

# SUB-MICRON COMPUTERIZED GAUGE FOR EXTERNAL MEASURING

# USER MANUAL



Calibration ISO 17025:2017



ISO 9001:2015



Item No	Range		Resolution		Accuracy	Indication	Data output	Calibration
	mm	inch	mm	inch	$\mu\text{m}$		Wireless	ISO 17025
134202005	0-20	0-0.8"	0,001	0.00005"	$\pm 20$	computerized MICS system with 1,54" touchscreen	max 50 m	+
134203005	10-30	0.4-1.2"			$\pm 20$		max 50 m	+
134204005	20-40	0.8-1.6"			$\pm 20$		max 50 m	+
134205005	30-50	1.2-2"			$\pm 20$		max 50 m	+
134206005	40-60	1.6-2.4"			$\pm 20$		max 50 m	+





Parameters	
LED display	color 1,54 inch
Resolution	240x240
Indication system	MICS 3.0
Power supply	Rechargeable Li-Pol battery
Battery capacity	400 mAh (depends of device)
Charging port	micro-USB
Case material	Aluminium
Buttons	Switch (Multifunctional), Reset
Wireless data transfer	up to 50m on open area

## CHARGING



**BUILT-IN BATTERY** - rechargeable Li-Pol battery

For charging connect USB cable  
Charging process indicating  
on Battery status  
(switch on device)

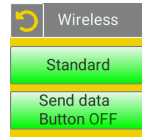


Activate **WIRELESS** data transfer

Connect caliper with **MICS** indication system to Tablet or PC

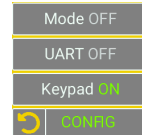
Send data to Tablet or PC:

- by Touchscreen
- by button push
- by Timer (activated in Timer menu)
- from Internal Memory
- with activated Automatic Force mode (activated in Force menu)



Activate **USB** data transfer

- connecting with USB cable to any OS and app in keyboard mode
- sending direct data with usual USB cable
- send values by Touchscenn, Button push, Timer, Memory



## MEMORY

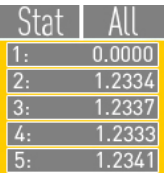
For save measuring data to internal caliper's memory touch data area on screen or button push. You can view saved data throw menu or send Wireless or USB connection to Windows PC, Android or iOS devices.

You can save up to 2000 values to memory

It's possible to use Standard or Folders system.



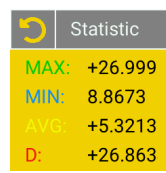
FOLDERS SYSTEM



MEMORY 2000 VAL.



MEMORY EXPORT



**Basic STATISTIC functions:**

MAX - maximum saved value

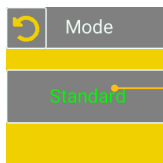
MIN - minimum saved value

AVG - average value

D - difference between MAX & MIN

STANDARD or FOLDER system can be activated throw MEMORY menu

### MEMORY settings



STANDARD OR FOLDER mode



**FREE SOFTWARE**



**USB HID CONNECTION**



KEYBOARD MODE



## DOWNLOAD APP

**DOWNLOAD APP**



DOWNLOAD MDS APP FOR MICROTECH DEVICES WIRELESS CONNECTION FROM [www.microtech.ua](http://www.microtech.ua), GooglePlay & App Store



# MENU NAVIGATION



USE TOUCHSCREEN TO OPERATE MENU  
SWIPE TO MOVE INSIDE MENUS

MENU button **MENU** Battery level

Colour can be changed according function **-0.0000** Actual value

Zero setting **0** Memory

## MEMORY WITH STATISTIC

		ALL		Statistic
		+7.3563	MAX:	+26.999
		-0.1109	MIN:	8.8673
		+1.2293	AVG:	+5.3213
		+26.9993	D:	+26.863
		-8.8673		

## MENU CONFIGURATION



### MAIN MENU



< +000.000

> +000.000

MIN

**LIMITS**  
color Go/NoGo

Max/Min

Enable

**MAX/MIN**  
indicating max or min value

Formula

Ax+Bx+C

**FORMULA MODE**  
 $Ax^2+Bx+C$

Timer

+000 sec.



