

# SUB-MICRON COMPUTERIZED MICROMETER

## USER MANUAL



ISO17025:2017



ISO 9001:2015



## SUB-MICRON COMPUTERIZED MICROMETER HEAD

Item No	Range		Resolution	Accuracy	Spindle	Protection	Display	Data output
	mm	inch						
110180027	0-25	0-1"	0,0001	±2	Rotating	IP-65	Color 1.5"	WIRELESS+USB
110181057	0-50	0-2"		±3		IP-65	Touch-screen	

## NON-ROTATING SUB-MICRON COMPUTERIZED MICROMETER HEAD

Item No	Range		Resolution	Accuracy	Spindle	Protection	Display	Data output
	mm	inch						
110181027	0-25	0-1"	0,0001	±2	NON-Rotating	IP-65	Color 1.5" Touch-screen	WIRELESS+USB

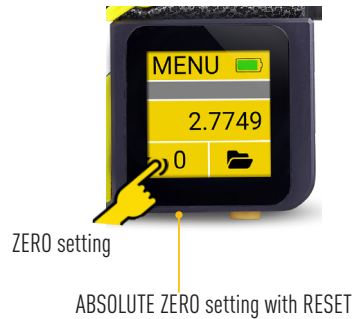


Parameters	
LED display	color 1,54 inch
Resolution	240x240
Indication system	MICS 4.0
Power supply	Rechargeable Li-Pol battery
Battery capacity	450 mAh
Charging port	micro-USB / Magnetic port
Case material	Aluminium
Buttons	Switch (Multifunctional), Reset
Wireless data transfer	Ultra long range
USB data transfer	USB HID

## ABSOLUTE ZERO SETTING

For ABSOLUTE ZERO setting push RESET button  
(this zero position will be saved also after switch off micrometer)

For ZERO setting, press the ZERO button on Touchscreen.



## CHARGING



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



BUILT-IN BATTERY - rechargeable Li-Pol battery

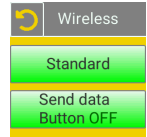


Activate **WIRELESS** data transfer

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

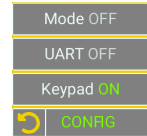
Send data to Tablet or PC:

- 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

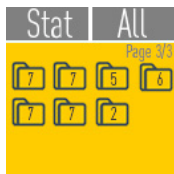


## MEMORY

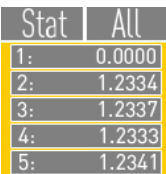
For save measuring data to internal caliper's memory touch data area on screen or button push. You can view saved data throw menu or send Wireless or USB connection to Windows PC, Android or iOS devices.

You can save up to 2000 values to memory

It's possible to use Standard or Folders system.



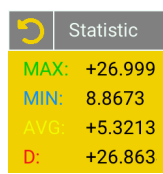
FOLDERS SYSTEM



MEMORY 2000 VAL.



MEMORY EXPORT

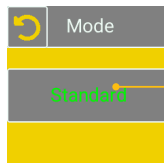


**Basic STATISTIC functions:**  
 MAX - maximum saved value  
 MIN - minimum saved value  
 AVG - average value  
 D - difference between MAX & MIN

STANDARD or FOLDER system can be activated throw MEMORY menu

### MEMORY settings

Memory sub-menu



STANDARD OR FOLDER mode



FREE SOFTWARE



USB HID CONNECTION



KEYBOARD MODE 

## DOWNLOAD APP

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

DOWNLOAD APP





USE TOUCHSCREEN TO OPERATE MENU

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



**LIMITS**  
color Go/NoGo

Max/Min

Enable

OK

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

Formula

$Ax+Bx+C$

Set Aray

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

Timer

+000 sec.

RESET



0.8970

0.8920

OK

RESET

Temp.comp.

