

Bluetooth Dongle

A 1436

Instruction manual

Version 1.0, Code no. 20 752 109

METREL®

Distributor:

Manufacturer:

METREL d.d.
Ljubljanska cesta 77
1354 Horjul
Slovenia
web site: http://www.metrel.si
e-mail: metrel@metrel.si

CE Mark on your equipment certifies that this equipment meets the requirements of the EU (European Union) concerning safety and electromagnetic compatibility regulations

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1 Preface

Congratulations on your purchase of the Bluetooth Dongle from METREL. This accessory was designed on a basis of rich experience, acquired through many years of dealing with handheld measuring instruments.

Bluetooth Dongle is a professional device which allows wireless communication between measuring instrument and the PCs or laptops with Bluetooth communication interface installed and between measuring instrument and Android mobile devices.

The operation of the Bluetooth Dongle is designed to be as simple and clear as possible and no special training (except for reading this instruction manual and measuring instrument's manual) are required in order to begin using the accessory.

2 Safety and operational considerations

2.1 Warnings and notes

In order to maintain the highest level of operator safety while carrying out various tests and measurements, METREL recommends keeping your instruments and accessories in good condition and undamaged. When using the instrument and accessories, consider the following general warnings:

General warnings:

- **If the test equipment is used in a manner not specified in test equipment's Instruction manuals, the protection provided by the equipment could be impaired!**
- **Do not use the Bluetooth Dongle if any damage is noticed!**
- **Repair of the Bluetooth Dongle is only allowed to be carried out by competent authorized personnel!**
- **Use only with Metrel Bluetooth approved measuring instruments.**

Notes:

- Metal objects should be kept at least 5 cm away from the dongle in order for the antenna to work efficiently.
- Good signal strength should be ensured for reliable communication between Bluetooth devices. Avoid obstacles and keep the distance within the Bluetooth module range.

3 Bluetooth dongle description

3.1 Front side

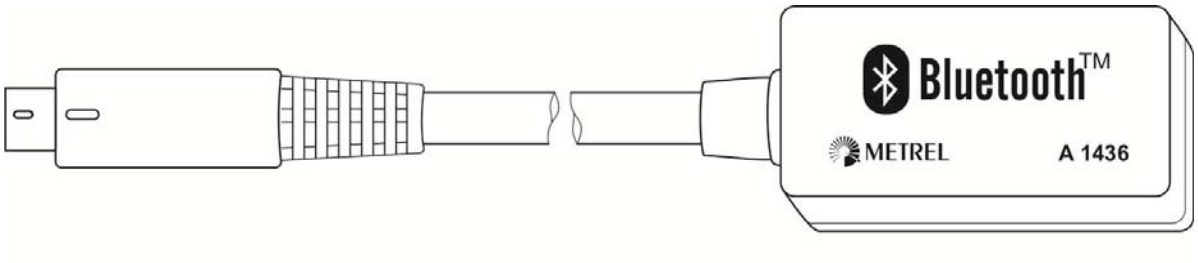


Figure 3.1: Front side

3.2 Back side

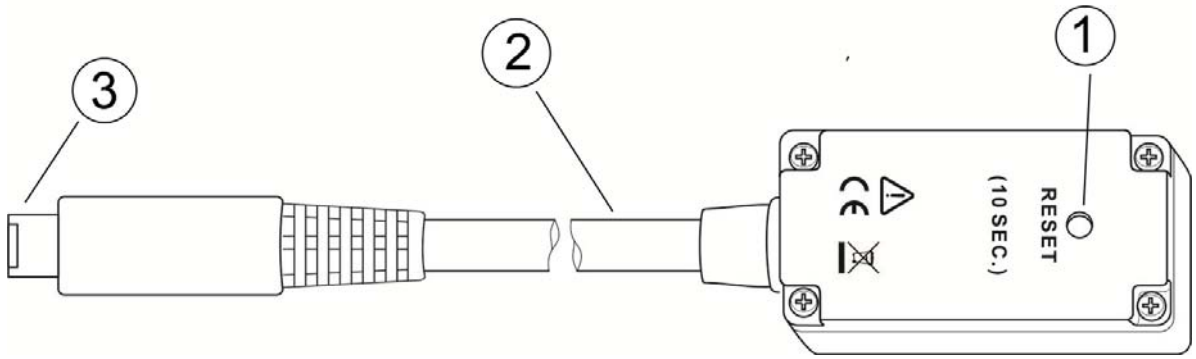


Figure 3.2: Back side

Legend:

1	**Reset key**	Resets the Bluetooth dongle.
2	**Connection cable**	Low voltage communication cable.
3	**PS/2 connector**	For connection to the instrument's PS/2 connector.

