

testo · Smart Probes

Instruction manual



1 Contents

1	Con	itents	3
2	Safe	ety and the environment	5
		About this document	
	2.2.	Ensure safety	6
		2.2.1. Safety and the testo 510i/605i	6
		2.2.2. Safety and the testo 549i	
	2.3.	Protecting the environment	
3		cifications	
4	Pro	duct description	8
		Overview of Smart Probes	
	4.2.	LED status	8
5	Firs	t steps	9
		Switching on/off	
		5.1.1. Switching on	9
	5 0	5.1.2. Switching off	
		Establishing Bluetooth® connection	
		Transmitting readings	
6	Usir	ng the App	11
	6.1.	Overview of operating controls	11
	6.2.	App options	11
		6.2.1. Set "Language"	11
		6.2.2. Display Tutorial	
		6.2.4. Display testo website	
		6.2.5. Display App Info	
	6.3.	1 1	
		6.3.1. Selecting the application menu	
		6.3.3. Displaying information about an application	13
	6.4.	p	
	6.5.	List, graphic diagram and table view	13
	6.6.	Settings view	14

	6.7.	Retaining readings	14
	6.8.	Exporting readings	14
		6.8.1. Excel (CSV) Export	
		6.8.2. PDF Export	
		6.8.3. Exporting a graph	15
7	Maiı	ntaining the product	16
	7.1.	Maintaining Smart Probes	16
	7.2.	Smart Probes App	16
8	Tips	and assistance	17
	_	Questions and answers	
		Accessories and spare parts	
9	Tec	hnical data	18
	9.1.	Bluetooth module	18
	9.2.	General technical data	18
		9.2.1. testo 905i	18
		9.2.2. testo 410i	
		9.2.3. testo 405i	
		9.2.4. testo 549i	
		9.2.6. testo 605i	
		9.2.7. testo 510i	
		9.2.8. testo 115i	
10	Cert	tifications	25

2 Safety and the environment

2.1. About this document

Use

- Please read this documentation through carefully and familiarize yourself with the product before putting it to use. Pay particular attention to the safety instructions and warning advice in order to prevent injuries and damage to the products.
- > Keep this document to hand so that you can refer to it when necessary.
- > Hand this documentation on to any subsequent users of the product.

Symbols and writing standards

Representation	Explanation
$\overline{\triangle}$	Warning advice, risk level according to the signal word:
	Warning! Serious physical injury may occur.
	Caution! Slight physical injury or damage to the equipment may occur.
	Implement the specified precautionary measures.
i	Note: Basic or further information.
1 2	Action: more steps, the sequence must be followed.
>	Action: a step or an optional step.
	Result of an action.
Menu	Elements of the instrument, the instrument display or the program interface.
[OK]	Control keys of the instrument or buttons of the program interface.
	Functions/paths within a menu.
""	Example entries

2.2. Ensure safety

- > Do not operate the instrument if there are signs of damage at the housing, mains unit or feed lines.
- > Do not perform contact measurements on non-insulated, live parts.
- > Do not store the product together with solvents. Do not use any desiccants.
- Carry out only the maintenance and repair work on this instrument that is described in the documentation. Follow the prescribed steps exactly. Use only original spare parts from Testo.
- > Dangers may also arise from the systems being measured or the measuring environment: Note the safety regulations valid in your area when performing the measurements.

2.2.1. Safety and the testo 510i/605i

- Magnetic field
- May be harmful to those with pacemakers.
- > Keep a minimum distance of 10 cm between pacemaker and instrument.

2.2.2. Safety and the testo 605i

- Not for condensing atmospheres. For continuous application in high humidity (> 80 %RH at ≤ 30 °C for > 12 h, > 60 %RH at > 30 °C for > 12 h), contact us via www.testo.com.
- The sensor must not be exposed to volatile chemicals such as solvents (e.g. ketene, ethanol, isopropyl alcohol, toluene) or organic compounds, especially in high concentrations and corresponding gases, over a prolonged period of time.

2.2.3. Safety and the testo 549i

- Risk of injury due to pressurized, hot, cold or toxic refrigerants/media!
- > Only to be used by qualified staff.
- > Wear protective goggles and safety gloves.
- > Before applying pressure to the measuring instrument: always fix the instrument tightly onto the pressure connection
- > Comply with the permissible measuring range (0 to 60 bar). Pay particular attention to this in systems with R744 refrigerant, since these are frequently operated at higher pressures!