Clear Comp. Solid alloys, Mo

+00.00

**ERROR COMPENSATION**  
mathematical correction

**TEMPERATURE COMPENSATION**  
manual correction

Resolution

X.0000

Millimeters

**RESOLUTION**  
selected up to 0.0001mm

Extra

Axis Mode Normal

CONNECT



Wireless

Standard

Send data

Button OFF

Mode OFF

UART OFF

Keypad Off

CONFIRM

**WIRELESS**  
modes of data transmission

**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

CHANGE

**CALIBRATION DATE**

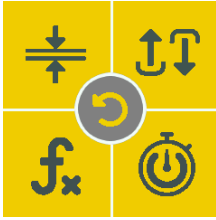
MICROTECH

www.microtech.us

COMP.CALIPER 1

FW: 3.0.5

MAC: 12345



## LIMITS GO/NOGO

### MENU SETTING

MAX value  
 MIN value  
 zero values

### Colour indication limits

**MAX - NoGo** more MAX value  
**MIN - NoGo** less MIN value  
**RANGE - Go** between MIN & MAX  
**NONE** - disactivating mode

### MAIN SCREEN INDICATION

MENU		
-10.005		+8.0608
0		0 mm

NoGo

Go

## MAX/MIN

### MENU SETTING

### Indication and saving MAX or MIN values

**ENABLE** - activating mode  
**MAX** - indicating MAX measured value  
**MIN** - indicating MIN measured value

### MAIN SCREEN INDICATION

MENU		MENU	
-2.9184		7.2241	
0		0	

MIN

MAX

## FORMULA

### MENU SETTING

Formula:

### FORMULA $Ax^2+Bx+C$

+000.000 Long push digit to select value  
 +001.000  
 +000.000  
 RESET Reset to zero arguments

### EXAMPLE OF FORMULA USING

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

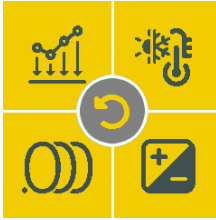
## TIMER

### MENU SETTING

Timer  
 Select timer period  
 Reset to deactivate mode

### Saving data to memory or sending Wireless by Timer

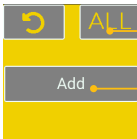
Timer  
 Confirm reset?  
 Yes  
 No



## MATHEMATICAL ERROR COMPENSATION

### MENU SETTING

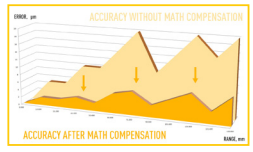
Mathematical correction points with big error to normal values



Select all points  
Add new point for error compensation



actual values  
correct values by up&down button  
confirm point correction



use gauge blocks or measuring machine for points correction

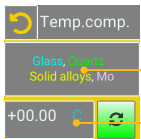


## TEMPERATURE COMPENSATION

### MENU SETTING

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

7 types of material:



7 types of material for selection  
Manual Temperature setting

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



## RESOLUTION

### MENU SETTING

### MAIN SCREEN INDICATION



Resolution selecting  
mm/inch conversion

**+8.0608**

Selecting resolution of value on main screen and memory



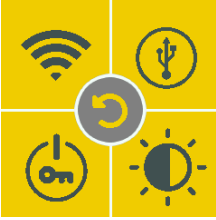
## EXTRA (Axis mode)

### MENU SETTING



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

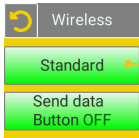




## WIRELESS CONNECTION

### 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 NECESSARY

## RESET TO FACTORY SETTINGS

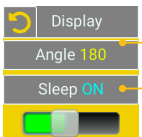
### RESET to factory settings



## DISPLAY SETTING

### MENU SETTING

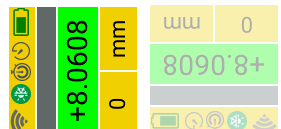
### DISPLAY ROTATION, BRIGHTNESS, SLEEPING MODE

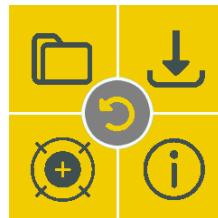


Display rotation 0°, 90°, 180°, 270°

- 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)

Brightness level





## MEMORY SETTINGS

### MENU SETTING

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





**MICROTECH**

**MICROTECH**

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