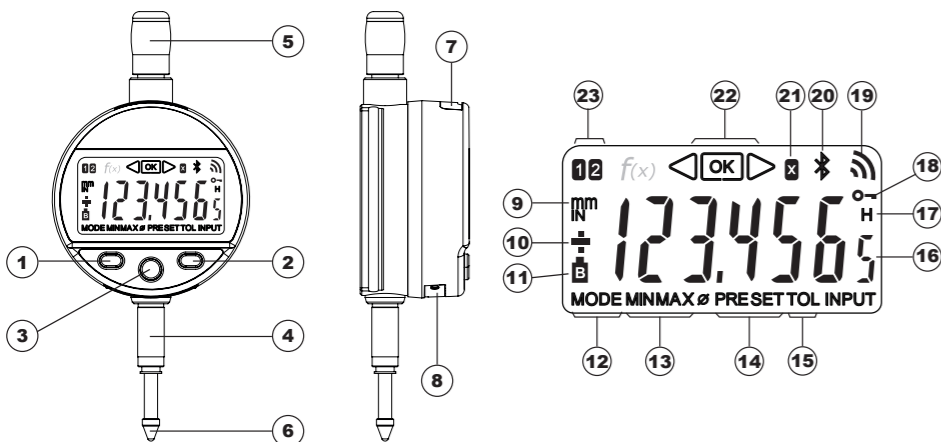


Description



1	MODE button	13	MIN/MAX/DELTA mode
2	SET button	14	Preset mode
3	“ Favourite ” button	15	Tolerance mode
4	Clamping shaft Ø8 or 3/8”	16	6-digit display
5	Lifting cap	17	Hold measured value
6	Contact point Ø2 / M2.5 or 4-48-UNF	18	Button lock
7	Slot for Proximity cable	19	Send data
8	Slot for battery	20	Bluetooth® Active
9	Measurement units (mm / INCH)	21	Multiplication factor
10	+ / - Indicator	22	Tolerance indicators
11	Low battery	23	Active reference
12	Mode menu display		

Operating Features

MODE The instrument has two operating modes: basic functions (direct access) and advanced functions. In addition to the configuration functions, 2 working reference functions can be accessed, MIN, MAX, DELTA (TIR) mode and tolerance display or input of multiplication factor.

Favourite The «favourite» button gives direct access to the function used most often.

SET Sets a Preset value, reset the MIN/MAX mode, verifies a selection, and controls switching off the instrument. By default, SIS mode enables automatic switch-off with no loss of origin.

Start/Switching On

To start, press any of the three buttons on the instrument.

Additional Information

Battery Information

• The display of the symbol indicates low battery power and battery replacement is required

To replace battery:

1. Open the battery cover using the screwdriver
2. Change the Battery (Lithium CR2032 type)
3. Check the rubber protection position
4. Close the battery cover



Maintenance

• Always keep the dial indicator in a dry environment and locked in its designated storage case when not in use. This will protect it against potential rust of metallic components

• Do not use aggressive products (alcohol, trichloroethylene or others) to clean the plastic parts

• Do not keep the dial indicator in places exposed to sun, heat or humidity

• Important : Dry the instrument thoroughly after exposure to moisture. This will guarantee correct performance and operation

For further technical information please contact Tridon Customer Service on 1300 362 263



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Specifications

Part No.	322402	322403
Measuring Range	12.5mm	12.5mm
Resolution	0.001mm	0.0001mm
Repeatability	2µm	0.5µm
Battery	Lithium battery CR2032 included	
Battery Life Avg.	8'000 hours / Bluetooth® 3'650 hours	
Consumption Avg.	73µA	
Electromagnetic compatibility	As per EN 61326-1	
Error Max. (0.1µm scale)	1.8µm	
Error Max. (10µm scale)	10µm	
Error Max. (1µm scale)	3µm	
Fixing and space envelope	Ø8h6 (3/8”), Interchangeable M2.5 (4-48-UNF) Probe (as per DIN 878)	
IP rating	IP51	
Measurement Unit	Metric/Imperial (Inch)	
Measurements/Sec	10/Sec MIN/MAX Mode: 20/Sec	
Measuring Force (Standard)	0.65 - 0.90	
Power	1 x 3V lithium battery, type CR2032, 220mAh	
Preset Max. (0.01µm scale)	±9999.99 mm / ±399.9995 IN	
Preset Max. (0.1µm scale)	±99.9999 mm / ±3.999995 IN	
Preset Max. (1µm scale)	±999.999 mm / ±39.99995 IN	
Speed of Travel (Maximum)	1.7m/s	
Standard Functions (customised by PC)	mm/inch, ref I/II, preset (max 999.999) min/max/delta, tolerances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock	
Weight	119g	
Working temperature (storage)	+5 to +40°C (-10 to +60°C)	

Bluetooth® Specifications

Autonomy

Continuous: Up to 2 months (Always connected with 4 values/Sec)

Saver: Up to 5 months (The instrument sends value only when the position has changed)

Blind/Push: Up to 7 months (Value is sent from the instrument (button) or requested from the computer)