3.3 PS/2 Connector pinout

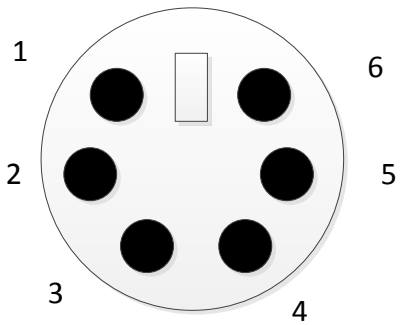


Figure 3.3: PS/2 Connector pinout

Legend:

1		Not connected.
2	**GND**	Power and Communication Ground.
3	**RX**	Instrument transmit / Dongle receive (RS-232).
4		Not connected.
5	**TX**	Instrument receive / Dongle transmit (RS-232).
6	**+ 5V**	+5V power supply.

3.4 Using with the instrument

Please refer to “Instruction manual” of your particular measuring instrument, in order to see how to properly use A 1436 Bluetooth dongle.

3.5 Standard set A 1436

- Bluetooth Dongle A 1436
- CD with instruction manual

4 Bluetooth Dongle operation

4.1 Bluetooth Dongle initialization procedure

The Bluetooth Dongle A 1436 should be initialized when it is used with the instrument for the first time. During initialization the instrument sets the dongle parameters and name in order to communicate properly with PC and other devices via Bluetooth.
Typically initialization is performed from instrument Menu: Settings → Communication menu. Some instruments can have different Menu structure, please refer to your instrument Instruction manual for details.

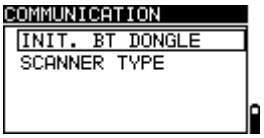


Figure 4.1: Menu for Bluetooth Dongle initialization

1. Connect Bluetooth Dongle A 1436 to the instrument.
2. Press **RESET key** on the Bluetooth dongle A 1436 for **at least 5 seconds.**
3. Select ***INIT. BT DONGLE*** in ***Communication menu*** and press the **TEST key**.
4. Wait for confirmation message and beep. Following message is displayed if dongle was initialized properly: **EXTERNAL BT DONGLE SEARCHING OK!**

4.2 Bluetooth communication

How to configure a Bluetooth link between instrument and PC

For Bluetooth communication with PC a Standard Serial Port over Bluetooth link for Bluetooth Dongle A 1436 must be configured first.

1. Switch Off and On the instrument.
2. Be sure that the Bluetooth Dongle A 1436 is properly initialized. If not the Bluetooth dongle must be initialized as described in chapter *4.1Bluetooth Dongle initialization* procedure*.*
3. On PC configure a Standard Serial Port to enable communication over Bluetooth link between instrument and PC. No code for pairing the devices is needed.
4. Run the *EurolinkPRO* program*.*
5. The PC and the instrument will automatically recognize each other.
6. The instrument is prepared to communicate with the PC.

Notes:

- Sometimes there will be a demand from the PC or Android device to enter the code. Enter code ‘NNNN’ to correctly configure the Bluetooth link.
- The name of a correctly configured Bluetooth device must consist of the instrument type plus serial number, eg. *MI 3108-12240429D*. If the Bluetooth dongle got another name, the configuration must be repeated.

4.3 Pairing Bluetooth Dongle with Android mobile device

In order to upload/download instrument data to Android mobile device, use one of Metrel Android application. Those applications can be obtained from Google Play market. Please refer to particular application user manual for detailed instruction how to install and use it. In following example Bluetooth Dongle connection with “Eurolink Android” application is shown.

Before use, we need to pair the Android device with the instrument, as described of workflow bellow:

1. Connect Bluetooth dongle to the instrument
2. Turn on your instrument
3. Start Eurolink Android application.
4. Go to: Settings menu → Activated Devices → (Pick a Bluetooth device)*
5. Select Metrel Bluetooth device
6. Enter password which you get together with Instrument, Bluetooth dongle or from your distributor.
7. Instrument and Android device should be paired and ready for use.

* Note that all paired Bluetooth devices are listed, even if they are not visible right now. Non-paired devices will slowly appear on the display usually after 10 seconds.

