



USER AND INSTALLATION MANUAL FLEXICUBE - S

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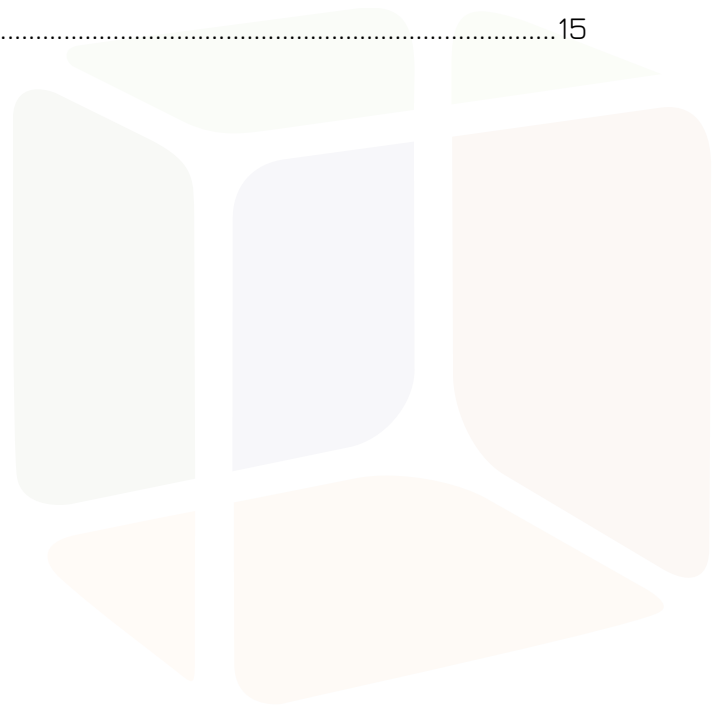
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Description

FlexiCube is a low-cost and low power device. FlexiCube device is intended to monitor and transfer selected information, such as temperature and humidity measurements, motion detection, location information (GPS), status information (door open, window open, cover open etc.), flooding detection, tank level measurements, river level measurements, etc. FlexiCube device is available in two versions, for outdoor and indoor use. The device must be installed properly for correct functionality. In particular you have to avoid inserting the device into the metal box, the device must have direct sky visibility (for GSP version), the device must be protected against direct contact with chemicals, etc.



If there is a third-party device used together with FlexiCube device you have to read carefully and follow the user manual of the third-party device.