0.8970

0.8920

OK

RESET

**ERROR COMPENSATION**  
mathematical correction

Temp.comp.

Glass, Quartz  
Sokki alloys, Mo

+00.00

**TEMPERATURE COMPENSATION**  
manual correction

Resolution

X.0000

Millimeters

**RESOLUTION**  
selected up to 0.0001mm

Extra

Axis Mode  
Normal



Wireless

Standard

Send data  
Button OFF

**WIRELESS**  
modes of data transmission

Mode OFF

UART OFF

Keypad ON

**USB**  
USB connection configuration

Device

PIN

RESET

**DEVICE SETTING**  
pin, reset

Display

Angle 180

Sleep OFF



Mode

Standard

**MEMORY SETTING**

Link to software

**SOFTWARE**  
link to download app

Calibration

DAY	MONTH	YEAR
01	01	2020

**CALIBRATION DATE**

MICROTECH

www.microtech.ua

COMP. CALIPER 1

FW: 3.0.5

MAC: 12345



## LIMITS GO/NOGO

MENU SETTING	Colour indication limits	MAIN SCREEN INDICATION
MAX value MIN value zero values	<p><b>MAX</b> - NoGo more MAX value</p> <p><b>MIN</b> - NoGo less MIN value</p> <p><b>RANGE</b> - Go between MIN &amp; MAX</p> <p><b>NONE</b> - disactivating mode</p>	  <p><b>NoGo</b>      <b>Go</b></p>

## MAX/MIN

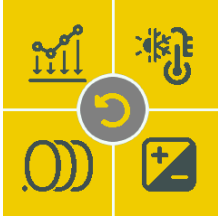
MENU SETTING	Indication and saving MAX or MIN values	MAIN SCREEN INDICATION
Max/Min Enable MAX	<p><b>ENABLE</b> - activating mode</p> <p><b>MAX</b> - indicating MAX measured value</p> <p><b>MIN</b> - indicating MIN measured value</p>	  <p><b>MIN</b>      <b>MAX</b></p>

## FORMULA

MENU SETTING	FORMULA $Ax^2+Bx+C$	EXAMPLE OF FORMULA USING								
Formula: $Ax^2+Bx+C$ AX+BX+C Set Argv RESET	<p>A +000.000 Long push digit to select value</p> <p>B +001.000</p> <p>C +000.000</p> <p>RESET Reset to zero arguments</p>	<table border="0"> <tr> <td>Standard measuring</td> <td>A=0, B=1, C=0</td> </tr> <tr> <td>PRESET 50mm</td> <td>A=0, B=1, C=50</td> </tr> <tr> <td>Value magnification x3</td> <td>A=0, B=3, C=0</td> </tr> <tr> <td>Square value</td> <td>A=1, B=0, C=0</td> </tr> </table>	Standard measuring	A=0, B=1, C=0	PRESET 50mm	A=0, B=1, C=50	Value magnification x3	A=0, B=3, C=0	Square value	A=1, B=0, C=0
Standard measuring	A=0, B=1, C=0									
PRESET 50mm	A=0, B=1, C=50									
Value magnification x3	A=0, B=3, C=0									
Square value	A=1, B=0, C=0									

## TIMER

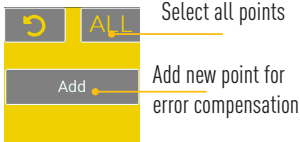
MENU SETTING	Saving data to memory or sending Wireless by Timer
Timer +000 sec. RESET	<p>Select timer period</p> <p>Reset to deactivate mode</p>



## MATHEMATICAL ERROR COMPENSATION

### MENU SETTING

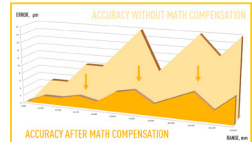
Mathematical correction points with big error to normal values



actual values

correct values by up&down button

confirm point correction

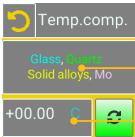


use gauge blocks or measuring machine for points correction

## TEMPERATURE COMPENSATION

### MENU SETTING

Re-calculation detail size to calibration conditions (20°C)



7 types of material for selection

Manual Temperature setting

7 types of material:

