WiRan
inside

SEZO UL - ONE PRODUCT, THREE VERSIONS

version A

version B

version C

SEZO UL - VERSION A

measuring environmental parameters such as temperature, humidity, air pressure, luminosity and UV radiation

battery-operated device - up to 5 years on a single battery

external probes for precise measurement of temperature and humidity

data transmission using LoRaWAN technology

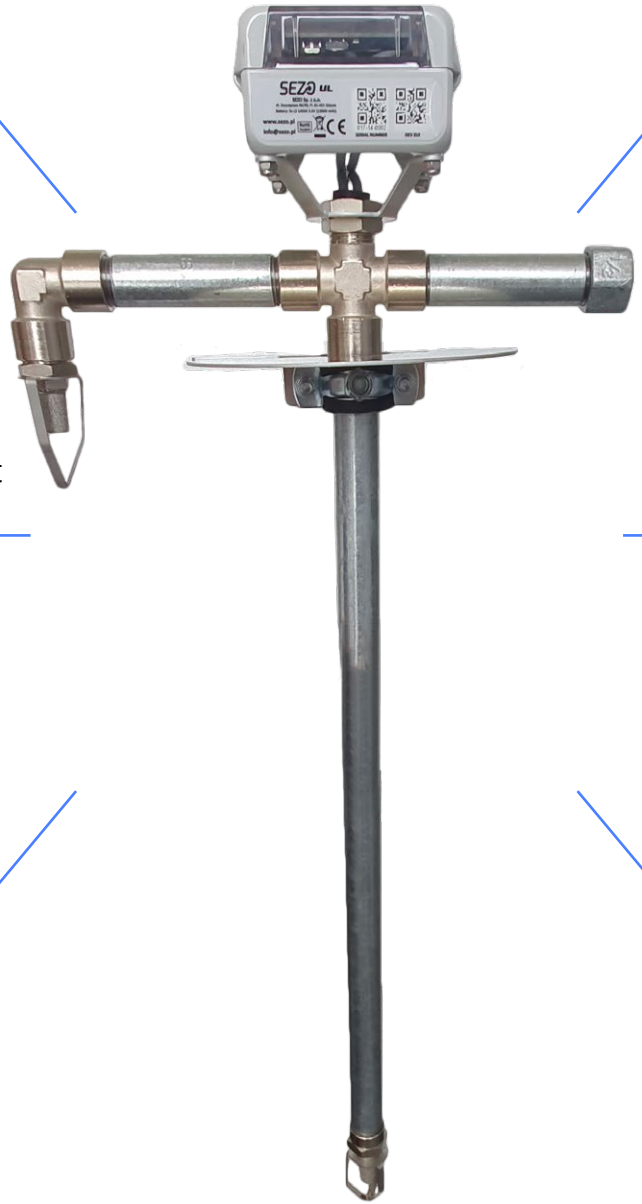
possibility of mounting up to two external probes

configuration via USB

SEZO UL - VERSION B

one or two external probes mounted on shaft for insertion into the test material

measuring environmental parameters such as temperature, humidity, air pressure, luminosity and UV radiation



one of the probes takes measurements right at the surface of the material

standard shaft length 0.5m and 1.0m, or according to customer order

a probe driven into the material precisely measures temperature and humidity deep inside the material

battery-operated device - up to 5 years on a single battery

SEZO UL - VERSION C

external probe in radiation shield, enables accurate temperature and humidity measurement even in sunny locations

measuring environmental parameters such as temperature, humidity, air pressure, luminosity and UV radiation

optional probe mounted on the tip of the shaft

standard shaft length 0.5m and 1.0m, or according to customer order

a probe driven into the material precisely measures temperature and humidity deep inside the material

battery-operated device - up to 5 years on a single battery

MONITORING OF FERTILIZER STORAGE CONDITIONS

SEZO UL allows you to control the environment within the warehouse, ensuring optimum storage conditions. This is particularly important in case of fast moving consumer goods (FMCG) such as packaged food, toiletries or, as in the case of Grupa Azoty, fertilizers, where it is necessary to ensure the right temperature as well as the level of humidity and UV exposure of the stored fertilizers.

SEZO UL measures environmental conditions both on the surface and deep within the heap. This makes it possible to make sure that the product is stored under optimal conditions throughout its volume and that all of its original properties remain unchanged.

The main module of the device, which is responsible for light intensity and UV measurements as well as radio communication, has a polycarbonate housing, while one of the probes can be installed in a radiation shield that protects the environmental sensor, thus ensuring reliable measurement results under varying environmental conditions. The device is compact and battery powered making the installation process hassle-free.

SEZO UL sends data via the LoRaWAN communication system to the Orange Live Objects platform.

SEZO UL - TECHNICAL SPECIFICATIONS

DESCRIPTION	- Battery-operated, low-power sensor device measuring environmental parameters, with two probes for temperature and humidity measurements of loose materials - Used to monitor storage conditions - LoRaWAN technology for long-distance transmission with high battery life (up to 5 years) - Environmental sensor radiation shield provides reliable measurement results in a variety of environmental conditions - USB configuration - Every unit is shipped with individual test report confirming all specified parameters
MEASURED PARAMETERS	Temperature, Humidity, Air Pressure, Luminosity, Intensity of UV radiation
OPERATING TEMPERATURE	-30 ÷ 60°C
MEASUREMENT RANGE AND ACCURACY	- Temperature: -30 ÷ 60°C, typ. ±0.1°C, max ±0.6°C - Humidity: 0 ÷ 100%, typ. ±1.5%, max. ±3% @25°C @20÷80% RH - Air pressure: 260 ÷ 1260 hPa, ±3 hPa - Luminosity: 0 ÷ 1000 lx, typ. ±10%, max ±35% - UV radiation: 100 ÷ 8000 uW/cm2, 280-370nm (UV A + B), typ. ±10%, max. ±20%
COMMUNICATION PROTOCOL	LoRaWAN v1.0.2, Class A device
FREQUENCY AND TRANSMISSION POWER	868 MHz, maximum 14 dBm
DATA TRANSMISSION INTERVAL	Default 15 minutes (configurable)
POWER SUPPLY	5 x LS 14500 (13000 mAh)
ENCLOSURE AND MOUNTING	IP55, mounting bayonet and radiation shield as optional accessories
WEIGHT	255 g (without probes)
PRODUCT DIMENSIONS	Length: 100 mm (without probes), Width: 89 mm, Height: 48,5 mm

SEZO

WiRan

WiRan

WiRan Sp. z o.o. is a B2B company providing R&D services to national and international clients in the space, maritime, railway, industrial and IoT sectors. Our expertise lies in Radio Frequency and Wireless technologies, the development of electronic parts, fast product prototyping, feasibility studies, certifications and EMC testing. Founded in 2002, we are looking back at soon to be 20 years as a HW design office - supporting our diverse clients from the conception through prototyping to product quality development of electronic devices You can find our designs mounted around Tricity (air quality measuring systems), and soon also in space (satellite communication modules), just to name a few.
WiRan offices and laboratories are currently located in Gdynia, Poland.

SEZO

SEZO is a suite of products that can be best described as long range, customizable IoT solutions. SEZO products are based on LoRaWAN™ and LTE-M / NB-IoT technology and can be customized by clients, based on their needs.