

SWISS  
READING  
SYSTEM

# MICRON COMPUTERIZED MULTI-FORCE CALIPER

## USER MANUAL



ISO17025:2017

ISO 9001  
BUREAU VERITAS  
Certification





Item No	Range		Reso- lution	Accu- racy*	eForce	Jaws	Measuring HUB	Ana log scale	Graphic	Preset	Go/NoGo	Max/Min	Formula	Timer	Temp comp	Linear corr.	Calibr date	Recharge	Auto off	Password	Memory	Statistics	WIRELESS	USB HID	FW update
	mm	inch	mm	µm	N	mm																			
141088015A	0-150	0-6"		±5		40/16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
141088020A	0-200	0-8"	0,001	±8	1-20	50/17	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
141088030A	0-300	0-12"		±10		60/20	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

\* For internal jaw and depth bar accuracy according DIN 862

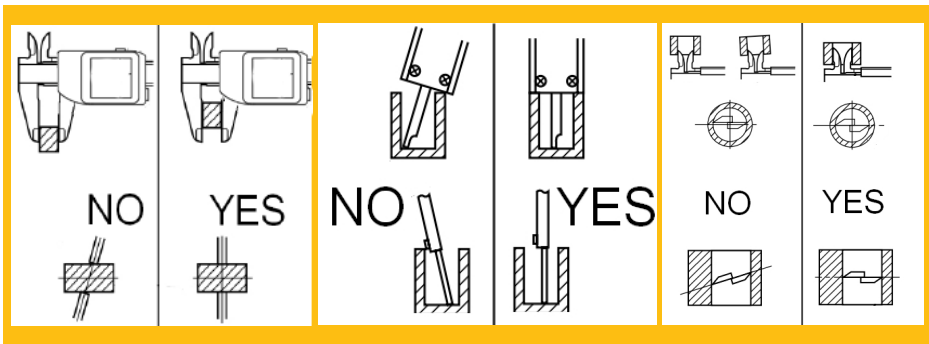
## TECHNICAL DATA

Parameters	
LED display	color 2,0 inch
Resolution	320x240
Indication system	MICS 3.0
Power supply	Rechargeable Li-Pol battery
Battery capacity	400 mAh
Charging port	micro-USB / Magnetic port
Case material	Aluminium
Buttons	Switch (Multifunctional)
Wireless data transfer	Long range/HID

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

**DO NOT LEAVE UNCHARGED CALIPER FOR A LONG TIME.  
THIS MAY RESULT TO INTERNAL BATTERY FAILURE!**

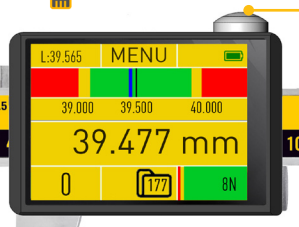
## CORRECT MEASURING





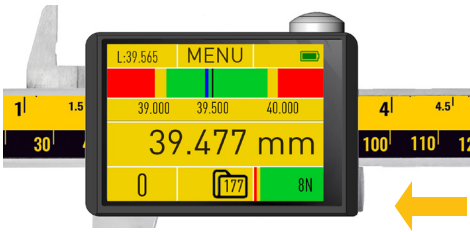
For charging connect USB cable

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



- SWITCH ON DEVICE** - button push (1 sec)
- SWITCH OFF DEVICE** - button push (3 sec)/ auto switch off
- DATA TRANSFER** - programming throw menu

## FORCE CONTROL



**FORCE 1-20N**

 **FORCE LOW**

 **FORCE OK**

 **FORCE TOO HIGH**

Electronic MULTI FORCE control module 1-20N

Cauper with electronic multi-Force control module, gives possibility measure all time with a requested FORCE in range 1-20N

FORCE MODES:

**DISABLE** - FORCE mode OFF

**INDICATE** - Indicating requested FORCE and status on FORCE bar

**AUTO** - Indicating requested FORCE and status on FORCE bar and Saving to memory actual length value upon reaching requested FORCE (1-20N).

**FORCE** - Indicating actual FORCE value during pushing

FORCE Indication on FORCE bar:

**Green** color - actual FORCE OK

**Yellow** color - lower FORCE

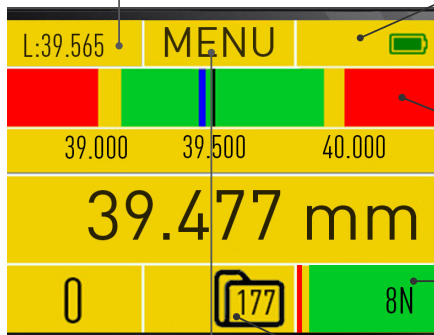
**Red** color - over FORCE

For **ZERO** setting also use Force control module (push Force up to **Green** indication and set **ZERO** by push for **0** button.

