



SUB-MICRON COMPUTERIZED INTERNAL MICROMETER USER MANUAL



Calibration ISO 17025:2017

ISO 9001
BUREAU VERITAS
Certification



ISO 9001:2015



Item No	Range	Resolution	Accuracy	Max depth	Functions	Data output		Calibration
						USB	Wireless	
133700210	2-2.5	0,0001	±0,003	154	Error & Temp comp. Preset. Memory Max/ Min Limits	+	max 50m	+
133700310	2.5-3	0,0001	±0,003	154		+	max 50m	+
133700410	3-4	0,0001	±0,003	154		+	max 50m	+
133700510	4-5	0,0001	±0,003	154		+	max 50m	+
133700610	5-6	0,0001	±0,004	154		+	max 50m	+
133700810	6-8	0,0001	±0,004	154		+	max 50m	+
133701010	8-10	0,0001	±0,004	154		+	max 50m	+
133701210	10-12	0,0001	±0,004	154		+	max 50m	+
133701610	12-16	0,0001	±0,004	230		+	max 50m	+
133702010	16-20	0,0001	±0,004	230		+	max 50m	+
133702510	20-25	0,0001	±0,004	240		+	max 50m	+
133703010	25-30	0,0001	±0,004	240		+	max 50m	+
133704010	30-40	0,0001	±0,004	240		+	max 50m	+
133705010	40-50	0,0001	±0,004	240		+	max 50m	+
133707010	50-70	0,0001	±0,0035	250		+	max 50m	+
133710010	70-100	0,0001	±0,0035	250		+	max 50m	+
133715010	100-150	0,0001	±0,004	250		+	max 50m	+
133725010	150-250	0,0001	±0,005	250		+	max 50m	+
133730010	200-300	0,0001	±0,006	250		+	max 50m	+
133750010	200-500	0,0001	±0,008	650	+	max 50m	+	
133790011	200-1000	0,0001	±0,011	1150	+	max 50m	+	

SETS SUB-MICRON COMPUTERIZED THREE POINT INTERNAL MICROMETER

Item No	Range	Resolution	Accuracy	Measuring heads	Setting rings	Max depth	Functions	Data output		Calibration
								USB	Wireless	
133700203	2-3	0,0001	±0,003	2 pcs	1pcs	12,5	Error & Temp comp. Preset. Memory Max/Min Limits	+	max 50m	+
133370306	3-6	0,0001	±0,003	3 pcs	3pcs	22,5		+	max 50m	+
133370612	6-12	0,0001	±0,003	3 pcs	3pcs	50+100		+	max 50m	+
133371220	12-20	0,0001	±0,003	2pcs	1pcs	80+150		+	max 50m	+
133372050	20-50	0,0001	±0,003	4pcs	2pcs	90+150		+	max 50m	+
133375090	50-100	0,0001	±0,004	2pcs	1pcs	107+150		+	max 50m	+
133579125	100-250	0,0001	±0,004	2pcs	1pcs	107+150		+	max 50m	+



PRECISION MEASUREMENTS

MICROTECH computerized micrometer with 0.1 resolution can be used for high precision measurements in manufacturing, automotive medical industry and for calibration



COLOR GO/NOGO INDICATION

Easy and quick limits control.
It's possible setup max and min value throw menu.
Color indication reduce possibility of error during control



INTERNAL MEMORY

Computerized micrometer has memory manger with possibility saving data to folders. Separate Data's or Folders can be transfer Wireless to MICROTECH Software (Windows, Android,iOS)



FORMULA MODE

In Formula mode we use Ax^2+Bx+C

Main using of this function is:

- Preset function
- Magnification of measured value

For customers request Formula can be updated



ERROR COMPENSATION

It's possible to make mathematical error compensation. Just re-calibrate micrometer with gauge block set and save results. Micrometer will indicate measuring results include re-calibration.



