Sigfox Toilet Odor Sensor WSSFC-TOS

SKU: WSSFC-TOS

Doc No: WSSFC-TOS-DS-EN-10

Introduction

WSSFC-TOS is a Sigfox sensor with built-in electrochemical gas sensor to measure Ammonia NH3 and H2S gas concentration to measure Toilet odor level. With Ultra-low power design and smart firmware allow the complete Wireless and Sensor package run on 1 x AA battery 3.6V for 2-5 years with 15 minutes update. It can support all regions of Sigfox network in over the World, RC1, RC2, RC3, RC4, RC5, RC6, RC7.

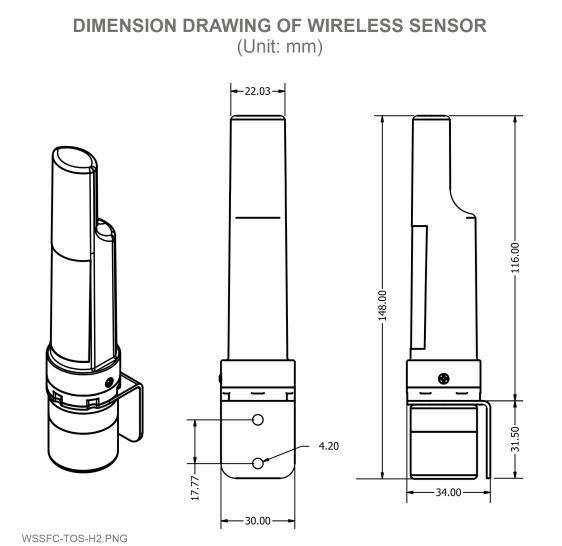
- High stability Electrochemical sensor ;
- Sigfox Ready;
- 2-5 years battery life with 15 minutes update;
- Plug & Play.

Typical Applications

- Monitor Ammonia and H2S in private or public toilets.



WSSFC-TOS-H1.PNG



WSSFC-TOS-H2.PNG



INTERFERENCE GASES

Gas	Concentration	Equivalent Output
CO	200ppm	<-6ppm
H2S	50ppm	<25ppm
CL2	10ppm	<-7ppm
C2H4	100ppm	0 ppm
H2	10000ppm	<14ppm
C2H5OH	1000ppm	<20ppm
SO2	20ppm	<9ppm
PH3	20ppm	<18ppm
CH2O	10ppm	<38ppm
C6H6	100ppm	<0.7ppm
CH3OH	200ppm	<4ppm

Specification

SENSOR SPECIFICATION	
Measuring range for combination of NH3 and H2S	0..50 ppm
Max detecting concentration	200 ppm
Repeatability	< 10% of Reading value
Resolution	0.1 ppm
Stability / month	< 10% of Reading value
Zero stability	< 1% of full scale
Working temperature	-20 .. + 50 oC
Working humidity	15 .. 90% RH
Working atmospheric pressure	101.3 Kpa +/- 10 Kpa
Sensor life	2 years
SIGFOX SPECIFICATION	
Sigfox zones	select RC2-RC3-RC4-RC5 or RC1-RC6-RC7
Antenna	Internal Antenna 2 dbi
Configuration	via offline USB cable (PC software is supplied at free)
Battery	01 x AA Type 3.6VDC
RF Module complies to	CE, FCC, ARIB
Working temperature	-40oC..+60oC (using Energizer Lithium Ultimate AA battery)
Dimensions	H106xW73xD42

Net-weight	< 100 grams
Housing	Polycarbonate, IP67
Mounting	Wall mount bracket

Payload Data

The following is the format of payload data will be sent to Sigfox server. Length is 6 bytes, it is future-proof for expansion to 12 bytes.

Sensor type (1 byte)	Status (1 byte)	1 st - Parameter (4 bytes)	2nd - Parameter (4 bytes)

Meaning of Data in the Payload

Data	Size (byte)	Bit	Format	Meaning
Sensor type	1	all	Uint8	Sensor type = 0x... means Toilet Odor Sensor Sensor type = 0xFF means no sensor
Status: battery level	1	Bit 7 and 6	Uint8	Battery capacity in 04 levels • 11: battery level 4 (99%) • 10: battery level 3 (60%) • 01: battery level 2 (30%) • 00: battery level 1 (10%)
Status: error		Bit 5 and 4		Node status • 01: error • 00: no error
Status: alarm 1		Bit 3 and 2		Alarm status of 1st - Parameter (Y1 value)11 : Hi alarm • 01 : Lo alarm • 00 : No alarm
Status: alarm 2		Bit 1 and 0		Alarm status of 2nd - Parameter (Y2 value)11 : Hi alarm • 01 : Lo alarm • 00 : No alarm
1st - Parameter	4	all	Float	Y1 value: Toilet Odor value in ppm
2nd - parameter	4	all	Float	Y2 value: spare

Ordering Code

Item code	Descriptions
WSSFC-TOS-9-11	SIGFOX TOILET ODOR SENSOR, AMMONIA AND H2S,INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP67, RC2-RC3-RC4-RC5 ZONES
WSSFC-TOS-8-11	SIGFOX TOILET ODOR SENSOR, AMMONIA AND H2S, INTERNAL ANTENNA, TYPE AA BATTERY 3.6VDC, IP67, RC1-RC6-RC7 ZONES

⚠ Link for full datasheet:

⚠ Link for manual:

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