Latency	<6ms
Radio Frequency	2.4Ghz
Range	Up to 15m (depending on the environment)
Robustness	FHSS



Bluetooth® Digital Dial Indicators User Guide

322402: 0.001 x 12.5mm

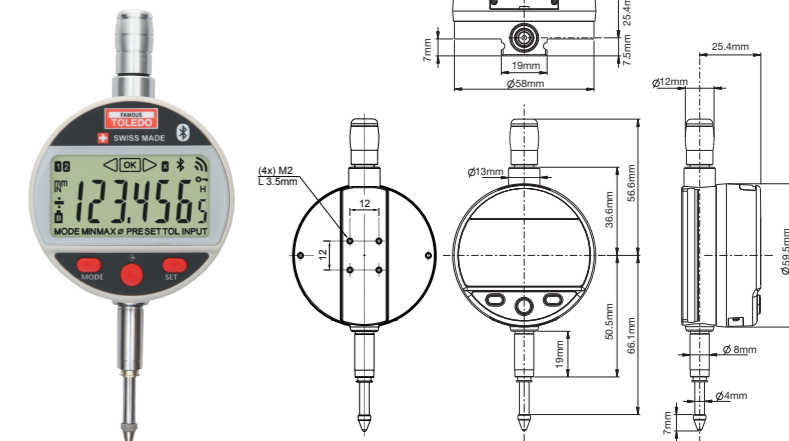
322403: 0.0001 x 12.5mm

Congratulations on your purchase of this Toledo Bluetooth® Dial Indicator. This precision instrument features the most modern technology including in-built Bluetooth® 4.0 transmitter.

This Digital Dial Indicator can be used in conjunction with the Toledo Bluetooth® software and receiving dongle to enable complete wireless connectivity with PC, Android and iOS systems.

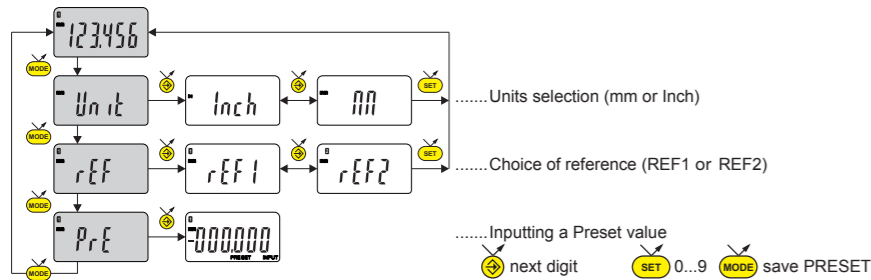
General Overview

- Precision instrument with built-in Bluetooth® wireless technology to enable direct data output to synchronised devices E.g. PC, Smart Phone, Tablet
- Water and coolant resistant IP51
- New technology with configurable menus
- Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)
- Automatic wake-up and sleeping mode
- Maximum error: 3µm
- Powered by standard CR2032 button cell battery (3 years life per battery)
- Supplied in heavy duty storage case with foam insert and firm locking clip
- Bluetooth® software sold separately
- Made in Switzerland



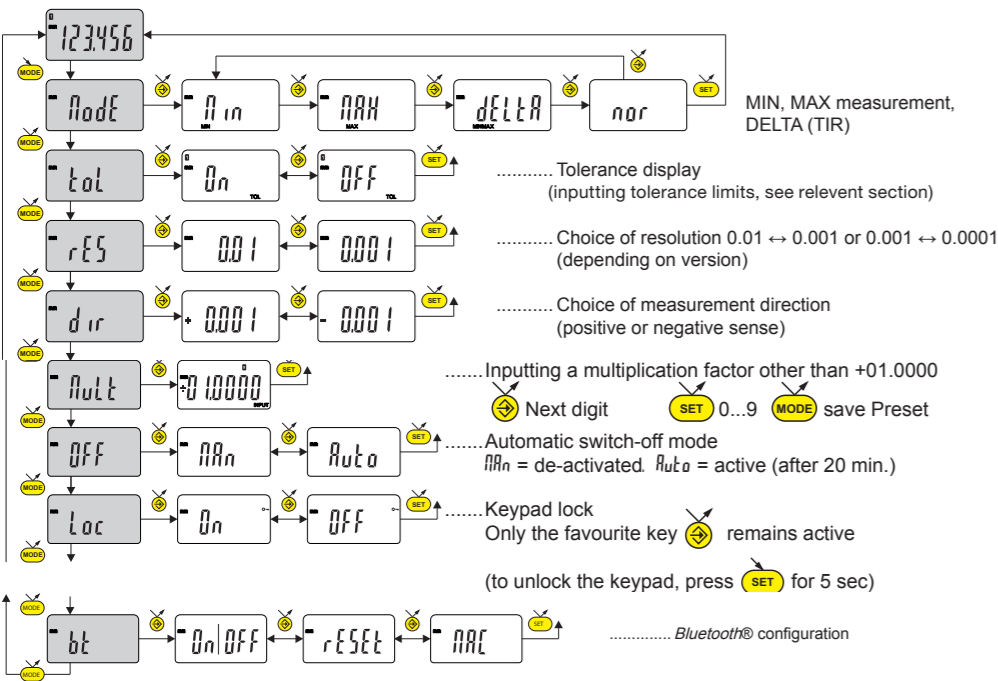
Basic Functions

Each short press on **MODE** gives direct access to the basic functions:



Advanced Functions

Prolonged pressure (>2s) on **MODE** gives access to the advanced functions. Then, each short press on **MODE** accesses the required function:



Note: It is also possible to display the tolerance limits when the instrument is operating in MIN, MAX or DELTA (TIR) mode. If no tolerance limit has been defined by the user, the instrument will display the tolerance limit indicators, but will not turn on the indicator lights.