2.2.4. Safety and the testo 805i

- Laser radiation! Class 2 laser
- > Do not look into the laser beam!

2.3. Protecting the environment

- Dispose of faulty rechargeable batteries/spent batteries in accordance with the valid legal specifications.
- At the end of its useful life, send the product to the separate collection for electric and electronic devices (observe local regulations) or return the product to Testo for disposal.

3 Specifications

Testo Smart Probes are different hand-held measuring instruments for various applications that communicate with your mobile terminal devices by means of an app. The respective Smart Probe performs the measurement and is operated by your mobile terminal device. The various Smart Probes allow you to measure the temperature, humidity, flow, and volume flow at the outlet, or perform pressure, differential pressure, and non-contact temperature measurements in the duct.

4 Product description

4.1. Overview of Smart Probes



- 1 Measuring unit
- 2 LED
- 3 Key
- 4 Battery compartment (at the back)
- 5 Direction of flow testo 405i / testo 410i (not shown) (An arrow on the top of the housing displays the direction of flow in which the measuring instrument has been calibrated and which achieves the best measurement results. Please note the direction of flow during usage.)

4.2. LED status

LED status	Meaning
Flashing red	Low battery status
Flashing yellow	 Smart Probe is switched on. Smart Probe is searching for a BT connection, but is not connected.
Flashing green	Smart Probe is switched on.Bluetooth is connected.

8

5 First steps

5.1. Switching on/off



5.1.1. Switching on

- 1. Pull the film out of the battery compartment.
- 2. Press the button on your Smart Probe.
- The Smart Probe switches on.

5.1.2. Switching off

- 1. Press and hold the button on your Smart Probe.
- The Smart Probe switches off.

5.2. Establishing Bluetooth® connection

You need a tablet or smartphone with the testo Smart Probes App already installed on it to be able to establish a Bluetooth connection.

You can get the App for iOS instruments in the App Store or for Android instruments in the Play Store.

Compatibility:

- requires iOS 8.3 or later/Android 4.3 or later
- requires Bluetooth 4.0
- Tested with the following smartphones/tablets: www.testo-international.com/de/smartprobesmanuals/
 - √ The testo App Smart Probe is installed on your terminal device and ready for use.
 - 1. Press the button on the Smart Probe.
 - The Smart Probe switches on.

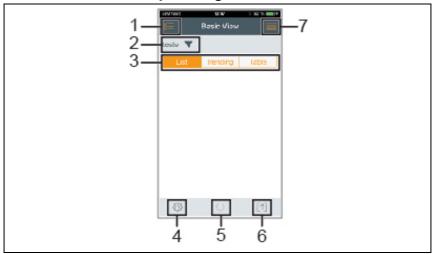
- The LED flashes yellow while connecting via Bluetooth and then flashes green once the connection is established.
- The connection between the Smart Probe and your mobile terminal device is established.

5.3. Transmitting readings

- √ The Smart Probe is switched on and connected to your mobile terminal device via Bluetooth.
- The current readings are automatically displayed in the App.

6 Using the App

6.1. Overview of operating controls



- 1 Choice of applications.
- 2 testo V Display of connected Smart Probes.
- 3 Switch between the views (list, graphic diagram, table)
- 4 Measurement settings. (The menu changes depending on the Smart Probe connected and the application selected)
- 5 Restarts the measuring value recording in graph and table format.
- 6 Export the readings.
- 7 Options menu

6.2. App options

6.2.1. Set "Language"

- 1. Tap -> Settings -> Language.
- A selection list is displayed.
- 2. Tap the required language.
- The selected language receives a green check mark.
- 3. Tap ◀ several times until the measurement view is displayed.
- The language has been changed.

6.2.2. Display Tutorial

The **Tutorial** guides you through the first steps when operating the testo Smart Probes App.

- 1. Tap = -> Tutorial
- The **Tutorial** is displayed. In **Tutorial**, swipe to display the next page.
- 2. Tap X to close the Tutorial.

6.2.3. Show help

An internet connection is required to display the testo website.

- 1. Tap = -> Help
- The page Fehler! Linkreferenz ungültig. is displayed.

6.2.4. Display testo website

An internet connection is required to display the testo website.

- 1. Tap -> About/Link -> Testo
- The page Fehler! Linkreferenz ungültig. is displayed.

