

iDOL 53 LoRa ammonia sensor



1 Product description

The iDOL 53 is an electrochemical sensor designed to measure ammonia levels in livestock houses. The sensor is designed to be fixed for constant measurement of ammonia concentration and can wirelessly send data to an iDOL 64 gateway.

The sensor element and dust filter can be changed as required. The sensor element is supplied in a can for extra protection.

Reading out of data takes place wirelessly using the LoRaWAN standard (Long Range Wide Area Network). It requires a LoRaWAN gateway. (Gateway must be purchased separately).

2 Product survey



140352 iDOL 53 wireless LoRa

Can be used for monitoring the ammonia level in the air.

Transmits data wirelessly.

Includes:

- DOL 53 ammonia sensor
- Lora converter with power supply
- Cable

To be used with iDOL 64 gateway.

2.1 Accessories (To be purchased separately)



140327 iDOL 64 Gateway modem wireless & analog

Receives wireless, LoRa-based and analog sensor data and forwards it to the dol-sensor cloud service.

4 pcs. standard M12 male with 5 pins.

Supplied with 2 m cable with plug.



140355 iDOL 64 Gateway modem wireless

Receives wireless, LoRa-based sensor data and forwards it to the dol-sensor cloud service.

Supplied with 2 m cable with plug.

3 Installation guide



Install the battery in the socket.



Secure the cover to the LoRa converter with 4 screws.
Screw the antenna onto the LoRa converter.

Note: To install the DOL 53 ammonia sensor, see Technical User's Guide.

3.1 Setup

After installation the sensor must be connected to an idol 64 Gateway.

To do this, DevEUI is required. This can be read manually from the label on the back of the LoRa converter.

Each LoRa transmission contains 0 – 10,000 mV and is converted to 0 – 100 ppm as output in the idol 64 Gateway. The default setting is measured every 10 minutes, but this can be changed.

4 Battery status

Sends battery status to the Gateway with the following states:

- Low. Replace battery soon
- Very low. Schedule battery replacement
- Critical. Replace battery now

5 Maintenance

5.1 Recycling/Disposal



The label indicates that the product must not be disposed of as general refuse disposal and must be treated as electronic waste.



The label indicates that the product is suitable for recycling.

It must be possible for customers to deliver the products to local collection sites/recycling stations in accordance with local instructions. The recycling station will then arrange for further transport to a certified plant for reuse, recovery and recycling.

6 Technical data

		Unit
	DOL 53	
	See DOL 53 technical data in the Technical User's Guide	-
	LoRaWAN converter	
Battery type	ER14505*	-
Battery voltage	3.6	V
Battery capacity	2700	mAh
Battery lifetime estimate	5 years with 10 minutes sampling and good signal	-
Protection class	67	IP
Approvals	CE, FCC and IC	-
	Power supply	
Supply voltage	100-240	V AC
Output voltage	24	V DC
Maximum current	42	mA
Maximum power	1	W
Protection class	67	IP
Approvals	CE	-

*The battery is only for the LoRa converter and cannot be used as a backup for the sensor. In the event of a power supply failure, the LoRa transmission continues, but the transmitted data will not be valid.