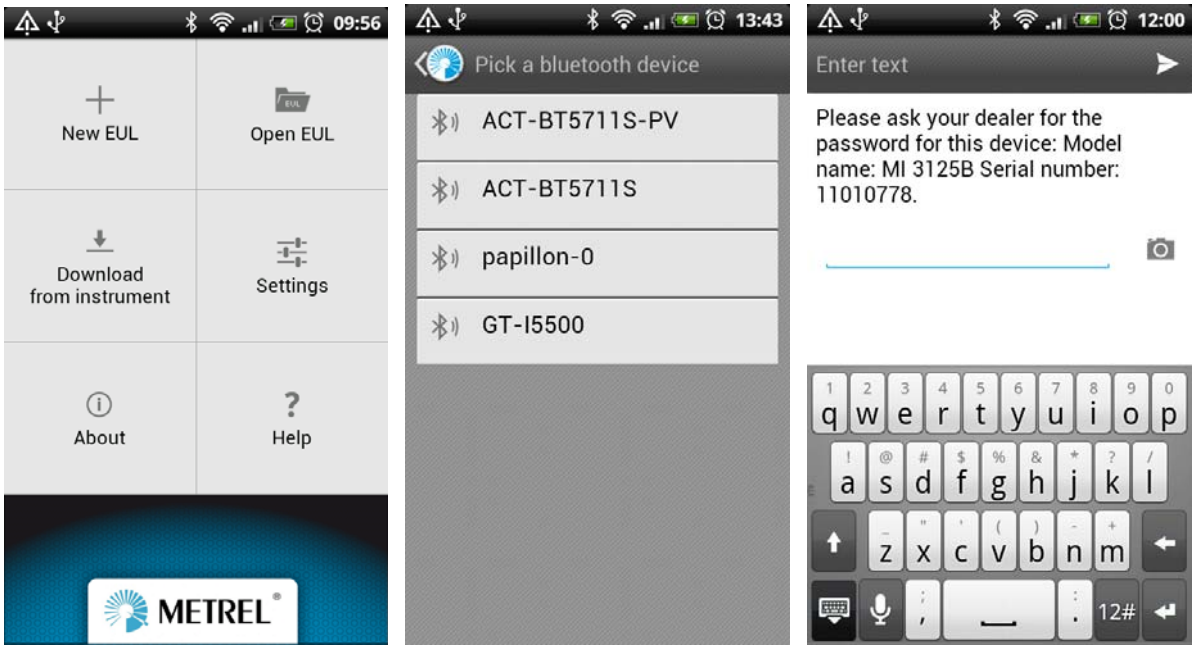


Figure 4.2: Eurolink Android screens related to Bluetooth dongle initialisation

5 Maintenance

Unauthorized persons are not allowed to open the Bluetooth Dongle. There are no user replaceable components inside.

5.1 Cleaning

No special maintenance is required for the housing. To clean the surface of the Bluetooth Dongle use a soft cloth slightly moistened with soapy water or alcohol. Then leave it to dry totally before use.

Warnings:

- **Do not use liquids based on petrol or hydrocarbons!**
- **Do not spill cleaning liquid over the Bluetooth Dongle!**

5.2 Service

For repairs under warranty, or at any other time, please contact your distributor.

6 Technical specifications

Module type:	Class II,
Supported BT standard:	Ver. 2.1, EDR compliant
Bluetooth® SIG certificate No.:	B016983
Antenna:	Printed PCB antenna*
Receiver sensitivity (0,1 % BER):	-83 dBm
Transmitter output power:	2dBm typical, 4dBm maximal
Max. distance range	~10 m
Frequency bands:	2.402 GHz 2.441 GHz 2.480 GHz
Supported BT protocols:	SPP
Supported baud rates	9600, 19200, 38400, 57600, 115200
Power supply current (receive mode):	max. 10mA
Power supply current (transmit mode):	max. 60mA
Operating temperature:	-20 ÷ 75 ^{0}C
Storage temperature:	-40 ÷ 150 ^{0}C
Power supply Voltage:	+3.3V ± 10%
Dimensions (w × h × d):	2.1 cm × 14.5 cm × 1.4 cm
Weight:	20 g

Metal objects should be kept at least 5 cm away from the dongle in order for the antenna to work efficiently.

6.1 Supported instruments

Please contact your local distributor or Metrel for completed list of instruments which supports Bluetooth communication interface.

6.2 Supported Android devices

Metrel Bluetooth dongle shuld be able to pair with any Android device which has embedded Bluetooth radio version 2.1 and higher. Please contact Metrel or local distributor if you have an issue with Bluetooth protocol.

6.3 Supported PCs with embedded Bluetooth radio and Bluetooth dongles

Metrel Bluetooth dongle shuld be able to pair with any PC with Bluetooth radio version 2.1 and higher. Please contact Metrel or local distributor if you have an issue with Bluetooth protocol.