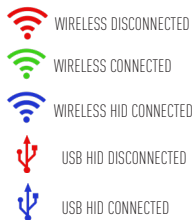


# MAIN SCREEN

LAST VALUE



CONNECTION STATUS



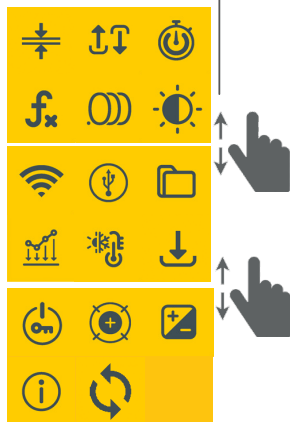
## ANALOG SCALE

## FORCE bar

## MEMORY



STANDARD or FOLDER system can be activated through MEMORY menu



For save measuring data to internal device memory touch data area on screen or button push. You can view saved data or send by WIRELESS or USB connection to Windows PC, Android or iOS It's possible to use Standard or Folders memory modes

Stat	All	Stat	All	Stat	All	Statistic
1: 0.0000	2: 1.2334	3: 1.2337	4: 1.2333	5: 1.2341	6: 1.2341	MAX: +26.999
Delete or Send?						MIN: 8.8673
Del Send						AVG: +5.3213
						D: +26.863

FOLDERS SYSTEM

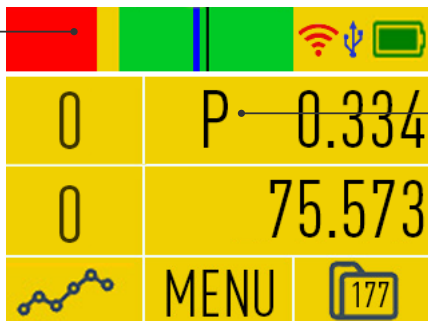
MEMORY 2000 VAL.

MEMORY EXPORT

STATISTIC

# MAIN SCREEN on 2D mode

ANALOG SCALE FOR PROBE MODE



2D AND HUB MODE

- PROBE - Saving data when Probe will reach value
- PROBE Auto - Saving data when Probe will reach value with this value compensation
- 2D - 2 axis data reading
- 2D Sync - Synchronized 2 axis data reading

# FUNCTIONS



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## LIMITS mode GO/NOGO



MAX - NoGo more Upper limit  
 MIN - NoGo less Lower limit  
 RANGE - Go between Limits  
 SCALE - Analog scale active

## COLOR INDICATION LIMITS ON MAIN SCREEN Go NoGo

>	2.000	Upper limit
<	3.000	Lower limit
%	20	Yellow zone on analog scale
SCALE	RES	

## PEAK mode MAX/MIN/MODULE/RANGE



DISABLE - non active mode  
 ENABLE - activating mode  
 REFRESH - refresh peak value according timer

Max/Min
Enabled
MAX

MAX - indicating MAX measured value  
 MIN - indicating MIN measured value  
 MODULE - indicating MAX module  
 RANGE - indicating deviation between MAX and MIN

## TIMER mode



## SAVING DATA TO MEMORY OR SENDING WIRELESS/USB BY TIMER

Timer
0.000 sec
Reset

Select timer period  
 Reset to deactivate mode

## FORMULA mode



Formula
$Ax^2+Bx+C$
Set Argv

Select FORMULA Type (Math, Radius or other)  
 Select arguments

## RESOLUTION selection



Resolution
X.0000
mm

Resolution selecting  
 mm/inch conversion

## DISPLAY settings



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)

Display
Angle 270
Sleep ON
Brightness level

Display rotation 0°, 90°, 180°, 270°  
 Brightness level

## LINEAR error compensation



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

O: 17.251	actual values
C: 17.258	correct values by up&down button
UP	OK
DN	RES

## Linear correction error's on device

confirm point correction

## TEMP compensation



Manual Temperature setting

Temp.com.	
Cu, Cu alloys	
27.5°C	RES

4 types of material for selection:

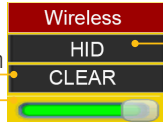
- Glass, Quartz
- Stainless steel
- Cuprum and alloys
- Aluminium and alloys