- glass, quartz, solid alloys
- granite, graphite
- Fe, Ni, Fe alloys
- stainless steel
- cooper, Cu alloys
- aluminium, al alloys
- acrylic sheet

## RESOLUTION

### MENU SETTING



Resolution selecting

mm/inch conversion

### MAIN SCREEN INDICATION

**+8.0608**

Selecting resolution of value on main screen and memory

## EXTRA (Axis mode)

### MENU SETTING



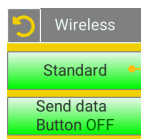
Selecting normal or inverted axis mode (+/- value indication)





## WIRELESS CONNECTION

**MENU SETTING**      Activating or disactivating wireless data transfer

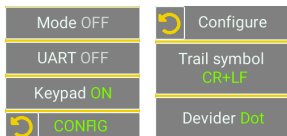


Switch on Wireless data transmission

**SELECTING WIRELESS DATA TRANSFER POWER**

## USB CONNECTION

**MENU SETTING**



Connect USB cable to PC

Activate USB connection mode

Select setting of data transfer

You can direct transfer data to any App in Windows, MacOS, Linux, Android devices

ACTIVATE FIRMWARE UPDATE IF NECESSERY

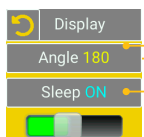
## RESET TO FACTORY SETTINGS

**RESET to factory settings**



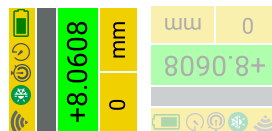
## DISPLAY SETTING

**MENU SETTING**      DISPLAY ROTATION, BRIGHTNESS, SLEEPING MODE



Display rotation 0°, 90°, 180°, 270°

- Sleep OFF (15 s low brightness off, sleep off)
- Sleep 15s (15 s low brightness on, sleep off)
- Sleep ON (15 s low brightness on, sleep on)





## MEMORY SETTINGS

### MENU SETTING

Stat	All	Stat	All
1:	0.0000	1:	0.0000
2:	1.2334	2:	1.2334
3:	1.2337	3:	1.2337
4:	1.2333	4:	1.2333
5:	1.2341	5:	1.2341

FOLDERS SYSTEM      MEMORY 2000 VAL.



## LINK TO SOFTWARE

### MENU SETTING

Link to software

QR Link to MICROTECH web site page with MDS Software download

- Android, iOS, Windows versions
- Free and Pro versions
- Manuals

Windows

iOS

ANDROID



## CALIBRATION DATE

### MENU SETTING

### Calibration date info

Calibration

DAY	MONTH	YEAR
01	01	2020

CHANGE

Push for change date info

DAY
01
MONTH
01
YEAR
2021



## DEVICE INFO

### MENU SETTING

MICROTECH

www.microtech.ua

COMP.CALIPER 1

FW: 3.0.5

MAC: 12345

Information about device

- device name
- firmware version
- MAC adress for easy connection



## OPTIONAL ACCESSORIES

STANDARD MDS data set 



STANDARD MDS app



ITEM 299110100 EXTERNAL MICRO POWERBANK 1000MAH

ITEM 299110200 EXTERNAL SLIM POWERBAN 5000MAH

ITEM 299110500 EXTERNAL P Ri POWERBANK 20000MAH

## FUNCTIONS

LIMITS (Go/NoGo)

PEAK VALUES (Max/Min)

MEMORY, WITH STATISTICS

TIMER

FORMULA  $AX^2+BX+C$

MM/INCH

PRESET

CALIBRATION DATE CONTROL

PIN LOCK

LINEAR CORRECTION

TEMPERATURE COMPENSATION

RECHARGEABLE LI-POL BATTERY

MAGNETIC CHARGING SOCKET

**WIRELESS** APPS FOR WINDOWS, ANDROID, iOS  
DATA TRANSFER TO MDS

**USB** HID DATA TRANSFER DIRECT TO WINDOWS,  
MACOS, ANDROID, LINUX APP'S



**MICROTECH**

**MICROTECH**

innovative measuring instruments

61001, Kharkiv, Ukraine, str. Rustaveli, 39

tel.: +38 (057) 739-03-50

[www.microtech.ua](http://www.microtech.ua)

[tool@microtech.ua](mailto:tool@microtech.ua)

Change without prior notice