Made in Germany

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Technical Information

GEL 211CV0

Mobile service unit

Service and diagnostic unit for VarioCODER with sin/cos output

D-51T-211CV0 | Date of issue 2026-03-06

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Finding solutions.
Founding trust.

Motion sensors and integrated drive technology

General

- Ensures precise signal quality through professional measuring, testing, and calibration functions
- Browser-based operation on smartphones, tablets, or PCs without any software installation
- Automatic analysis, calibration, and report generation for maximum efficiency
- Fast error diagnosis thanks to graphical visualization and tolerance testing
- Ideal for commissioning, maintenance, and Condition Monitoring of drive systems



Properties

- Universally applicable for many VarioCODER types
- Data transmission via WLAN
- Compact, portable device
- Rapid evaluation of measuring signals, including graphical representation
- Interactive correction and automatic calibration of SIN/COS signals
- Storing tolerance presets and data sets in the device
- Automatic report generation
- Plug-and-play connection without dismantling the sensor

Advantages

- Automated commissioning possible
- Platform-independent, accessible via browser
- Easy handling in service use
- Immediate analysis and error detection
- Optimal signal matching
- Assembly errors can be quickly identified
- Deep insight into sensor and drive operation
- Reusable measuring and tolerance profiles
- Comprehensive documentation
- Very quick setup

Field of application

- Service and commissioning of the VarioCODER in the motor
- Individual calibration of VarioCODER and motor

Description

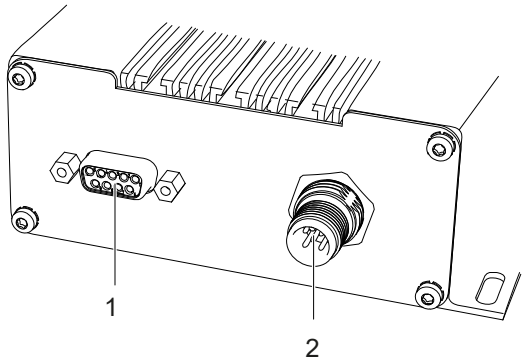
Product construction

Using the mobile service unit, sensor signals are checked for compliance with the tolerance presets. Various tolerance presets can be stored and invoked for this purpose.

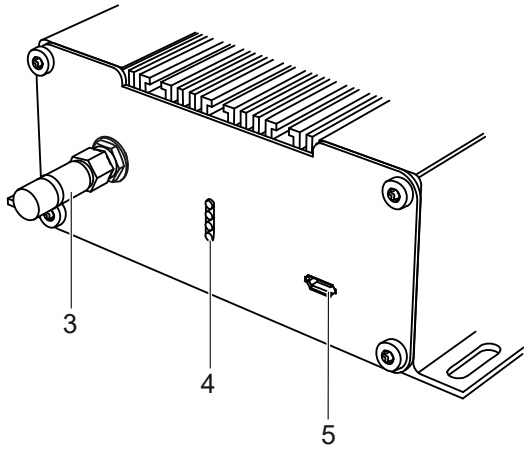
The sensor is connected to the sensor connection for the duration of the analysis. Power supply to the device and the connected sensor is via the power supply unit connection.

Device overview

Front



Rear side GEL 211CV04W2B (WLAN)



1 Sensor connection

2 Power supply unit connection

3 WLAN aerial

4 Indicators (Power/Comm/Signal/Status)

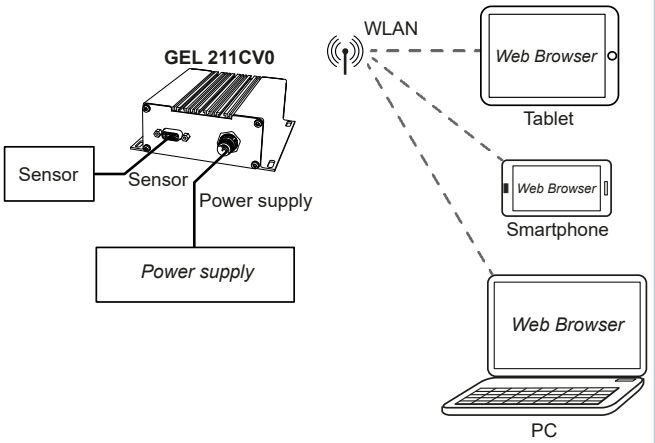
5 Micro USB connection (type B):
- Firmware update
- Changes to settings (for example, WLAN password)
- Data transmission

Scope of supply

Configuration kit	
PK21110-SEKA-W	• Mobile service unit 211CV0 • Power cord with international adapter • Connecting cable for SEK and 211CV0 • Unlocking tool for connector • Operating Instructions • Case

Example of use

WLAN



- An M12 connector is located on the front of the mobile service unit, which is used to supply power to the device and the sensor.
- The sensor is connected via the 9-pin Sub-D connector.
- Access to the web interface of the terminal device requires a WLAN connection between the mobile service unit and the terminal device.