TEMPERATURE COMPENSATION

Temperature compensation function gives possibility recalculate details sizes with high or low temperatures to normal (20C conditions). Available recalculation for 7 materials

MAIN INFO



MICROTECH

- SWITCH ON DEVICE** - button push (1 sec)
- SWITCH OFF DEVICE** - auto switch off (configurating throw DISPLAY SETTING menu)
 - button push (3 sec)



Clean the oil from the measuring surfaces of micrometer by cloth.

Turn on micrometer by pressing SWITCH ON button.

For SETTING RING size setting

- clean measuring jaws and the hole of ring with a soft cloth.
- Rotate ratchet stop until the measuring jaws contact the hole of the setting ring.

Use FORMULA mode to install ring value (C - value)

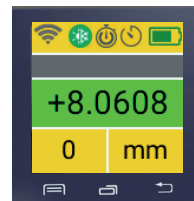
- set ZERO button on touch screen to during recalibration internal micrometer on setting ring.

CHARGING

For charging connect USB cable



Charging process indicating on Battery status (switch on device)



BUILT-IN BATTERY - rechargeable Li-Pol battery

Parameters	
LED display	color 1,5 inch
Power supply	Rechargeable Li-Pol battery
Lifetime	>580h (Medium brightness)
Charging port	micro-USB
Case material	Aluminium
Buttons	Switch, Reset
Wireless data transfer	10m without external antenna 50m with external antenna (from set)



MENU NAVIGATION

functions status

Battery status

color indication Go/NoGo

mm/inch conversion

ZERO setting

Folders	001
001	+0.0020
002	+1.5509
+ New Folder	+11.0781

MAIN MENU

MEMORY MANAGER
max 100000 values
folders system
transferring data from memory to PC

< +00.0001
> +00.0001
MIN

LIMITS
color Go/NoGo
Max/Min
Enable
MAX

MAX/MIN
indicating max or min value

A +00.0000
B +00.0000
C +00.0000
RESET

FORMULA MODE
 Ax^2+Bx+C

Timer
+000 sec.
RESET

TIMER MODE
saving or transfer data on timer

01.0000
OK
RESET

ERROR COMPENSATION
mathematical correction
Temp. comp.
None Mode
+25.00 C

TEMPERATURE COMPENSATION
manual correction 4 materials

Resolution
X.0000

RESOLUTION
selected up to 0.0001mm

Extra
Axis Mode
Normal

AXIS MODE
normal or inverted

Wireless Trans
Normal
1 min

WIRELESS
modes of data transmission
Mode OFF
UART OFF
Keypad ON
CONFG

USB
USB connection configuration

Device
Auto start ON
PIN RESET

DEVICE SETTING
autostart, reset, password

Angle
Sleep
Light High

SCREEN SETTING
screen rotation, brightness

Mode
Folder
+000
RESET

MEMORY SETTING
folder configuration
Link to software

SOFTWARE
link to download app

Calibration Date
DAY MONTH YEAR
01 01 2020
CHANGE

CALIBRATION STATUS
calibration date control

app@microtech.ua
F411RE
FW: 1.1.1
MAC: 00000
ID: 00000000

DEVICE INFO
service info about device



USB CONNECTION

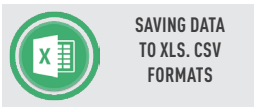
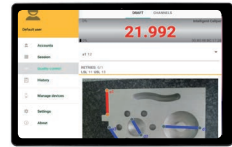
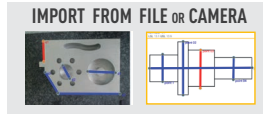


