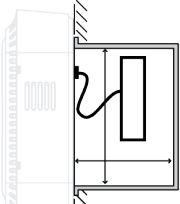
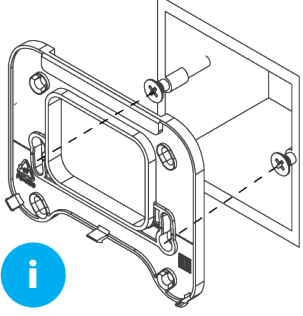
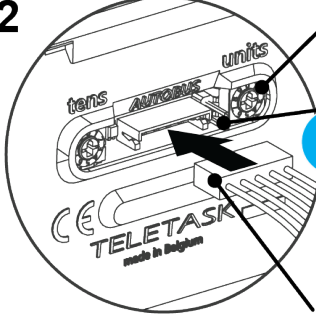
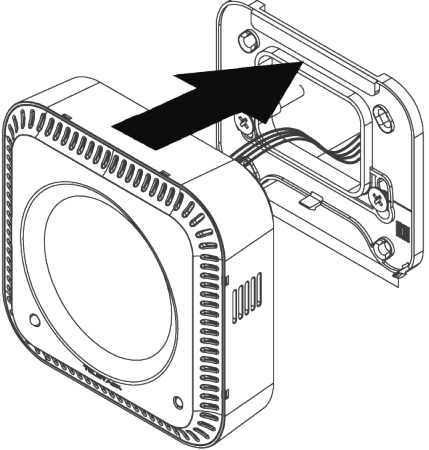
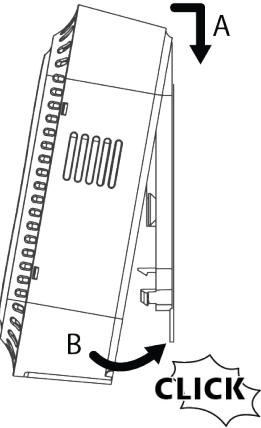
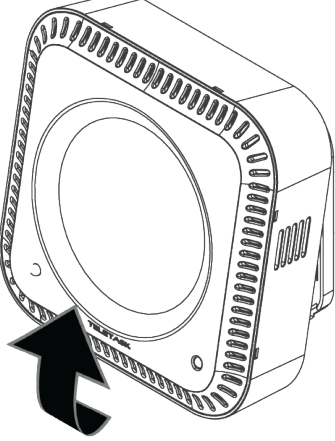
IP20

#### **LIMITED WARRANTY**

4 years

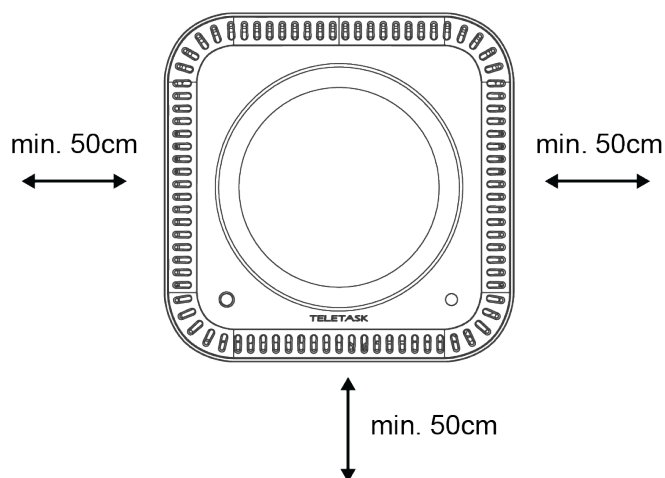


## INSTALLATION INSTRUCTIONS

|                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>60mm 60mm</p> <p> Airtight wall box required</p> |  <p> min. 40 x 25 x 25mm for <b>AUTOBUS connector</b></p>                                                                             |
| <p><b>1</b></p>  <p> Bracket thickness: 4mm</p>      | <p><b>2</b></p>  <p>Set AUTOBUS address</p> <p> Add AUTOBUS terminator only on the last interface on the bus</p> <p>Connect AUTOBUS</p> |
| <p><b>3</b></p>                                                                                                                     | <p><b>4</b></p>                                                                                                                                                                                                       |
|  <p>Indoor use only</p>                                                                                                             | <p>Removal:<br/>lift up manually</p>                                                                                                                                                                                   |



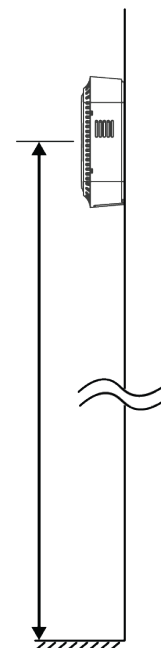
**Attention!**



Keep clear of objects and corners



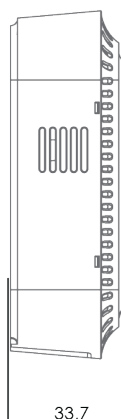
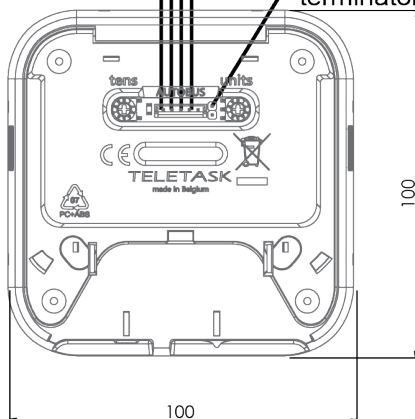
min. 0,9m  
max. 1,8m



**TECHNICAL INFORMATION**

AUTOBUS

AUTOBUS terminator



Not in use

AIR-Q LED color:

- (Very Good: green)
- (Good: yellow)
- (Moderate: orange)
- (Poor/very poor: red)