6.2.5. Display App Info

In App Info you can find the version number of the installed App.

- 1. Tap -> About/Link -> Info
- The App's version number is displayed, as well as the ID.
- 2. Tap ◀ several times until the measurement view is displayed.

6.3. Application menus

6.3.1. Selecting the application menu

- Press
- A selection of menus for various applications is displayed.
- 2. Select the required application.
- The selection disappears and your selected application is displayed.

6.3.2. Setting favourites

- 1. Press
- A selection of applications is displayed.
- 2. Press next to the application that you would like to designate as a favourite.
- The asterisk is displayed in orange

 , and the selected application is listed under Show Favorites.

6.3.3. Displaying information about an application

- 1. Press
- A selection of applications is displayed.
- 2. Press 1.
- The information about an application is displayed.

6.4. Displaying Smart Probe details

- One or more Smart Probes are connected to your mobile terminal device via Bluetooth.
- 1. Press testo ▼
- All connected Smart Probes are displayed in this list.
- Select the Smart Probe to display the details you would like to see.
- A list appears with the details for the Smart Probe.
- 3. Press Close to exit the detailed view.

6.5. List, graphic diagram and table view

The available readings can be displayed in different ways in the various views.

- List view
 Displays the readings transmitted by the Smart Probe in the form of a list. Readings from all connected Smart Probes are displayed here.
- Graphic diagram view
 The graphical progression of up to four different readings can be displayed. Tap on a reading above the diagram to select the readings to be displayed.

Table view
In the Table view, all readings are displayed in sequence according to date and time. The different readings from the individual Smart Probes can be selected by pressing ◀ ▶.

6.6. Settings view

- 1. Press and select Edit View.
- An overview of all Smart Probes and their measurement parameters is displayed.
- Move the required reading up or down to the position it should be.
- Press to hide a Smart Probe reading.
- Press ▼ to select the unit for a reading.
- Press OK to confirm your settings

6.7. Retaining readings

Readings are retained in the "List" view; in the "Trend" and "Table" view, the current readings are still displayed.

- The Smart Probe is switched on, connected to your mobile terminal device via Bluetooth, and readings are transmitted.
- 1. Press the button on your Smart Probe.
- The current reading is retained.
- 2. Press the key again.
- The instrument again displays the current readings.

6.8. Exporting readings

6.8.1. Excel (CSV) Export

- 1. Press 1.
- A selection of export options appears.
- 2. Press Export Excel (CSV).
- A list of readings is displayed.
- 3. Press 1
- A selection of sending/export options appears.
- 4. Select your required sending/export options.

6.8.2. PDF Export

- 1. Press [1]
- A selection of export options appears.
- 2. Press Export PDF.
- A PDF is created and saved on your mobile terminal device (Android only) or sent via e-mail (iOS and Android).
- 3. Press Done to exit the detailed view.

6.8.3. Exporting a graph

- 1. Press 1.
- A selection of export options appears.
- 2. Press Export Graph.
- An image file of the trend display is created.
- 3. Press 1.
- A selection of sending/export options is displayed.
- 4. Tap on the sending/export option you need.

7 Maintaining the product

7.1. Maintaining Smart Probes

Cleaning the instrument

- > Do not use any aggressive cleaning agents or solvents!
- > Mild household cleaning agents or soap suds may be used.
- > If the housing of the instrument is dirty, clean it with a damp cloth.

Keeping connections clean

> Keep connections clean and free of grease and other deposits, clean with a damp cloth as required.

Ensuring measuring accuracy

- > Testo Customer Service would be glad to further assist you if you so wish.
- > Keep within the permissible measuring range!
- > Calibrate instrument regularly (recommendation: once a year).

7.2. Smart Probes App

The testo Smart Probes App is kept updated via the Play Store for Android devices and the App Store for iOS devices. Please update the App as soon as a new update is available. We therefore recommend that you do not disable automatic notifications when new updates are available.