USB-DONGLE



UP TO 50M

WIRELESS CONNECTION



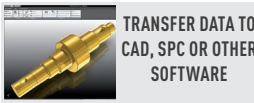
SAVING DATA TO XLS. CSV FORMATS



SAVING DATA TO XLS. CSV FORMATS



SAVING DATA TO XLS. CSV FORMATS



TRANSFER DATA TO CAD, SPC OR OTHER SOFTWARE



SAVING GRAPH



SAVING GRAPH



TRANSFER DATA TO EXCEL OR OTHER TABLE EDITORS



VOICE MODE



VOICE MODE

DATA TRANSFER DISTANCE FOR INTELLIGENT INSTRUMENTS

- All MICROTECH Intelligent instruments has internal memory. You can collect data to memory and when it will be necessary transfer all data to the peripheral device with no data losing.
- It's possible transfer data, like in Wireless instruments up to 15 m or up 50 m with external antenna
- USB port can be used to transfer data directly to Windows PC



QUALITY CONTROL RESULTS



LIMITS GO/NOGO

MENU SETTING

< +00.0001

> +00.0001

MIN

MAIN SCREEN

+8.0608

0 mm

NoGo Go NoGo

MAX - NoGo over MAX value
 MIN - NoGo over MIN value
 RANGE - selecting GO range
 NONE - No active mode

FORMULA

A +00.0000

B +00.0000

C +00.0000

RESET

EXAMPLES:

- for value x2 - B=2
- set PRESET 100mm C=100
- square value A=1

Avialable Formulas:
 - Ax^2+Bx+C
 -Radius (for indicators)
 -Sphere (for indicators)

MATH. ERROR COMPENSATION

0.010000

0.010000

OK

RESET

Red value
- actual value on instrument

Green value
- compensated value

Use up&down button to update actual value (green) to correct value.
 For compensation correction - push OK.
 After points correction computerized instrument will recalculate values according corrected points

RESOLUTION

Resolution

X.0000

+8.0608

Selecting instrument resolution

MAX/MIN

Max/Min

Enable

MAX

Status indication on main screen

+8.0608

0 mm

ENABLE/DISABLE mode indicating MAX dvalue indicating MIN value

TIMER

Timer

+000 sec.

RESET

Timer indication on main screen

+8.0608

0 mm

Saving or transfer data by Timer
 Select timer period
 For disactive - reset to zero

TEMPERATURE COMPENSATION

Temp. comp.

Glass, Quartz
Solid alloys, Mo

+25.00

+8.0608

0 mm

Re-calculation value to calibration conditions 20C
 7 types of materilas for selection
 Manual temperature setting

EXTRA (Axis mode)

Extra

Axis Mode

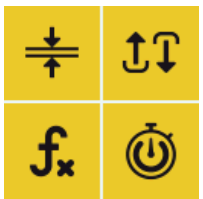
Normal

+/- value indication

+8.0608

0 mm

Selecting normal or inverted axis mode



FUNCTIONS



MICROTECH

WIRELESS CONNECTION

Wireless Trans

Normal

1 min

WIRELESS status

+8.0608

0 mm

USB CONNECTION

Mode OFF

UART OFF

Keypad ON

CONFIG

Windows



PIN

Device

Auto start ON

PIN RESET

DISPLAY SETTING

Angle 0

Sleep off

Rotation 0, 90, 180, 270

Sleep mode

Brightness level

+8.0608

0 mm

8090'8+

MEMORY MANAGER SETTINGS

Mode	001
Folder	+0.0020
+000	+1.5509
RESET	+11.0781

- Standard / Folder mode

In Folder mode possible to set qty values in each folder.

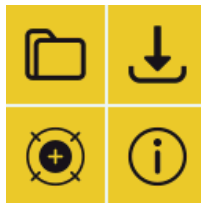
LINK TO SOFTWARE

Link to software

Free Software for Windows, Android, iOS

Link to page with MDS Software download

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



CALIBRATION DATE

Calibration Date

DAY	MONTH	YEAR
01	01	2020

CHANGE

Saving or transfer data by Timer

Select timer period

For disactive - reset to zero

DEVICE INFO

app@microtech.ua

F411RE

FW: 1.1.1

MAC: 00000

ID: 00000000

Information about firmware version and MAC adress for easy connection



MICROTECH



Free Software for Windows, Android, iOS

max 50 m
data transfer distance

MICROTECH

innovative measuring instruments

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Change without prior notice

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