

# Technical Information

## FieldEdge SGC200

Bluetooth Edge Device to connect measuring technology to the Netilion Cloud



### Application

The FieldEdge SGC200 enables the connection of Endress+Hauser Bluetooth devices to the Netilion Cloud. Data transmission is via a global SIM card and LTE network. Device IDs, device readings and NAMUR NE 107 status information are transmitted.

### Your benefits

- Reliable transmission of measured values via encrypted Bluetooth communication.
- Transmission of the measurement and status information of the connected instruments.
- Easy installation and commissioning of up to five Endress+Hauser Bluetooth devices.
- No integration into customer automation system necessary.
- Complete freedom to develop your own solutions and applications in conjunction with a Netilion Connect Subscription and use of the Netilion software interface (Application Program Interface (API)).
- Use of Netilion Services for example for remote monitoring with a Netilion Service Subscription.

## About this document

### Symbols

#### Safety symbols

##### **DANGER**

This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

##### **WARNING**

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.









##### **CAUTION**

This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.

##### **NOTICE**

This symbol contains information on procedures and other facts which do not result in personal injury.

#### Symbols for certain types of information

Symbol	Meaning
	<b>Permitted</b> Procedures, processes or actions that are permitted.
	<b>Preferred</b> Procedures, processes or actions that are preferred.
	<b>Forbidden</b> Procedures, processes or actions that are forbidden.
	<b>Tip</b> Indicates additional information.
	Reference to documentation.
	Reference to page.
	Reference to graphic.
	Visual inspection.

## Function and system design

### Function

The FieldEdge SGC200 enables the connection of Endress+Hauser devices to the Netilion Cloud via Bluetooth. The FieldEdge transmits device IDs, device readings and status information. Connection to the web is via an integrated LTE modem with a global SIM card. The FieldEdge is configured via the Endress+Hauser SmartBlue app.

You can use the transmitted data via the following offers:

- Netilion Connect or
- Netilion Services

#### **Netilion Connect**

The transmitted data can be retrieved directly via a software interface (REST JSON Application Programming Interface (API)) and integrated into a user application.

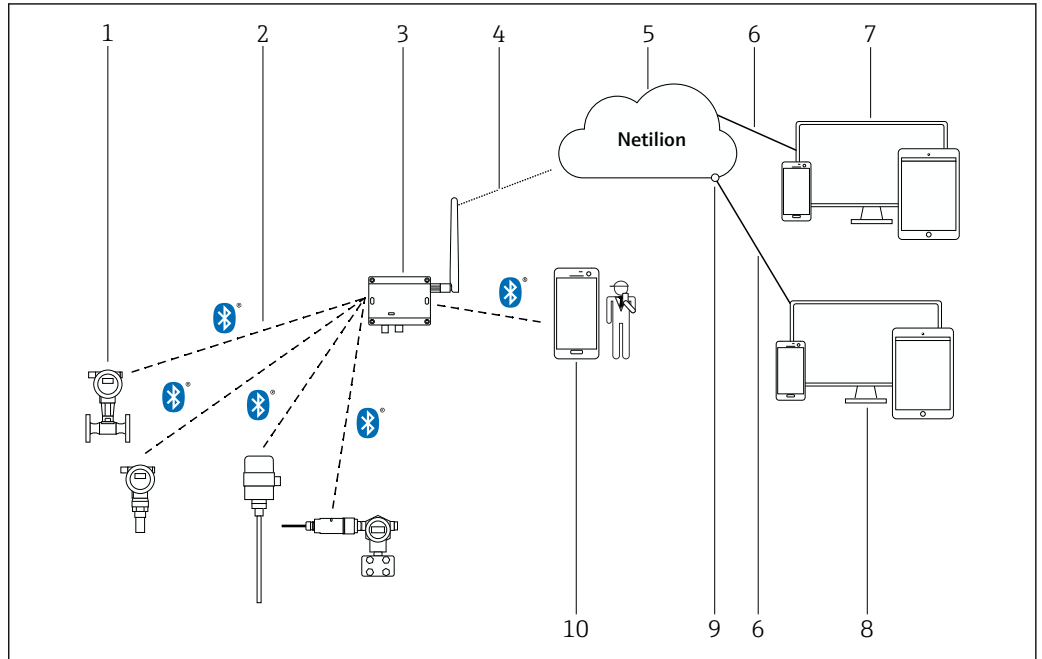


The Application Programming Interface (API) is provided as part of the Netilion Connect Subscription.

