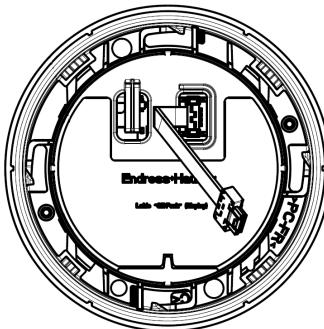
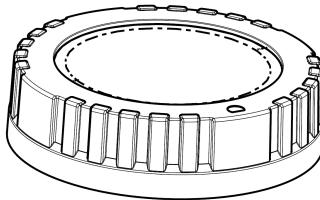


# Special Documentation

## VU231C Bluetooth® display

Remote operation via Bluetooth® wireless technology



# 1 About this document

## 1.1 Symbols



### Tip

Indicates additional information.

## 1.2 Documentation

### 1.2.1 Designated use

Remote operation of devices via Bluetooth® wireless technology

#### Suitable for the following device versions

- Device:
  - Micropilot: FMR30B
  - Prosonic: FMU30B

#### Incorrect use

The manufacturer is not liable for damage caused by improper or non-designated use.

Under different operating conditions than those described here, protection may be compromised and the correct functioning of the device cannot be guaranteed.

## 1.3 Registered trademarks

### Bluetooth®

The *Bluetooth®* word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Endress+Hauser is under license. Other trademarks and trade names are those of their respective owners.

### Apple®

Apple, the Apple logo, iPhone, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

### Android®

Android, Google Play and the Google Play logo are trademarks of Google Inc.

# 2 Radio approvals

## 2.1 Europe

This device meets the requirements of the Radio Equipment Directive RED 2014/53/EU. The standards specified in the declaration of conformity were used for this purpose.

## 2.2 United States

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices are compliant with the FCC Code of Federal Regulations, CFR 47, Part 1, Sections 15.205, 15.207, 15.209.

The type plate of the VU231C is not visible from the outside when plugged onto a device, but is only visible during installation. Therefore, Contains FCC ID: LCGVU231C is printed on the type plate of the product to which the VU231C is connected.

To comply with FCC RF Exposure requirements for an uncontrolled environment, this device must be installed and operated to assure a minimum separation distance of at least 20 cm.

## 2.3 Canada

### Canada CNR-Gen Section 8.4

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not interfere, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with ISED RF Exposure requirements for an uncontrolled environment, this device must be installed and operated to assure a minimum separation distance of at least 20 cm.

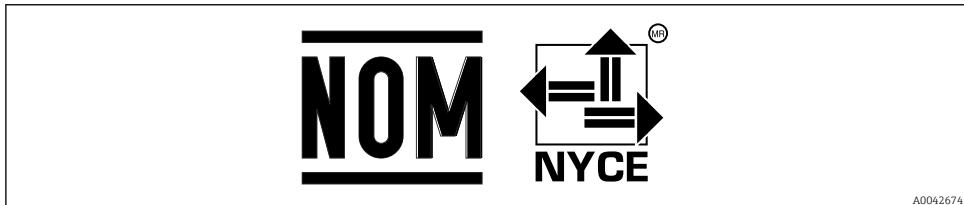
The type plate of the VU231C is not visible from the outside when plugged onto a device, but is only visible during installation. Therefore, Contains IC: 2519A-VU231C is printed on the type plate of the product to which the VU231C is connected.

## 2.3 Mexico

### IFETEL notice

La operación de este equipo está sujeta a las siguientes dos condiciones:

- (1) es posible que este equipo o dispositivo no cause interferencia perjudicial
- (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada



## 2.4 Japan

Japanese Radio Law and Japanese Telecommunications Business Law Compliance.

This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).

This device should not be modified (otherwise the granted designation number will become invalid).