8 Tips and assistance

8.1. Questions and answers

Question	Answer
LED flashes red	Batteries are almost spent.Change batteries.
The instrument switches itself off	Remaining battery capacity insufficient > Change the batteries.
lights up instead of the measurement parameter display	 Outside the permissible measuring range. Keep within the permissible measuring range. Sensor is defective
	> Contact your testo Service department.
The App cannot be found in the store	 No correct search terms were entered. Enter an unambiguous search term, e.g.: "testo Smart Probes" or use the link on the testo website.
	Your mobile terminal device does not meet the technical requirements (iOS 8.3 or later, Android 4.3 or later / Bluetooth 4.0 (Low Energy)) Please check the technical data for your mobile terminal device

8.2. Accessories and spare parts

Designation	Item number
testo Smart Case (Refrigeration) for storing and transporting 2 × testo 115i and 2 × testo 549i, dimensions 250 × 180 × 70 mm	0516 0240
testo Smart Case (Heating) for storing and transporting testo 115i, testo 410i, testo 510i, testo 549i and testo 805i, dimensions 250 × 180 × 70 mm	0516 0270
testo Smart Case (VAC) for storing and transporting testo 405i, testo 410i, testo 510i, testo 605i testo 805i and testo 905i, dimensions 270 × 190 × 60 mm	0516 0250

9 Technical data

9.1. Bluetooth module

The use of the wireless module is subject to the regulations and stipulations of the respective country of use, and the module may only be used in each case in countries for which a country certification has been granted.

The user and every owner undertake to adhere to these regulations and prerequisites for use, and acknowledge that the re-sale, export, import, etc. in particular in, to or from countries without wireless permits, is their responsibility.

9.2. General technical data

All accuracy specifications apply at a nominal temperature of 22 °C.

9.2.1. testo 905i

Feature	Values
Measuring range	-50 to 150 °C / -58 to 302 °F
Accuracy ± 1 digit	± 1 °C / ± 1.8 °F
Resolution	0.1 °C / 0.1 °F
Measurement rate	1/sec
Available units of measurement	°C, °F
Storage temperature	-20 °C to 60 °C / -4 to 140 °F
Operating temperature	-20 °C to +50 °C / -4 to 122 °F
Battery type	3 micro batteries AAA
Battery life	150 h
Dimensions	222 mm × 30 mm × 24 mm Probe shaft length 100 mm Probe shaft diameter 4 mm
Directives, standards and tests	EU guideline: 2014/30/EU

9.2.2. testo 410i

Feature	Values
Measuring range	0.4 to 30 m/s / 80 to 5,900 fpm -20 to 60 °C / -4 to 140 °F
Accuracy ± 1 digit	± (0.2 m/s + 2% of m.v.) (0.4 to 20 m/s) ± (40 fpm + 2% of m.v.) (80 to 4,000 fpm) ± 0.5 °C / ±0.9 °F
Resolution	0.1 °C / 0.1 °F 0.1 m/s / 1 fpm
Measurement rate	1/sec
Available units of measurement	°C, °F, m/s, fpm, m³/h, cfm, l/s
Storage temperature	-20 °C to 60 °C / -4 to 140 °F
Operating temperature	-20 °C to +50 °C / -4 to 122 °F
Battery type	3 micro batteries AAA
Battery life	130 h
Dimensions	154 mm × 43 mm × 21 mm 30 mm vane diameter
Directives, standards and tests	EU guideline: 2014/30/EU

9.2.3. testo 405i

Feature	Values
Measuring range ¹	0 to 30 m/s / 0 to 5,900 fpm -20 to 60 °C / -4 to 140 °F
Accuracy ± 1 digit	± (0.1 m/s + 5% of m.v.) (0 to +2 m/s) ± (0.3 m/s + 5% of m.v.) (2 to +15 m/s) ± (20 fpm + 5% of m.v.) (0 to +394 fpm) ± (59 fpm + 5% of m.v.) (394 to +3.000 fpm) ± 0.5 °C / ±0.9 °F

_

 $^{^{1}}$ Please switch on the Smart Probe in the following ambient conditions: > 10 °C, air velocity 0 m/s = protective cap closed to enable the sensor to heat up.