Wireless Technology

Toledo Bluetooth® precision instruments feature an in-built Bluetooth® 4.0 transmitter to enable complete wireless data transmission between instrument and device. No additional attachments are required to enable Bluetooth® connectivity, but associated software and receiving dongle is needed (sold separately)

To activate Bluetooth® Press the [MODE] button until «BT» appears on the screen. Then press the [SET] button to activate or deactivate the function or to perform a reset of the connection, then press [MODE] button to validate. A third menu allows you to read the MAC (Bluetooth®) address.

The Bluetooth® connection procedure has 3 states:

1. Symbol off - Disconnected Mode
2. Symbol blinking - Advertising Mode
3. Symbol on - Connected Mode

Connection

1. Activate Bluetooth® Smart compatible software and hardware/App either on your PC, Tablet or smartphone
2. Start the instrument. By default the Bluetooth® module is active and the instrument is available for connection for 120s (Advertising Mode)
3. As soon as the device is detected, a connection is established automatically. If no connection is established during 120s, reactivate the Bluetooth® module using the bt/On menu.
4. Instrument is ready to communicate (connected mode)

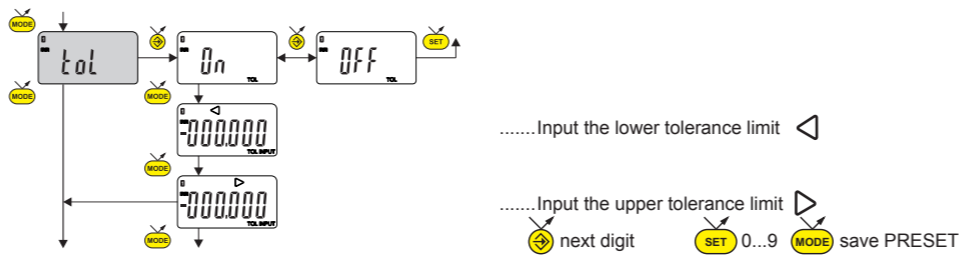
Pairing

Pairing with the master is automatically done at first connection.

To connect the instrument to a new master (new pairing), it is necessary to clear all pairing information on the instrument using the bt/RESET menu.

Inputting Tolerance Limits

To input or modify the tolerance limits, tol → Un mode should be selected, followed by a short press on **MODE**

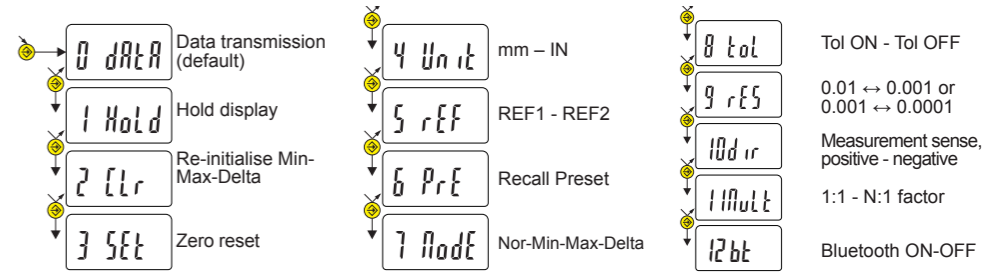


Note:

- For measuring internal dimensions, the red and yellow indicators can be switched over by reversing the order in which the tolerance limits are input (lower limit > upper limit).
- It is possible to input different tolerances on REF1 and REF2.

Favourite Settings

Favourite Settings give direct access to a predefined function, and can be configured according to the needs of the user. In order to assign a function a Favourite Setting, give a prolonged press on the **MODE** button and then select the required function:



Validation of selection: By a prolonged press on **MODE** or a short press **SET** on or **MODE**

Switching Off

The dial gauge goes automatically into stand-by if not used for 20 minutes, unless automatic switch-off mode has been turned off.

Stand-by mode can be forced by a prolonged press (> 2 sec) on **SET**:

In stand-by mode, the value of the origin is retained by the sensor (SIS mode), and the instrument automatically restarts with any movement of the measurement probe, Bluetooth® request or press of a button.

The instrument can be switched off completely for a long period of non-use, but this will necessitate a zero reset on restart (the origin will be lost):

- Prolonged press (>4 sec) on **SET**:

Re-initialising the Instrument (Resetting)

The initial instrument settings can be restored at any time by a prolonged press (>4 sec) simultaneously on **MODE** and **SET** until the message rESet is displayed.