Typical application cases

The mobile service unit allows the sensor to be properly commissioned and optimized.

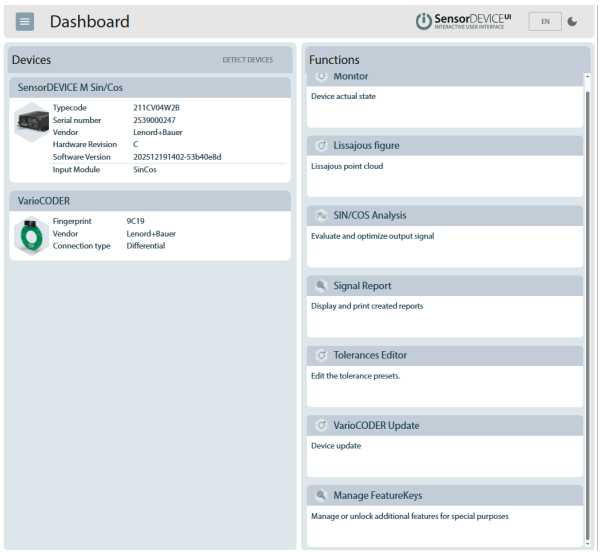
The following are typical application cases:

Function	Description
Signal control	Once the sensor has been installed, the signals should be checked to ensure that they remain within the specified limits.
Zero position adjustment	After installing a VarioCODER with slotted holes, it must be set to the zero position of the motor.
Sensor zero position determination	After installing a VarioCODER, the zero position of the sensor must be entered into the controller.
Signal optimization	When installed, the signals from the VarioCODER are further optimized to adapt them to the specific installation situation in the engine.

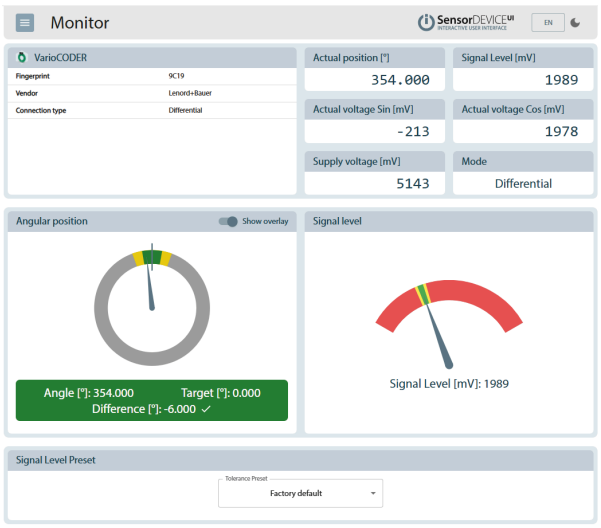
SensorDeviceUI

The SensorDeviceUI acts as the user interface for the mobile service unit.
To do this, the sensor is connected to the GEL211CV0 and a connection is established to a terminal device via WLAN.
The interface is then opened directly in the browser by entering the device's IP address.
The web interface was developed with mobile terminal devices in mind, so that it can be used even on smaller displays. For optimal operation, a display with a screen diagonal of 7 inches or higher is recommended.

User interface examples:
A complete description of the SensorDeviceUI can be found in the operating instructions.



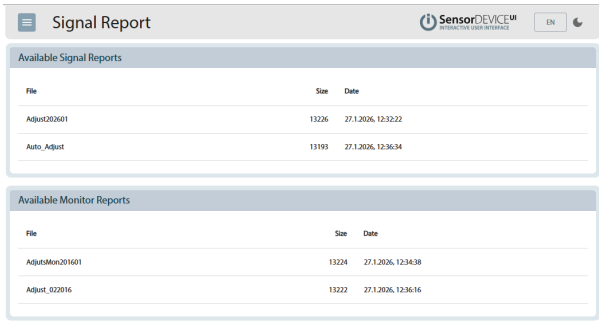
The dashboard serves as the start and navigation page for the SensorDeviceUI.
All menus and functions can be clearly accessed from here.



The Monitor function menu displays the current status of the connected sensor.



In the SIN/COS Analysis function menu, the sensor is evaluated over one or more sensor signal periods and can be optimized as required.