Feature	Values
Resolution	0.01 m/s / 1 fpm
	0.1 °C / 0.1 °F
Measurement rate	1/sec
Available units of measurement	°C, °F, m/s, fpm, m³/h, cfm, l/s
Storage temperature	-20 °C to 60 °C / -4 to 140 °F
Operating temperature	-20 °C to +50 °C / -4 to 122 °F
Battery type	3 micro batteries AAA
Battery life	15 hrs
Dimensions	200 mm × 30 mm × 41 mm
	Extendible telescope 400 mm
	Probe shaft diameter 12 mm
	Probe tip diameter 9 mm
Directives, standards and tests	EU guideline: 2014/30/EU

9.2.4. testo 549i

Feature	Values
Measuring range	0 to 60 bar (rel) / 0 to 870 psi (rel)
Overpressure	65 bar
Accuracy ± 1 digit	0.5% of full scale value
Resolution	0.01 bar / 0.1 psi
Measurement rate	2/sec
Available units of measurement	bar, psi, MPa, kPa
Connection	1× 7/16" UNF / 1/4" SAE connection
Overload rel.	65 bar
Storage temperature	-20 °C to 60 °C / -4 to 140 °F
Operating temperature	-20 °C to +50 °C / -4 to 122 °F
Battery type	3 micro batteries AAA
Battery life	130 hrs
Measurable media	CFC, HFC, HCFC, N, H20, CO2
Dimensions	152 mm x 35 mm x 35 mm

Feature	Values
Directives, standards and tests	EU guideline: 2014/30/EU

9.2.5. testo 805i

Feature	Values -30 °C to 250 °C / -22 to 482 °F	
Measuring range		
Accuracy ± 1 digit	± 1.5 °C or ± 1.5% of m.v. (0 to 250 °C)	
	± 2.0 °C (-20.0 to -0.1 °C)	
	± 2.5 °C (-30.0 to -20.1 °C)	
	± 2.7 °F or ± 1.5% of m.v. (32 to 482 °F)	
	± 3.6 °F (-4 to 32 °F)	
	± 4.5 °F (-22 to -4 °F)	
Resolution	0.1 °C / 0.1 °F	
Measurement rate	2/sec	
Available units of	°C, °F	
measurement		
Connection	7/16" – UNF	
Storage temperature	-20 °C to 60 °C / -4 to 140 °F	
Operating temperature	-10 °C to +50 °C / 14 to 122 °F	
Battery type	3 micro batteries AAA	
Battery life	30 hrs	
Optics	10:1	
Laser marking	Diffraction lens as laser marking (laser circle)	
Dimensions	140 mm × 36 mm × 25 mm	
Emission level	Adjustable from 0.1 to 1.0	
Directives, standards and tests	EU guideline: 2014/30/EU	

9.2.6. testo 605i

Feature	Values	
Measuring range	-20 to 60 °C, -4 to 140 °F, 0 to 100% RH	
Accuracy ± 1 digit	±0.8 °C (-20 0 °C) / ±1.44 °F (-4 32 °F) ±0.5 °C (0 +60 °C) / ±0.9 °F (32 140 °F) ± 3.0 %RH (10%RH35%RH)	
	± 2.0 %RH (35%RH65%RH)	
	± 3.0 %RH (65%RH90%RH)	
	± 5.0 %RH (<10%RH or >90%RH)	
	@ 25°C ±1°C	
	Hysteresis: ± 1.0 %RH	
	Long term stability/year :± 1.0 %RH/year	
Resolution	0.1 °F / 0.1 °C 0.1% RH	
Measurement rate	1/sec	
Available units of measurement	°C, °F, %RH, °Ctd, °Ftd, wetbulb °C, wetbulb °F	
Storage temperature	-20 °C to 60 °C / -4 to 140 °F	
Operating temperature	-20 °C to +50 °C / -4 to 122 °F	
Battery type	3 micro batteries AAA	
Battery life	150 h	
Dimensions	218 mm × 30 mm × 27 mm Probe shaft length 90 mm	
Directives, standards and tests	EU guideline: 2014/30/EU	

9.2.7. testo 510i

Feature	Values	
Measuring range	-150 150 hPa / 60 in wc	

	T	
Feature	Values	
Accuracy ± 1 digit	± 0.05 hPa (0 to 1.00 hPa) /	
	± 0.02 in wc (0 to 0.4 in wc)	
	± 0.2 hPa + 1.5% of m.v. (1.01 to 150 hPa)	
	± 0.08 in wc + 1.5% of m.v. (0.41 to 60 in wc)	
Overpressure	500 mbar	
Resolution	0.01 hPa / 0.01 inch wc	
Measurement rate	2/sec	
Available units of	mbar, hPa, Pa, mmHg, inHg, in WC, psi, mmWC	
measurement	In conjunction with Pitot tube (optional): m/s, fpm, m³/h, cfm, l/s	
Storage temperature	-20 °C to 60 °C / -4 to 140 °F	
Operating temperature	-20 °C to +50 °C / -4 to 122 °F	
Battery type	3 micro batteries AAA	
Battery life	150 hrs	
Dimensions	148 × 36 × 23 mm	
Directives, standards and tests	EU guideline: 2014/30/EU	