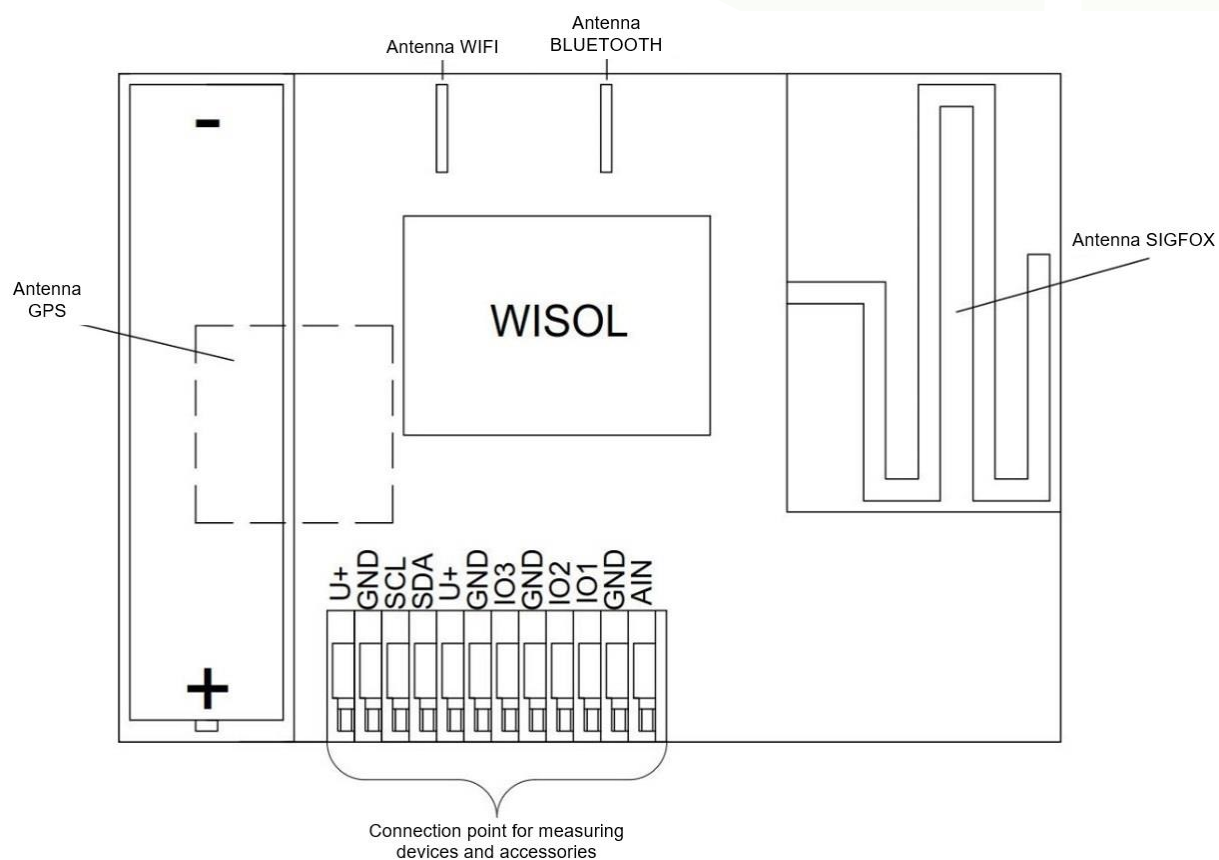
PRODUCT ADVANTAGES:

- Low-cost solution
- Low power device with battery power option
- Indoor / outdoor use
- User-friendly solution
- Universal configurable solution with possibility of connecting multiple sensors
- Presentation of measured and detected data, configurable sensors and sensors' monitoring via web portal.flexicube.cz
- Possibility of systematically alerting according to user-defined scenarios via SMS or email

Technical data

Technology	wireless UNB (Ultra Narrow Band)
Transmission and processing time	4 – 6 s
Battery life	up to 10 years depending on the connected peripheral devices and usage
Data availability	REST API, web, email, SMS
Data collection	Communication/analog/contact measuring
Location	GPS, GLONASS
Usage	indoor / outdoor
Average power consumption	5 μ A (depending on the connected peripheral devices and usage)
Power supply	3,6 VDC – AA Battery
Dimensions (l x w x h)	100 x 100 x 30 mm
Weight	134g (150g with battery)
IP rating	65
Temperature Range	-20°C to +60°C

Connection scheme



DESCRIPTION:

SCL, SDA - I2C bus

U+ - positive voltage

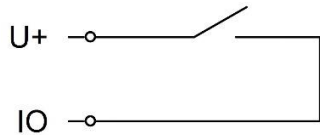
GND - negative voltage (ground)

IO - universal IO pin (contact/UART)

