

DOL 51

Ammonia Sensor

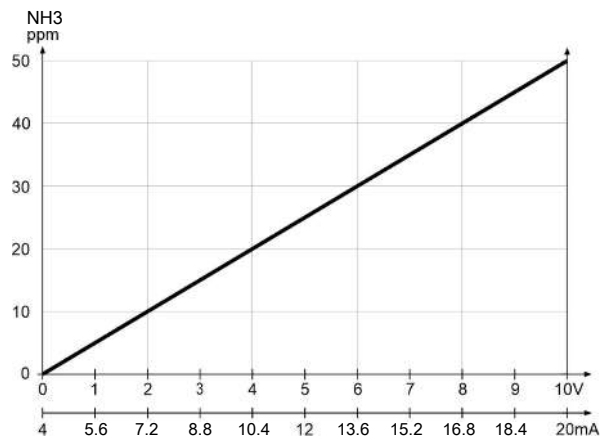


1 Product description

The DOL 51 is an electrochemical sensor designed to measure ammonia levels. The sensor consists of a sensor element, a house, a dust filter, and a convection cap with heating, connected to the housing with a cable. The sensor element and filter can be replaced as required, and the sensor element is supplied in a can for additional protection.

The sensor is meant for stationary mounting for continuous measuring of the ammonia concentration.

DOL 51 is well suited for measuring in an air cleaner, and in other places where the humidity can become very high. DOL 51 can withstand up to 100%RH.



Functional graph.

2 Product survey



140312 DOL 51 Ammonia Sensor w/heat

DOL 51 measures the ammonia in the livestock house air.



140314 DOL 51 Sensor Element

Sensor element for DOL 51.



140236 DOL 53 dust filter (5 pcs.)

Dust filters for DOL 51 and DOL 53. Set of 5 pieces.



140299 DOL 53 – test gas adapter

Used for gas test of DOL 51 and DOL 53.

3 Technical data

		DOL 51, 0-10V, 4-20mA, 0-50ppm NH₃	
Specification		Parameter	Unit
Output	Voltage range	0 - 10	VDC
	Power range	4 - 20	mA
	Load for voltage output	> 500 - < 10M	Ω
	Recommended load, voltage output	> 100	kΩ
	Load for current output	> 100 - < 470	Ω
NH ₃	Measuring range	0 - 50	ppm NH ₃
	Voltage resolution	0.2	V/ppm NH ₃
	Resolution	0.32	mA/ppm
	Signal transmission resolution	0.5	ppm NH ₃
	Accuracy	1.5 ppm or $\pm 10\%$ of the measured value	ppm NH ₃
	Long term drift	< $\pm 10\%$ of the measured value	%
	Time constant: T50	≤ 30	sec.
Supply voltage		22 - 26	VDC
Supply current		< 200	mA
Temperature, operation		0 - +50	°C
Temperature, storage		-20 - +60	°C
Humidity		15 - 100	%RH
Pressure		700 - 1300	hPa
Max. storage time (sensor element)	See date on sensor can		
Warranty sensor element	1	years	
Expected lifetime of sensor element	Not beyond the date on the sensor element type plate	1½	years
IP classification		IP65	
Cable length		6	m
Cable conductor size		5 x 0.25 (5 x AWG23)	mm ²
Max. cable length at 0.75 mm ²		20	m
Max. cable length at 1.5 mm ²		40	m
Dimensions (diameter/width)		75	mm
Dimensions (length)		225	mm
Weight		600	g
Approvals		CE UKCA	

3.1 Dimensioned sketch

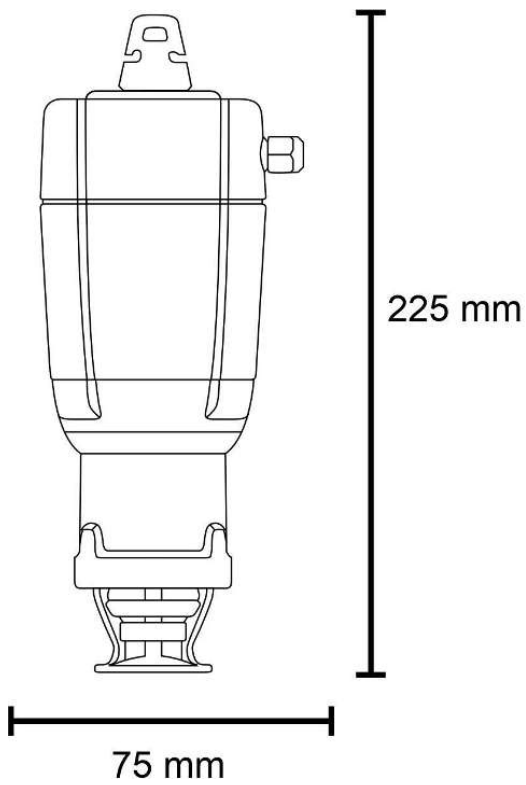


Figure 5: Dimensions in mm.