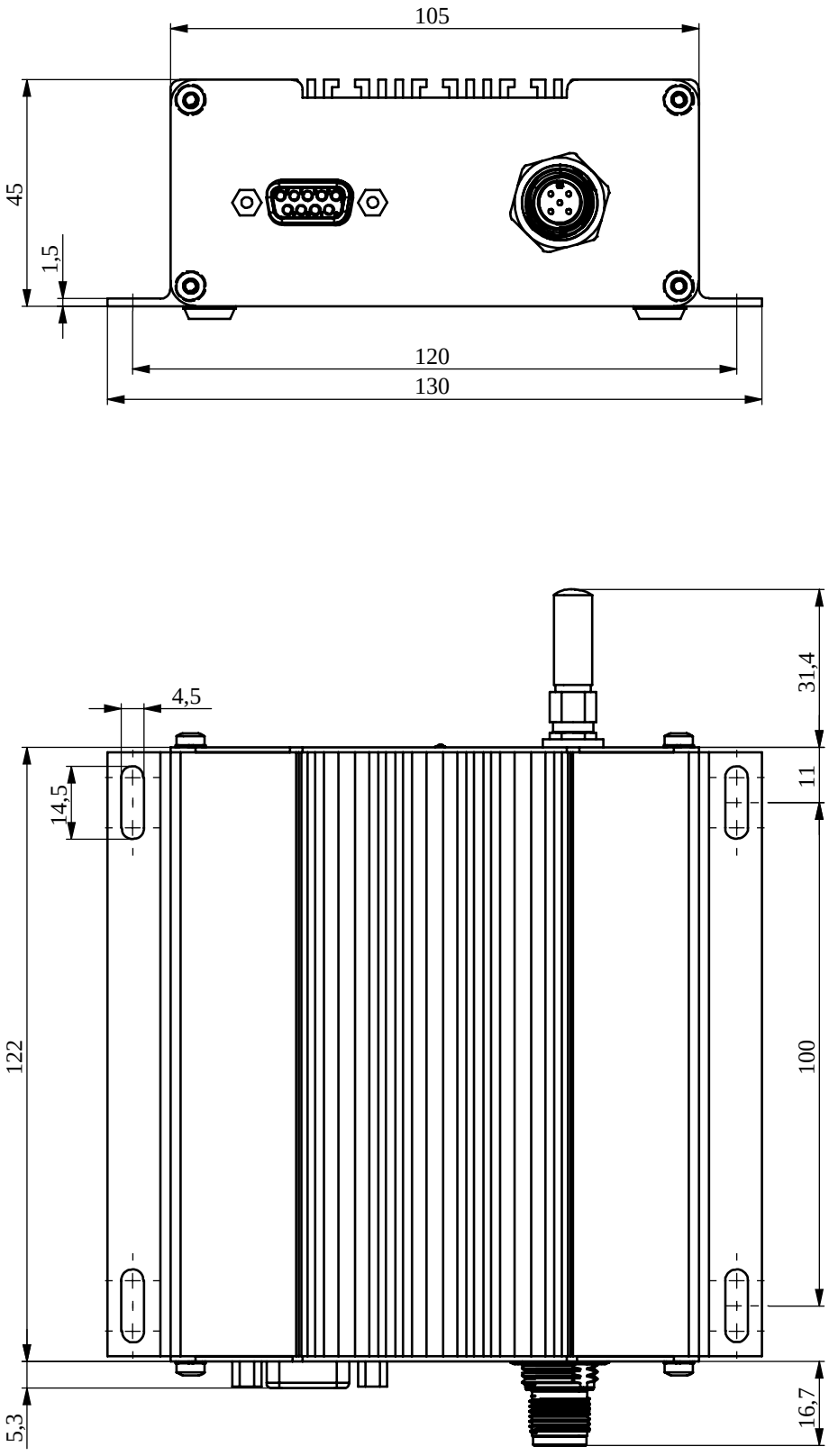
Saved reports can be accessed and managed in the Reports function menu.

Technical data

Electrical data	
Supply voltage U_B	+24 V DC
Sensor supply voltage	5 V
Current consumption via USB port	≤ 500 mA
Signal frequency	up to 1 kHz
Connections	Sensor: Sub-D socket, 9-pin; Power supply unit: M12 male contacts, 5 pin USB (micro USB, type B),
Data transmission WLAN	WLAN Report files: WLAN or USB
Mechanical data	
Housing material	Aluminum anodized, black
Weight	approx. 0.5 kg
Dimensions (without connector/aerial)	130 mm × 123 mm × 45 mm
Ambient data	
Operating temperature range	0 °C to +70 °C
Storage temperature range	-20 °C to 85 °C
Degree of protection	IP20
Maximum relative air humidity	80 %
Condensation	not permitted
WLAN module approvals	
IC ID	21098-ESPWROOM32
Transmission power	< 16 dBm
Frequency range	2412 to 2462 MHz
Application area	European Union Member States and Norway, Switzerland, Iceland, Liechtenstein

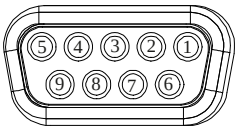
Dimensional drawings

Dimensional drawing GEL 211CV04W2B (WLAN)



All dimensions in mm
General tolerance ISO 2768-m

Connection

	Pin	Function
Sensor connection 9-pin Sub-D connector 	1	GND
	2	NC
	3	NC
	4	U_{2+}
	5	U_{1+}
	6	+5 V supply voltage sensor (output)
	7	NC
	8	U_{2-}
	9	U_{1-}

Only a shielded cable should be used to connect the sensor to the mobile service device.

	Pin	Function
Power supply unit connection M12 connectors 	1	+24 V
	2	NC
	3	GND
	4	NC
	5	NC

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