

iDOL 139 LoRa CO₂, Humidity and Temperature Sensor



iDOL 139 is a sensor for measuring carbon dioxide (CO₂) relative humidity and temperature. The sensor is intended for measurement in live-stock houses and industrial environments. It is protected by a sturdy casing and behind a filter.

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).

Product survey



140356 iDOL 139 Wireless LoRa 24 VDC

For measuring of carbon dioxide (CO₂) relative humidity and temperature.
Transmits data wirelessly.
Supplied with 2 meter power cable for 24 V DC and a protective cap.
To be used with iDOL 64 gateway.

Accessories



140337 iDOL 139 power supply

For supply of 80-240 V AC.



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.

Spare parts



140261 DOL 119/139 Protection cap plug 5 pcs.

Protection cap for DOL 119/139 for protection of the sensor during, for example, cleaning.


140269 Cable 2 m M12 plug incl. sealing plug

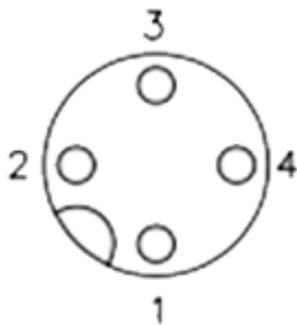
2 meter cable with M12 plug and sealing plug.

Technical data

		iDOL 139 LoRa	
Specification		Parameter	Unit
LoRa modul	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)	-
	Transmission frequency	1 (SF 7) 3 (SF 12)	min
	Range	Up to 300 in livestock houses. (Depends on walls and installation height of sensor and gateway).	m
Relative humidity	Measuring range	0-100	%RH
	Resolution	0.1	V/%RH
	Accuracy +10 °C - +40 °C (40-80% RH)	+/-3	%RH
	Accuracy 10%RH – 95%RH	+/-3 + 4% of measured value	%RH
	Time constant: T63	10 min. at 0.5 m/s air speed	-
Temperature	Measuring range	-40 - +60	°C
	Resolution	0.1	V/°C
	Accuracy -15 °C - +30 °C	+/-0.75	°C
	Accuracy -40 °C - -15 °C	+/-1.5	°C
	Accuracy +30 °C - +60 °C	+/-1.5	°C
	Time constant T63	7 min. at 0.5 m/s air speed	-
CO2	Measuring range	0-10000	ppm
	Resolution	0.001	V/ppm
	Accuracy 400 - 10000	100 ± 5% of measured value	ppm
	Time constant T63	2 min. at 0.5 m/s air speed	-
Supply voltage		5-30	VDC
Supply current	Normal	9	mA
	Maximum for data transmission	105	mA
Temperature, operation CO₂		0 - +50	°C

	iDOL 139 LoRa	
Temperature, operation	-40 - +60	°C
Temperature, storage	-40 - +70	°C
IP classification	IP67 (DIN 40050-9)	-
	NEMA 1, 3, 4, 6	-
Dimensions (diameter/width)	34	mm
Dimensions (length)	150	mm
Weight	180	g
Approvals	CE	-

Connection terminal



Pin connection in M12 plug	Digital signal (sensor output)	Color
Pin 1	24 V	Brown
Pin 2	Reserved	White
Pin 4	Reserved	Black
Pin 3	GND	Blue

Dimensions

Dimensions in mm.