#### **Netilion Services**

Netilion Services can be used for example for remote monitoring with a Netilion Service Subscription.

System design



1 Network architecture

- 1 Endress+Hauser field devices based on Bluetooth® Wireless technology
- 2 Encrypted, wireless remote access via Bluetooth®
- 3 FieldEdge SGC200
- 4 LTE connection
- 5 Netilion Cloud
- 6 https Internet connection
- 7 Netilion Services: Netilion Service app based on internet browser
- 8 User application
- 9 Netilion Connect: Application Programming Interface (API)
- 10 Endress+Hauser SmartBlue app

## Input

Input signal

Bluetooth: IEEE 802.15.1

Range

The range depends on the alignment of the SGC200, the mounting location and the ambient conditions. When the FieldEdge SGC200 is ideally aligned, there are no obstacles for a distance of up to 40 m.

## Output

Output signal

Cellular radio LTE with 3G/2G fallback

Order code for EMEA cellular radio + installed global SIM card (LTE with 3G/2G fallback)

- 4G LTE Cat-1: B1/B3/B7/B8/B20/B28
- 3G/HSPA+, UMTS: B1/B8
- 2G/EDGE/GSM/GPRS 900, 1800

The cellular radio signal is selected automatically by the device. The selection depends on availability. The priority is 4G (LTE). If an LTE cellular radio signal is not available, the 3G (HSPA+, UMTS) or 2G (GSM, GPRS or EDGE) cellular radio signal is selected. The priorities are: LTE → 3G → 2G

Transmission interval

The Bluetooth read interval is 1 minute.

The cellular radio transmission interval is 15 minutes.

## Power supply

<b>Supply voltage</b>	Supply voltage	8 to 30 V <sub>DC</sub>
	Recommended supply voltage	24 V <sub>DC</sub>
	Current consumption	200 mA(maximum)
	Power consumption	3.6 W
	Electrical connection	M12, connector, 5 contacts, screw connection M12, socket, 5 contacts, screw connection

## Performance characteristics

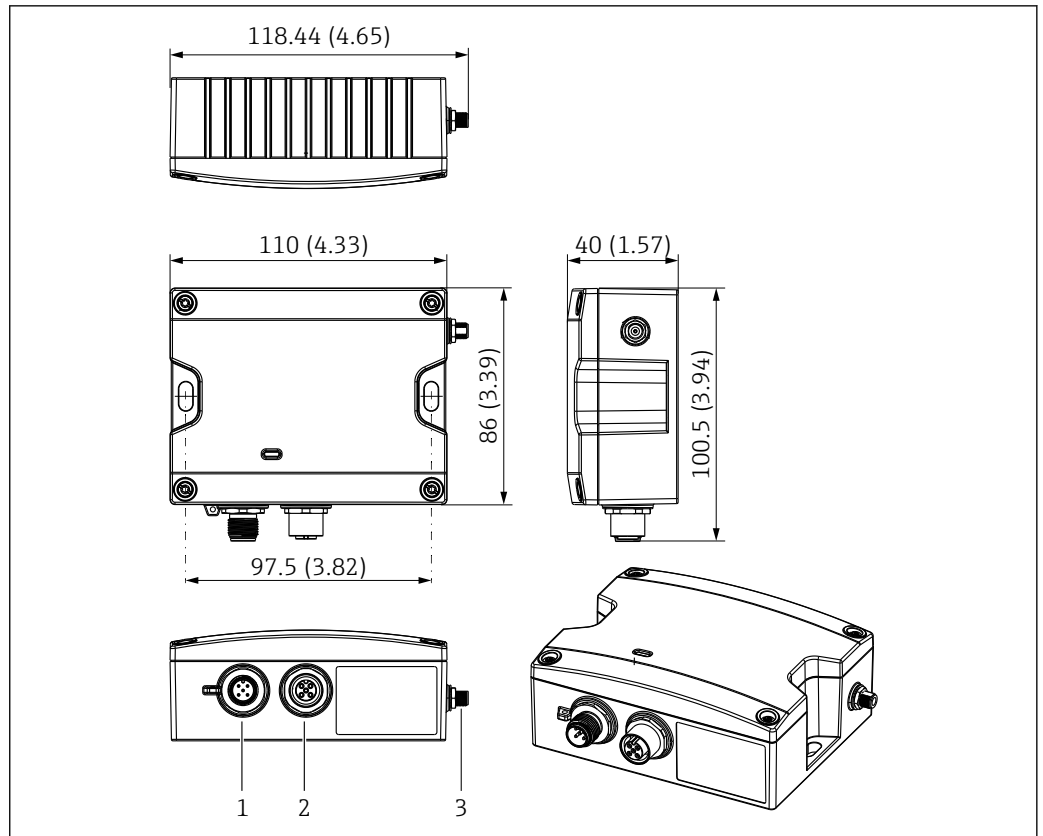
<b>Hardware</b>	CPU	Sierra Wireless WP7607-1 IoT module ARM® Cortex™- A7 (1.3 GHz) Cortex-A7 memory: NAND flash - 512 MB DDR - 256 MB 2x Bluetooth Comm CPU Nordic nRF52840 32-bit ARM Cortex-M4F @ 64 MHz RAM 256 Kbyte ROM 1 MB
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## Environment