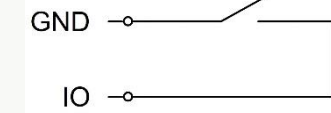
AIN - analog voltage input

Connection types

POTENTIAL-FREE CONTACT

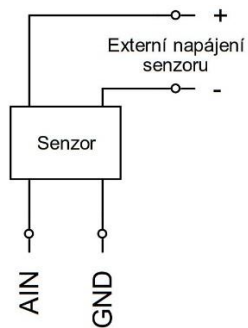


Connection of potential-free contact against battery voltage

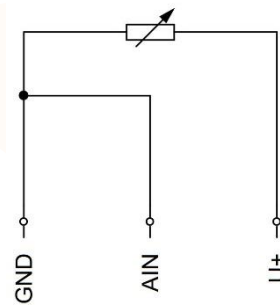


Connection of potential-free contact against ground

ANALOG VOLTAGE INPUT

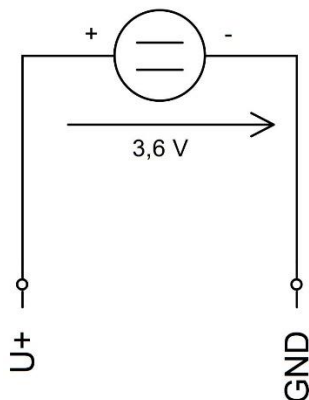


Voltage input connection with external power supply



Voltage input connection with battery power supply

FLEXICUBE DEVICE EXTERNAL POWER SUPPLY



*External power supply with 3.6 V input voltage
Note: only with battery disconnected*

Package content

FLEXICUBE CIRCUIT BOARD



BATTERY



CASING



Commissioning

First, insert the battery as described below.

- 1) Open the battery holder top cover (use a flat screwdriver or similar tool)



Open the battery holder top cover



The battery holder top cover opened

- 2) Insert the battery as shown in the battery holder - the positive (+) faces the terminal block side



