beamonics
Made to measure

TDLAS — BM-V-2 BeamSight

Features

- Remote analysis open-path gas analyzer
- Real-time quantification of gases
- Portable or stationary configurations
- Operates without reflector
- Integrated battery or externally powered
- Lightweight

Description

BM-V-2 BeamSight: Compact and Innovative Remote Gas Analyzer

The BM-V-2 BeamSight is a cutting-edge tool for remote gas analysis, offering true stand-off detection capable of analyzing gas concentrations from a significant distance.

Effortless commissioning: The true remote-analysis configuration provides alignment-free commissioning, eliminating the need for long cables or complex mechanical and opto-mechanical constructions. This innovative approach allows monitoring of large areas with a single system and provides measurement results at a safe distance from potentially hazardous gases.

Advanced TDLAS technology: Based on the Beamonics proprietary remote TDLAS platform, the BM-V-2 BeamSight is inherently calibration- and maintenance-free. The analyzer does not suffer from sensor-poisoning effects and can continously measure gas concentrations from very low background atmospheric levels to saturation levels (100 vol%).

Exceptional sensitivity: The BM-V-2 BeamSight boasts outstanding sensitivity, capable of analyzing even background atmospheric concentrations of several gases, such as methane (CH_4) and carbon dioxide (CO_2).

Versatile configurations: The BM-V-2 BeamSight is available in two configurations: one for fixed installations and one for battery-powered portable applications. These configurations make it ideal for portable applications, including rover or drone-mounted setups, and fixed installations.

Integration ready: The BM-V-2 BeamSight is delivered in an integration-ready state with several interfaces, including USB, UART, and I²C.

Target gases: The analyzer can analyze a range of gases, including CH_4, CO, CO_2, H_2S, HF, C_2H_2, NH_3 and HCl.

Examples of gases

Gas	Detection precision (ppm • m)[a)]
HF	0.001
CO	0.3
CO_2	0.8
H_2S	1
CH_4	0.3
C_2H_2	0.1
NH_3	2
HCl	0.1

[a)]Under standard test conditions: R = 10 m, t = 0.5 s, P = 1 atm, T = 300 K, largest of 1% relative and specified precision

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Analyzer characteristics

Parameter	Symbol	Min	Typical	Max
Detection distance	R	0.2 m	30 m	100 m*
External supply voltage	V_{in}	10 VDC	12 VDC	14 VDC
Power consumption**	P	4.0 W	4.6 W	5.0 W
Weight (fixed installation)	m_f		0.7 kg	
Size (fixed installation) (l × w × h)	S_f		147 mm × 111 mm × 84 mm	
Weight (battery powered)	m_b		1.0 kg	
Size (battery powered) (l × w × h)	S_b		147 mm × 111 mm × 184 mm	
Operating battery life	t_b		5 h	
Operating temperature	T_{op}	-10 °C		50 °C

**With reflecting surface / **Depending on if display is equipped, 100 mA laser diode under ambient conditions.*

Interfaces

Interface	Description
USB	Mini USB / USB-C
Expansion connector	I^2C, UART, GPIO
Power	DC-plug or board-to-board connector
Display	Resistive touch

Other

Parameter	Symbol	Min	Typical	Max
Operating temperature	T_{op}	-5 °C		45 °C
Humidity (non-condensing)			40% @ 50 °C / 80% @ 30 °C	
IP classification			IP44	
Analysis laser (IR)			Laser Class 1	
Aim laser (visible)			Laser Class 3R	
CE-marked EU directives			2014/35/EU, 2012/19/EU, 2011/65/EU, EN61000-6-2:2005, EN61000-6-2:2019, EN61000-6-4:2007, EN61000-6-4:2019	

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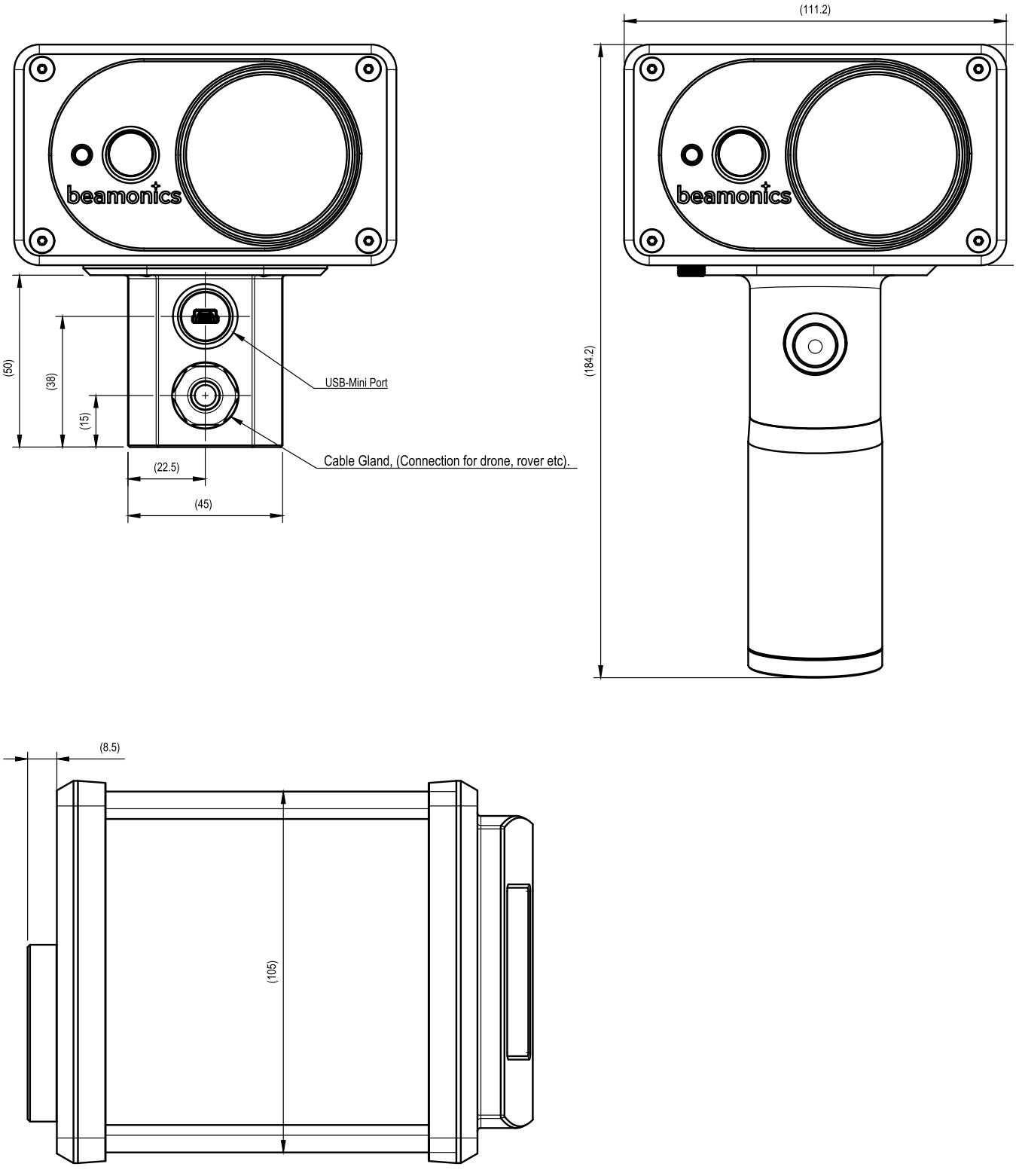
Outer dimensions