## WIRELESS data transfer



Reconnection button  
Wireless power regulation



**ON** - WIRELESS data transfer to MDS App for Android, iOS, Windows  
**HID**- WIRELESS HID direct transfer data to any App in Windows, MacOS, Linux, Android devices (like keyboard). Configure data format in USB sub-menu

**2D-S** - Slave device on WIRELESS connection on HUB mode

**2D-M** - Master device on WIRELESS connection on HUB mode

## USB OTG data transfer



Connect USB cable to PC & Activate USB HID connection mode

Select setting of data transfer

Direct transfer data to any App in Windows, MacOS, Linux, Android devices

Configuring data transfer Dot/Comma and Tab/Arrow Down/CR+LF

## HUB connection



**A.C.on** - Auto Connection active

**A.C.off** - Auto Connection no active

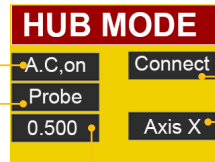
**PROBE** -Saving data when Probe will reach value

**PROBE Auto** - Saving data when Probe will reach value with this value compensation

**2D** - 2 axis data reading

**2D Sync**- Synchronized 2 axis data reading

**Disable** - switch off modes



### PROBE MODE

External Wireless device connection

Axis priority selecting

Setting PROBE limit value

**A.C.on** - Auto Connection active

**A.C.off** - Auto Connection no active

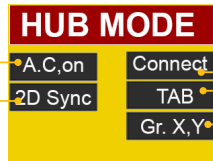
**PROBE** -Saving data when Probe will reach value

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### 2D MODE

External Wireless device connection

Symbol between Axis

Graphic mode indication setting

# FUNCTIONS

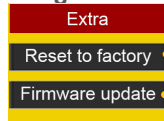


## FORCE

**DISABLE** - FORCE mode OFF  
**INDICATE** - Indicating requested FORCE and status on FORCE bar  
**AUTO** - Indicating requested FORCE and status on FORCE bar and Saving to memory actual length value upon reaching requested FORCE (1-20N).  
**FORCE** - Indicating actual FORCE value during pushing

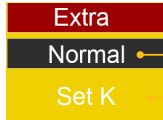


## RESET to Factory settings



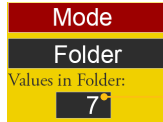
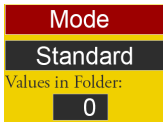
Push 10 times to RESET device to factory settings  
 Push 10 times to FIRMWARE UPDATE

## EXTRA



Selecting normal or inverted axis mode (+/- value indication)  
 Coefficient setting (for distributor and calibration only)

## MEMORY manager setting



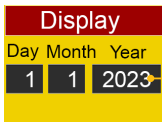
Activating STANDARD or FOLDER SYSTEM

Values in each Folder



FOLDERS SYSTEM

## CALIBRATION date info



Push for change calibration date info

## Device INFO

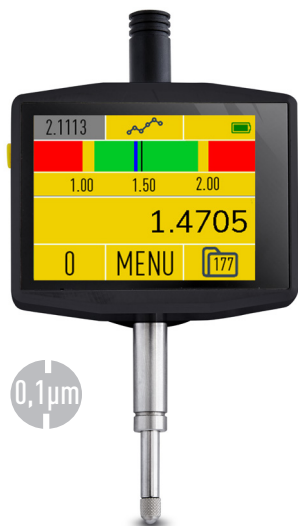


Information about device  
 - Firmware version  
 - MAC adress for WIRELESS connection

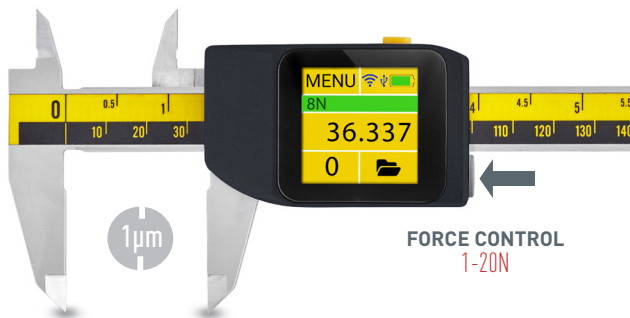


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# INDUSTRY 4.0 INSTRUMENTS



0,1µm



1µm

FORCE CONTROL  
1-20N



0,1µm



MICROTECH 0-40mm



1µm

## MICROTECH

innovative measuring instruments

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