Insert the battery



The battery inserted

- 3) Close the battery holder top cover



Closing the battery holder top cover



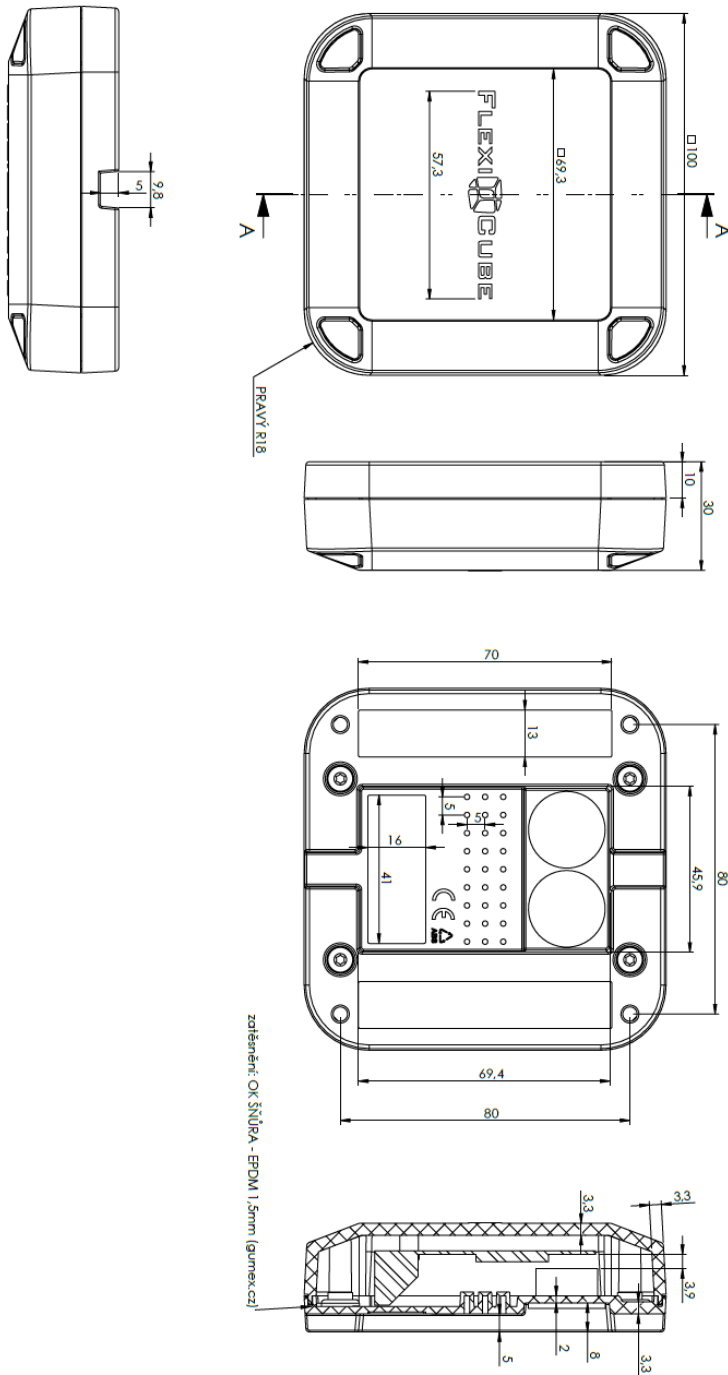
The battery holder top cover closed

Battery replacement

The remaining battery capacity is transmitted in each message and displayed in the web portal. Lost communication due to a full discharge of the battery is not a reason for the claim of the device.

When replacing a discharged battery, proceed as described above in the commissioning chapter. First open the battery holder top cover (use a flat screwdriver or similar tool), remove the discharged battery, insert a new battery (pay attention to the polarity) and close the battery holder top cover.

Installation scheme



Installation instructions

INSTALLATION METHODS:

- Free laying
 - placing on the dashboard, placing in a backpack, etc.
- Fixing with double-sided adhesive tape
 - at the bottom of the case, there are dents for placing double-sided tape
 - recommended for installations without permanent physical stress e.g. vibrations
 - a simple, fast and solid method of attachment.
- Fastening with screws (not included in package)
 - holes are provided in the corners of the bottom case part for the screw mounting; the openings are covered with easily removable plugs
 - recommended for fixed installations and for installations with permanent physical stress e.g. vibrations
- Using tie-down straps (not included in package)
 - holes are provided in the corners of the bottom case part for attachment by tie-down straps; the openings are covered with easily removable plugs
 - recommended for fixed installations
 - a simple, fast and solid method of attachment.

INSTALLATION RULES:

It is recommended to follow these guidelines to ensure maximum device functionality:

- place the device horizontally with the logo facing up (ideally with direct sky visibility)
- avoid installation inside metal covers.

Not to follow the instructions above may result in decreased GPS positioning accuracy or GPS position unavailability and increased probability of unsuccessful transfer of information from the device up to complete loss of connection.

When placing the device inside the building (especially in the underground or reinforced concrete structures), the transmission signal is attenuated, which can lead to increased number of failed transmissions or complete device unavailability.

Safety instructions

- Do not expose the device or its parts to temperatures higher than 60°C.
- Do not expose the device or its parts to temperatures lower than -20°C.
- Be careful when handling the device in the presence of children.
- The device is not intended to be operated by children or persons with limited mental abilities or lack of experience or knowledge unless they are trained in their use by the person responsible for their safety.
- Do not expose device to detergents, emulsions and other liquid products and chemicals in any way.
- The manufacturer is not responsible for any damages caused by improper use of the device or use in violation of this document.

Recycling

CORRECT PRODUCT DISPOSAL

(Waste Electrical & Electronic Equipment - applicable in the European Union and other European countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life.



To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

CORRECT BATTERIES DISPOSAL

(Applicable in the European Union and other European countries with separate battery return systems)



This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66.

If batteries are not properly disposed of, these substances can cause harm to human health or the environment. To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle

them through your local, free battery return system. Read the above instructions to correctly remove battery from the device.

Copyright

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APPLICABLE STANDARDS:

- ETSI EN 300 220 – Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz
- ETSI EN 301 489 – ElectroMagnetic Compatibility (EMC) standard for radio equipment and services
- IEC 60950 – Information technology equipment – Safety
- IEC 62209 – Measurement procedure for the assessment of specific absorption rate (SAR) of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices