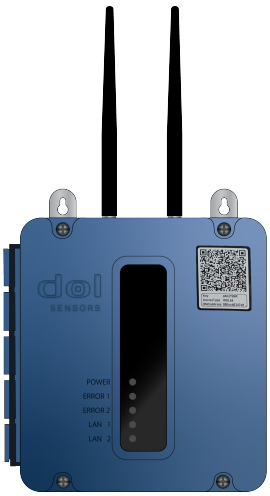
iDOL 64 LoRa Gateway



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1 Product description

The idol 64 Wireless Gateway is the center point of the dol sensor monitoring solution. It receives sensor data and forwards it to the dol-sensor cloud service, where the data can be retrieved through the dol-sensors API.

idol 64 is available in 2 variants. One for wireless, LoRa-based sensor data and one that can also be connected to up to 4 analog sensors.

With the built-in modem, the Gateway can easily connect to the Internet and exchange data.

Features

It has the following features:

- Wireless LoRa 868 MHz EU-region
- Modem with SIM card 2G/3G/4G EU-region
- Analog sensor input 0-10 VDC (140327 only)

Sensors

The following wireless (LoRa) sensors are supported:

- idol 139 temperature, humidity and CO_2
- iDOL 53 ammonia
- iDOL 90 water watch

The following analog sensors are supported (requires 140327):

- DOL 139 temperature, humidity and CO_2
- DOL 53 ammonia
- DOL 51 ammonia

2 Product survey

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.

140327 iDOL 64 Gateway modem wireless & analog

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

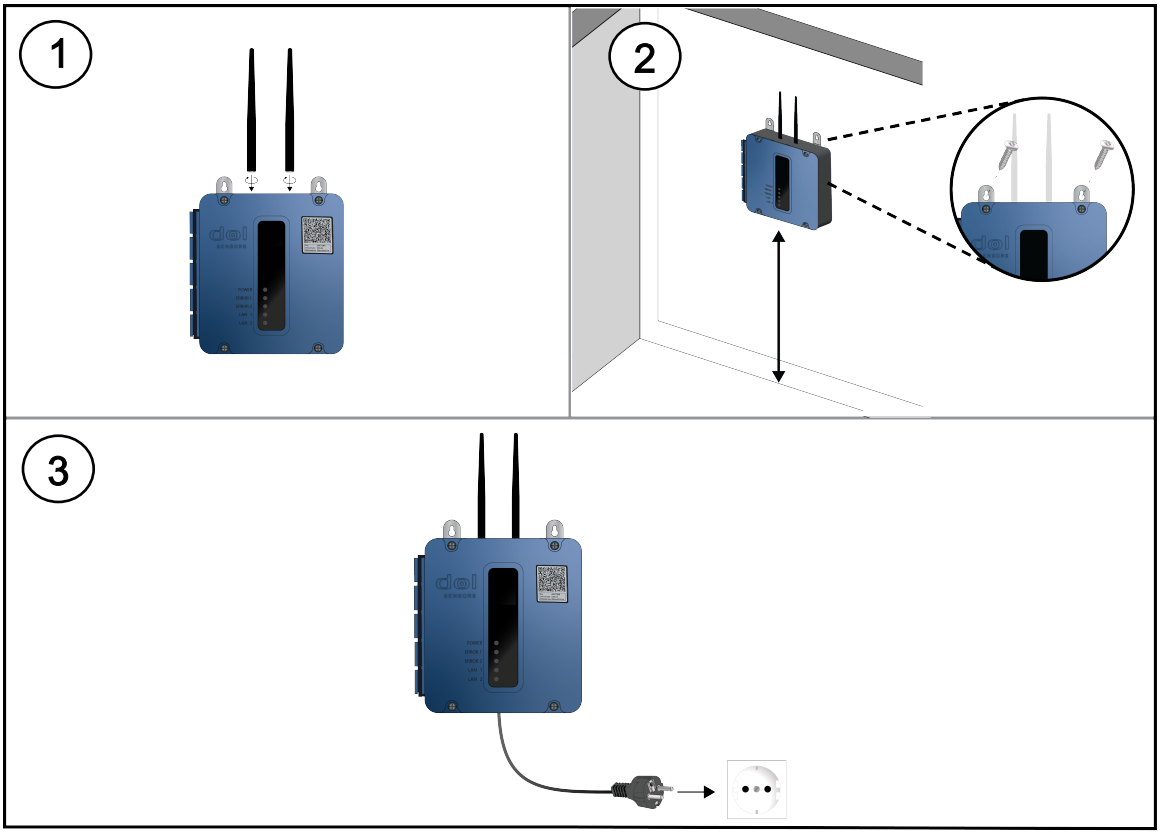
4 pcs. standard M12 male with 5 pins.

Supplied with 2 m cable with plug.

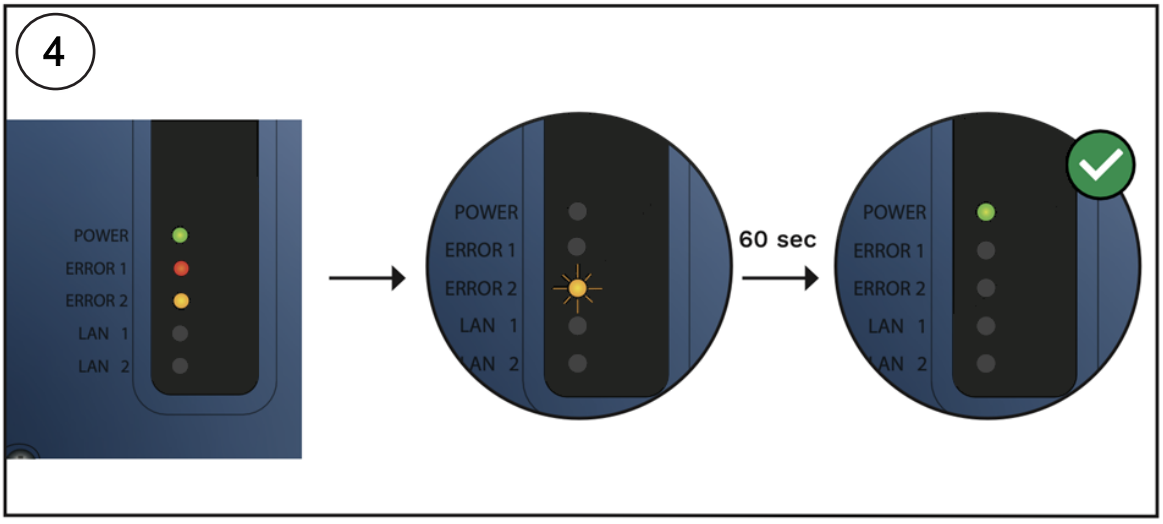
3 Installation guide

Installation, servicing and troubleshooting of all electrical equipment must be carried out by qualified personnel in compliance with the applicable national and international standard EN 60204-1 and any other EU standards that are applicable in Europe.

1. Mount the antennas on the external plugs.
2. Mount the gateway vertically on a wall as high as possible for the best connection.
3. Turn on the Gateway by connecting the AC cable to the power outlet.



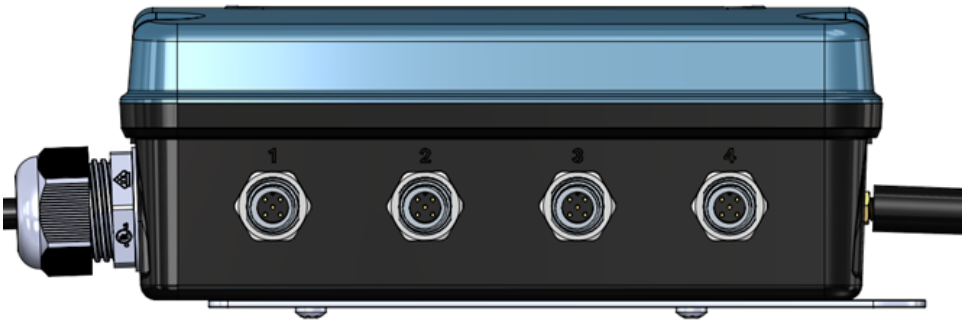
4. After the power is connected, wait for **THE POWER** LED to turn solid green.



3.1 Connecting Analog sensors (140327 only)

A sensor can be connected to each connector (standard M12 male connector with 5 pins).

Please note that DOL 53 must be connected with a special cable (**140365**).



Then configures the sensor model using the dol-sensors API.

4 User Guide

4.1 LED indication

Status LED

State	Description
POWER	Flashes green at startup and turns solid green when the Gateway connects to the DOL-sensor cloud service. Flashes green quickly when updating firmware.
Error 1	Flashes red if any sensor is disconnected.
Error 2	Flashes yellow when modem is connecting to internet data provider.

4.2 SIM card

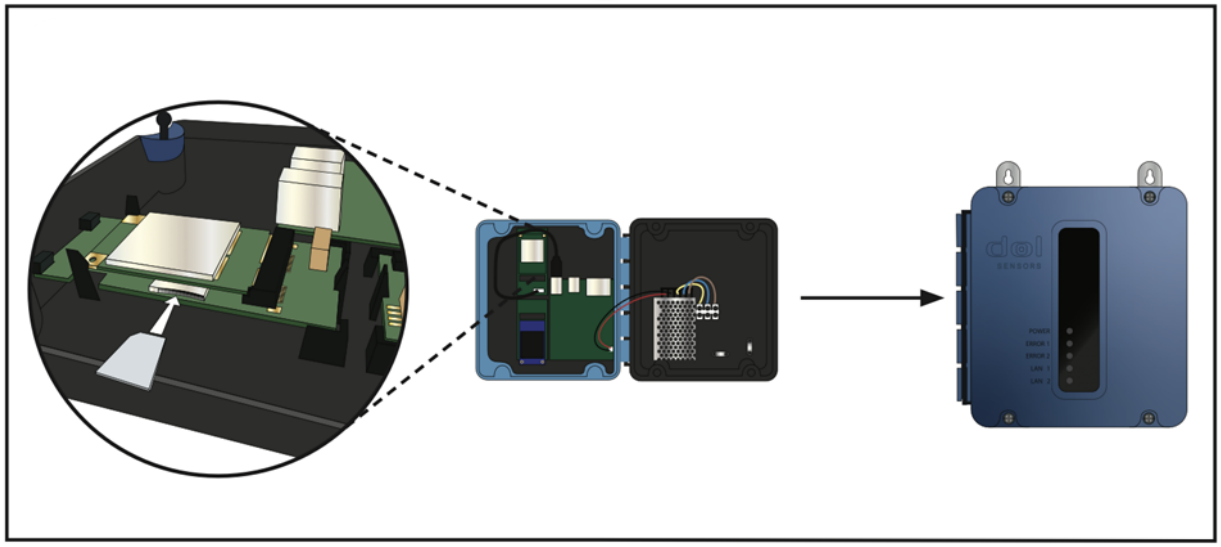
The Gateway assigns IP address (DHCP) and shares Internet with all devices connected via ethernet, such as PC.

The data active on idol 64 is intended for sensor data only and is therefore limited.

If the data limit is exceeded the sim card will automatically deactivate, and no more data will be send. In this case, contact dol sensors.

4.2.1 Replacing SIM card

If replacement of the SIM card is required, follow the guide below.



Note: Only SIM cards supplied by dol-sensors can be used.

5 Maintenance

The iDOL 64 itself does not need maintenance, but must be cleaned regularly as dust and excrements from flies etc. might hinder heat produced by the iDOL 64 to be led away.

Clean iDOL 64 with:

- Water with a small amount of dishwashing liquid
- Soft brush or a cloth

Do not use:

- High-pressure cleaner
- Highly compressed air
- Window cleaning spray
- Solvents such as acetone, benzene, Carbon Tetrachloride and the like
- Corrosive/caustic agents
- Alcohol-based disinfectants

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.

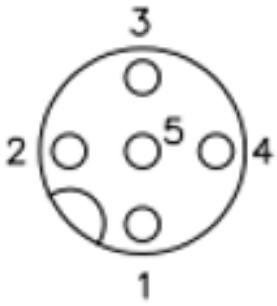
The label indicates that the product is suitable for recycling.

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

		iDOL 64 Gateway	
Specification		Parameter	Unit
LoRa	LoRaWAN version	1.0.2	-
	Regional parameters version	Revision B	-
	Radio frequency plan	Europe – 863-870	Mhz
	Spreading factor	7–12 (Depends on noise and obstacles)	-
	Range	Up to 300 in livestock houses. (Depends on walls and installation height of sensor and gateway).	m
Modem	Network bands	2G (GSM) 3G (WCDMA) 4G (LTE)	-
	Region support	EU	-
	Micro-SIM card	Data card pre-installed	-
	Life SIM card	5	Year
	Max data limits per month	500	MB
Analog input	Number of inputs	12 analog inputs	-
	Number of ports	4 pcs M12 port	-
	Output supply	0–24 @ 200 mA per output Max 500 mA total for all outputs	V DC
Power supply	Voltage	100 - 240	V AC
	Unloaded current	13	W
	Current max load	25	W
Temperature, operation		-10 - +40	°C
Temperature, storage		-25 - +60	°C
Humidity, operation		10 - 90	%RH
IP classification		IP65	-
Dimensions LxWxH		378x201.5x81.6	mm
Packing dimensions LxWxH		315x250x180	mm
Weight		2000	g
Approvals		CE	-

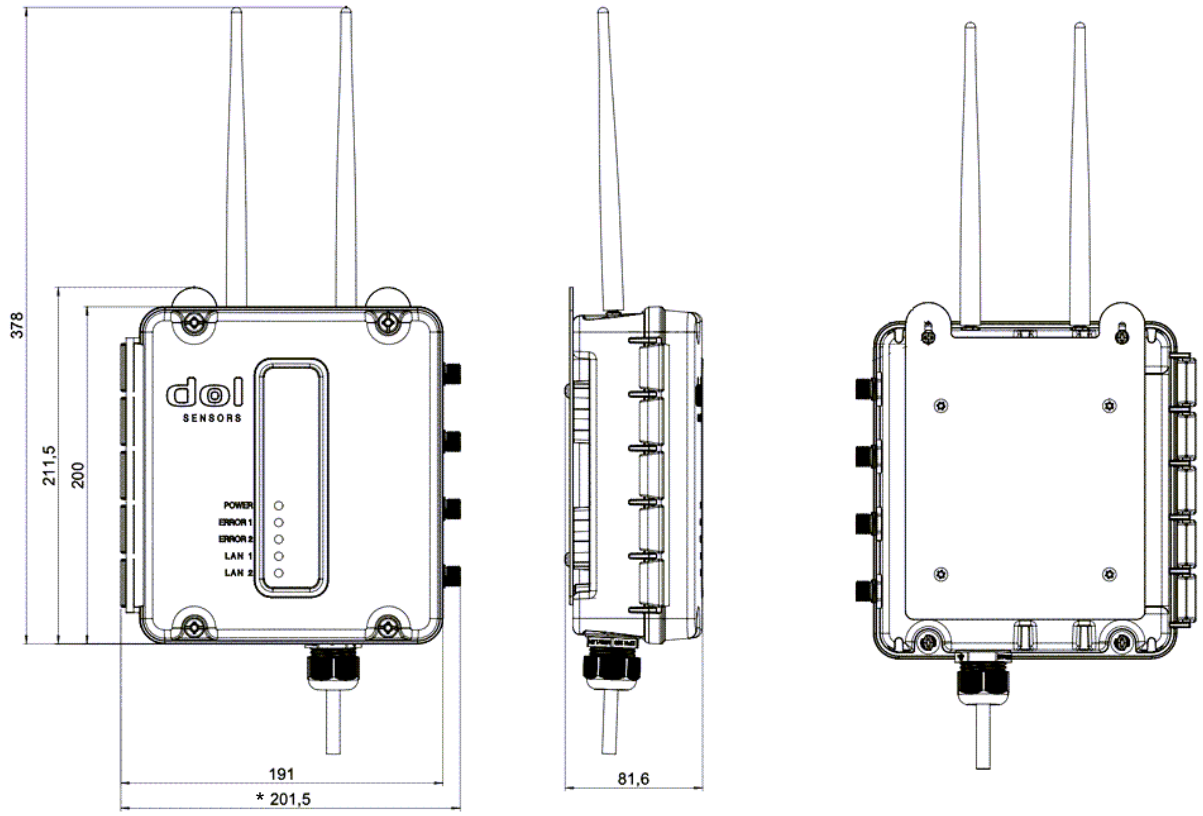
6.1 Connector connection



Pin connection in M12 plug	Analog signal	Color
Pin 1	24 V	Brown
Pin 2	Input 1	White
Pin 4	Input 2	Black
Pin 3	GND	Blue
Pin 5	Input 3	Gray

6.2 Dimensions

Dimensions in mm.



* iDOL 64 Gateway Modem Wireless & Analog

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