## 2.5 Taiwan

根據 NCC 低功率電波輻射性電機管理辦法規定：

第十二條經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻

率、加大功率或變更原設計之特性及功能。

第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立

即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

廠牌 Endress+Hauser

產品型號 VU231C

產地德國

製造商 Endress+Hauser SE+Co.KG

## 2.6 Thailand



เครื่องวิทยุคมนาคมนี้ ได้รับยกเว้น ไม่ต้องได้รับใบอนุญาตให้มี ใช้ซึ่งเครื่องวิทยุคมนาคม หรือตั้งสถานีวิทยุคมนาคมตามประกาศ กสทช. เรื่อง เครื่องวิทยุคมนาคม และสถานีวิทยุ คมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาต วิทยุคมนาคมตามพระราชบัญญัติวิทยุคมนาคม พ.ศ. 2498



**กสทช.** | โทรคมนาคม  
กำกับดูแลเพื่อประชาชน  
Call Center 1200 (โทรฟรี)

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## 2.7 Singapore

Complies with  
IDMA Standards  
DA108204

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## 2.8 Malaysia



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## 2.9 Indonesia

Cert. ID: xxxx/SDPPI/xxx

PLG ID: xxxx



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## 2.10 Brazil



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XXXXX-XX-XXXXX

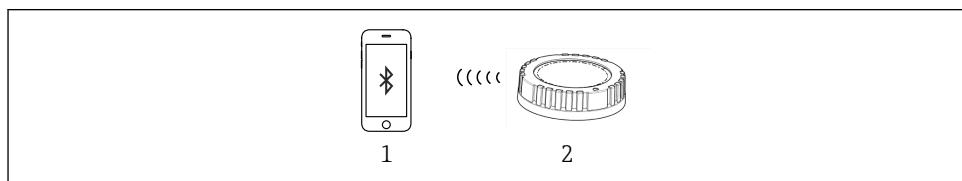
Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

## 2.11 Other countries

Other national approvals are available on request.

# 3 Operation options

## 3.1 Access via Bluetooth® wireless technology



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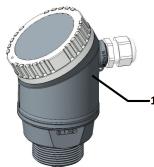
### 1 Remote operation via Bluetooth® wireless technology

1 Smartphone or tablet with SmartBlue (App)

2 Display with optional Bluetooth function

## 3.2 Preparation

The serial number of the device serves as the initial password when the connection is established for the first time. The serial number can be found on the nameplate.



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1 *Nameplate*

### 3.3 Technical data

- Maximum free-field range 50 m (165 ft)
- Operation radius with intervisibility: 10 m (33 ft) around the device
- Supply voltage: 3.2 V<sub>DC</sub> with max. 3.4 V<sub>DC</sub> and min. 3.1 V<sub>DC</sub>
- Power consumption: max.17 mW
- Current consumption: 5 mA
- Pollution degree: 2
- Temperature range: -40 to +85 °C (-40 to +185 °F)
- Relative humidity: operation up to 100 % in the measuring devices  
Do not open in a condensing environment!
- Suitable for wet environments, integrated in measuring devices

## 4 Commissioning

### 4.1 Requirements

#### Device requirements

Commissioning via SmartBlue is only possible if a VU231C Bluetooth® display is installed.

#### System requirements

SmartBlue is available as a download from the Google Play Store for Android devices and from the iTunes Store for iOS devices

- iOS devices: iPhone 5S or higher from iOS11; iPad 5th Generation or higher from iOS11;  
iPod Touch 6th Generation or higher from iOS11
- Devices with Android: from Android 6.0 and Bluetooth® 4.0

### Initial password

- The serial number of the device (on the nameplate) serves as the initial password when the connection is established for the first time.
- If the main electronics module of the device is a spare part, the initial password is the ID number of the Bluetooth display.  
The ID number is located on the rear of the display beside the Bluetooth logo.

#### Please note the following:

If the Bluetooth display is removed from one device and installed in another device.

- All the log-in data are only saved in the Bluetooth display and not in the device
- The password changed by the user is also saved in the Bluetooth display
- The Bluetooth and/or background lighting function can depend on the supply voltage to the device. For details on the supply voltage range, **see the Operating Instructions for the entire device.**

## 4.2 SmartBlue app

1. Scan the QR code or enter "SmartBlue" in the search field of the App Store.



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 2 *Download link*

2. Start SmartBlue.
3. Select device from livelist displayed.
4. Enter the login data:
  - ↳ User name: admin
  - Password: Serial number of the device or ID number of the Bluetooth display
5. Tap the icons for more information.

After logging in for the first time, change the password!



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

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