9.2.8. testo 115i

Feature	Values	
Measuring range	-40 to 150 °C / -58 to 302 °F	
Accuracy ± 1 digit	± 1.3 °C (-20 to 85 °C)	
	± 2.34 °F (-4 to 185 °F)	
Resolution	0.1 °C / 0.1 °F	
Measurement rate	1/sec	
Available units of	°C, °F	
measurement		
Storage temperature	-20 °C to 60 °C / -4 to 140 °F	
Operating temperature	-20 °C to +50 °C / -4 to 122 °F	
Battery type	3 micro batteries AAA	
Battery life	150 h	
Dimensions	183 mm × 90 mm × 30 mm	
	max. 35 mm pipe diameter	

9 Technical data

Feature	Values
Directives, standards and tests	EU guideline: 2014/30/EU

10 Certifications

Module Lierda L Series BLE

Product	testo 115i, testo 405i, testo 410i, testo 510i, testo 549i, testo 605i, testo 805i, testo 905i		
MatNo.	0560 1115, 0560 1405, 0560 1410, 0560 1510, 0560 1549, 0560 1605, 0560 1805, 0560 1905		
Country	Comments		
Australia	E 1561		
	ANATEL Agéncia Nacional de Telecomunicações O0592-16-04701 O		
t t t t t t t t t t t t t t t t t t t	Product IC ID: testo 115i		
t	resto 115i		

25

	testo 549i CMIIT ID: 2015DP6560 testo 605i CMIIT ID: 2015DP6561 testo 805i CMIIT ID: 2015DP6562 testo 905i CMIIT ID: 2015DP6563
	The EU Declaration of Conformity can be found on the testo homepage www.testo.com under the product specific downloads.
Europa + EFTA	EU countries: Belgium (BE), Bulgaria (BG), Denmark (DK), Germany (DE), Estonia (EE), Finland (FI), France (FR), Greece (GR), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Sweden (SE), Slovakia (SK), Slovenia (SI), Spain (ES), Czech Republic (CZ), Hungary (HU), United Kingdom (GB), Republic of Cyprus (CY).
	EFTA countries: Iceland, Liechtenstein, Norway, Switzerland
Hongkong	Authorized

Japan	testo 115i
	R 204-540016
	testo 405i
	R 204-540017
	testo 410i
	R 204-540018
	testo 510i
	R 204-540019
	testo 549i
	testo 605i
	R 204-540021
	testo 905i
	R 204-540023
	see Japan Information
Korea	
	testo 115i Certification No. MSIP-CRM-Toi-115i
	testo 405i Certification No. MSIP-CRM-Toi-405i testo 410i Certification No. MSIP-CRM-Toi-410i
	testo 510i Certification No. MSIP-CRM-Toi-510i testo 549i Certification No. MSIP-CRM-Toi-549i
	testo 605i Certification No. MSIP-CRM-Toi-605i
	testo 805i Certification No. MSIP-CRM-Toi-805i testo 905i Certification No. MSIP-CRM-Toi-905i see KCC Warning
Taiwan	testo 115i NCC: CCAB16LP177FT0
	testo 405i NCC: CCAB16LP177AT3 testo 410i NCC: CCAB16LP1770T1
	testo 510i NCC: CCAB16LP177DT9 testo 549i NCC: CCAB16LP177ET1
	testo 605i NCC: CCAB16LP177BT5
	testo 805i NCC: CCAB16LP177CT7 testo 905i NCC: CCAB16LP177GT2

Turkey	Authorized	
USA	Product FCC ID: testo 115i	
Russia	Authorized	
Philippines	Authorized	
South Africa	testo 115i TA-2016/1207 testo 405i TA-2016/1201 testo 410i TA-2016/1200 testo 510i TA-2016/1199 testo 549i TA-2016/1198 testo 605i TA-2016/1204 testo 805i TA-2016/1206 testo 905i TA-2016/1205	
Bluetooth SIG List	Bluetooth®	Range 15 m (free field) (varies with the used mobile device)
	Bluetooth® type	LSD Science & Technology Co., Ltd L Series BLE Module (08 Mai 2013) based on TI CC254X chip
	Qualified Design ID	B016552
	Bluetooth® radio class	Class 3
	Bluetooth® company ID	10274

IC Warnings

This instrument complies with Part 15C of the FCC Rules and Industry Canada RSS-210 (revision 8). Commissioning is subject to the following two conditions:

- (1) This instrument must not cause any harmful interference and
- (2) this instrument must be able to cope with interference, even if this has undesirable effects on operation.