<b>Ambient temperature range</b>	-40 to 80 °C (-40 to 176 °F)
<b>Storage temperature</b>	-40 to 80 °C (-40 to 176 °F)
<b>Humidity</b>	10 to 95 %
<b>Degree of protection</b>	IP67
<b>Vibration resistance</b>	DIN EN 60068-2-64 IEC 60068-2-64: 20 to 2 000 Hz(1 m/s)2 Hz
<b>Electromagnetic compatibility (EMC)</b>	Compliant with EMC standard EN 6100 and NAMUR Recommendation EMC (NE 21)

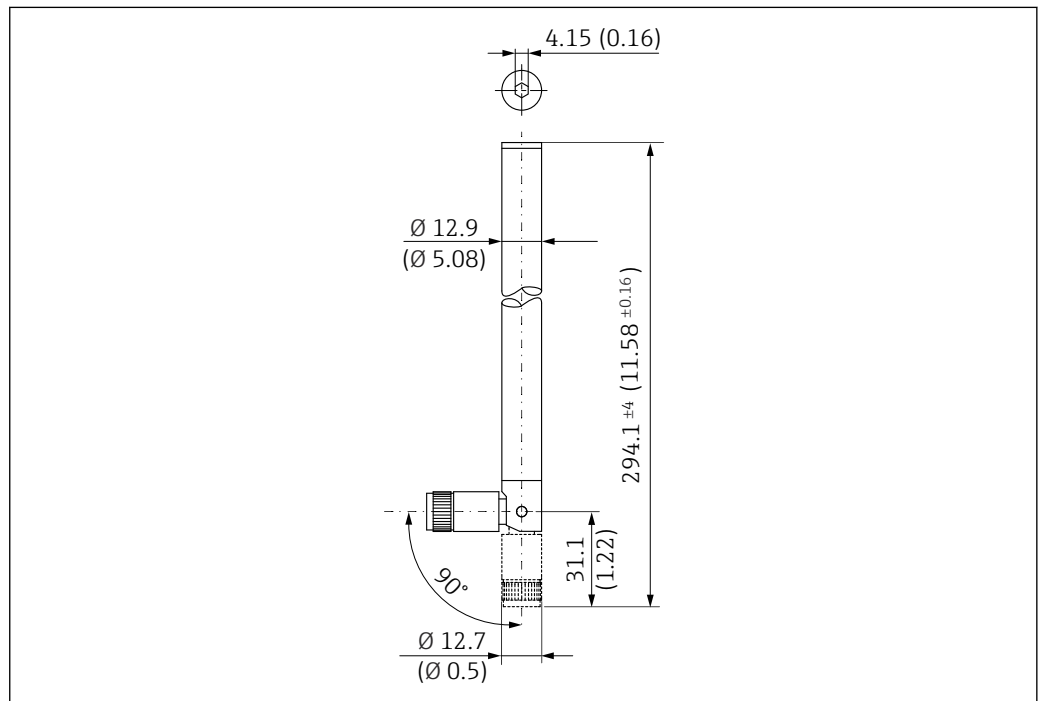
## Mechanical construction

<b>Design, dimensions</b>	<b>FieldEdge SGC200</b>  <b>Dimensions</b> <ul style="list-style-type: none"> <li>■ FieldEdge SGC200 without LTE antenna: 100.5 mm · 40 mm · 118.44 mm (3.94 in · 1.57 in · 4.65 in)</li> <li>■ FieldEdge SGC200 with angled LTE antenna (supplied): 350 mm · 40 mm · 155 mm (13.78 in · 1.57 in · 6.10 in)</li> </ul>
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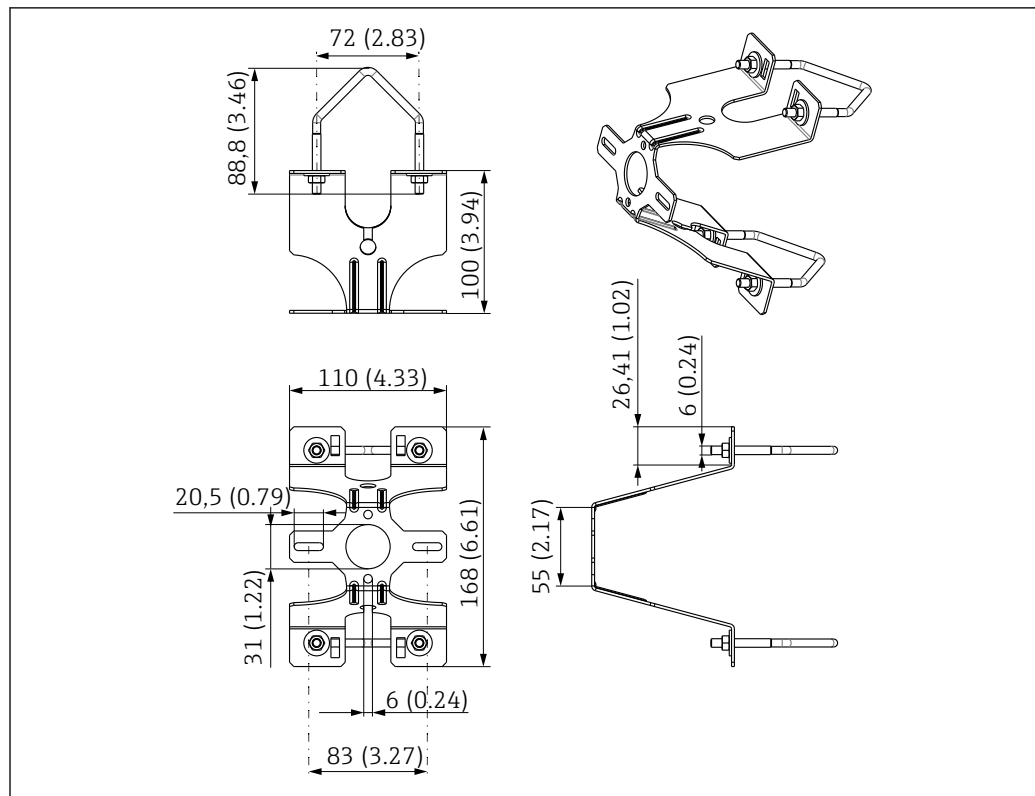
2 Dimensions of FieldEdge SCG200 without LTE antenna in mm (in)

- 1 5-pin connector for connecting power supply
- 2 5-pin socket for future use
- 3 Connection for LTE antenna (supplied) or for optionally available remote LTE antenna



3 Dimensions of LTE antenna in mm (in)

A0043632

**Mounting bracket**

4 Dimensions of mounting bracket in mm (in)

The mounting bracket is suitable for installation on a wall and on pipes with the following diameters: 45 to 60 mm (1.77 to 2.36 in).

**Material**

Polycarbonate (PC), polybutylenterephthalate (PBT)

**Certificates and approvals****CE mark**

The FieldEdge SGC200 meets the legal requirements of the relevant EU directives. Endress+Hauser has affixed the CE mark as confirmation that the FieldEdge SGC200 has been successfully tested.

**Ordering information**

Detailed information on the product structure are available as follows:  
From your Endress+Hauser Sales Center: [www.addresses.endress.com](http://www.addresses.endress.com)



- For detailed information on Netilion Connect, see <https://developer.netilion.endress.com/discover>
- For detailed information on Netilion Services, see <https://netilion.endress.com>

**Scope of delivery**

The scope of delivery comprises:

- FieldEdge SCG200
- LTE antenna
- M12 connection

Optional accessories:

- Mounting bracket, wall/pipe
- Remote LTE antenna

## Supplementary documentation

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FieldEdge SGC200

Operating Instructions BA02058S/04/EN

### Registered trademarks

Bluetooth® is the registered trademark of Bluetooth SIG, Kirkland, WA 98033, USA.

HART® is the registered trademark of the FieldComm Group, Austin, TX 78759, USA.



[www.addresses.endress.com](http://www.addresses.endress.com)

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