Cet appareil satisfait à la partie 15C des directives FCC et au standard Industrie Canada RSS-210 (révision 8). Sa mise en service est soumise aux deux conditions suivantes :

- (1) cet appareil ne doit causer aucune interférence dangereuse et
- (2) cet appareil doit supporter toute interférence, y compris des interférences qui provoquerait des opérations indésirables.

FCC Warnings

Information from the FCC (Federal Communications Commission)

For your own safety

Shielded cables should be used for a composite interface. This is to ensure continued protection against radio frequency interference.

FCC warning statement

This equipment has been tested and found to comply with the limits for a Class C digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cable must be used in order to comply with the emission limits.

Warning

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.

KCC Warning

해당 무선 설비는 운용 중 전파혼신 가능성이 있음

Japan Information

当該機器には電波法に基づく、技術基準適合証明等を受けた特定無線設備を装着している。

Module Lierda LSD4BT-S37

Product	testo 115i, testo 549i, testo 605i	
MatNo.	0560 2115, 0560 2549, 0560 2605	
Country	Comments	

	1		
Canada	Product IC ID:		
	testo 115i: IC: 6127B-05602115		
	testo 549i: IC: 6127B-05602549		
	testo 605i: IC: 6127B-05602605		
	see IC Warnings		
	The EU Declaration of Conformity can be found on the testo homepage www.testo.com under the		
	product specific down	nloads.	
Europa + EFTA	EU countries: Belgium (BE), Bulgaria (BG), Denmark (DK), Germany (DE), Estonia (EE), Finland (FI), France (FR), Greece (GR), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Sweden (SE), Slovakia (SK), Slovenia (SI), Spain (ES), Czech Republic (CZ), Hungary (HU), United Kingdom (GB), Republic of Cyprus (CY).		
	EFTA countries: Iceland, Liechtenstein, Norway, Switzerland		
Turkey	Authorized		
USA	testo 115i: WAF-05602115		
	testo 549i: WAF-05602549		
	testo 605i: WAF-05602605		
	see FCC Warnings		
Bluetooth*	Feature	Values	
1-6			
Information	Bluetooth® range	Open air: typical 100 m	
	radio type Bluetooth® radio class	Bluetooth® Low Energy (BLE) 4.2	
	Bluetooth® company	LSD Science & Technology Co., Ltd	
	RF Band	BT LE: 2402 – 2480MHz BT LE: 16.94dBm	
	power output [E.I.R.P]	DT LL. 10.94ubiii	

Bluetooth* SIG List	Feature	Values
	Declaration ID	D043363
	member company	Testo SE & Co. KGaA

IC Warnings

RSS-Gen & RSS-247 statement:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, 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.

Caution: Radio Frequency Radiation Exposure

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets the IC radio frequency (RF) Exposure Guidelines.

Co-Location:

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Attention : exposition au rayonnement de radiofréquences

Cet équipement est conforme aux limites d'exposition aux radiofréquences IC fixées pour un environnement non contrôlé et aux Lignes directrices relatives à l'exposition aux radiofréquences (RF).

Co-location

Ce transmetteur ne peut pas être installé en colocation ou être utilisé avec une autre antenne ou transmetteur, quel qu'en soit le type.

FCC Warnings

Information from the FCC (Federal Communications Commission)

For your own safety

Shielded cables should be used for a composite interface. This is to ensure continued protection against radio frequency interference.

FCC warning statement

This equipment has been tested and found to comply with the limits for a Class C digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cable must be used in order to comply with the emission limits.

Warning

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.

Caution: Radio Frequency Radiation Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.

Co-Location

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.



Testo SE & Co. KGaA

Testo-Straße 1, 79853 Lenzkirch

Telefon: +49 7653 681-0 Fax: +49 7653 681-100 E-Mail: info@testo.de Internet: www.testo.com