The Latest Generation of **Micrometers**

Integrated Wireless

No Damage to Workpieces

The non-rotating, contacting measuring system prevents scratches to sensitive and precision-machined surfaces. You can even measure thin metal foils for example, without them becoming twisted or deformed.

Quick Sliding Adjustment

The quick adjustment dramatically reduces measuring times: a spindle feed rate 10 times faster than the standard achieves a measuring path of 5 mm per revolution.
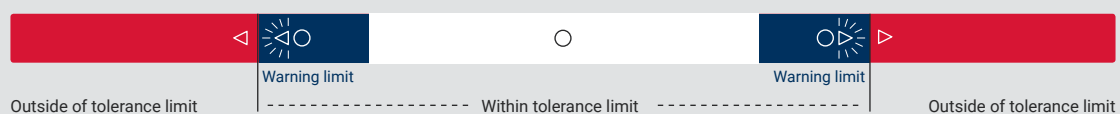
40 EWRi-L

Compact Design

The handy size and sophisticated ergonomics enable the easiest one-handed operation in its compact class.

Non-Rotating Spindle

The non-rotating spindle maintains the engaged position. For example, when it comes to thread flank measurement using thread measuring wires, the two measuring wire holders always remain engaged with each other.

Tolerance Function with Warning Limits

Outside of tolerance limit | Warning limit | Within tolerance limit | Warning limit | Outside of tolerance limit

Micromar 40 EWRi

Digital Micrometer Set

| 0 TOL | LOCK | ABS | # ID | MarConnect integrated wireless | IP65 | REFERENCE |

Functions

- RESET (set display to zero)
- ABS (display can be set to zero without losing reference to ORIGIN)
- mm/inch
- ORIGIN (for entering a numerical value)
- LOCK function (key lock)
- TOL (Tolerance and warning limits)
- HOLD (storage of measured values)
- DATA (data transmission)
- Bi-directional data interface (external input option of characteristic values and setting of individual lock functions by MarCom Software)

Features

- High contrast analog display
- Hardened and ground stainless spindle
- Carbide tipped spindle and anvil
- Rapid drive
- Ratchet is integrated in the thimble
- Lacquered and heat insulated steel frame
- FREE Marcom Professional Software download: **www.mahr.com/marcom** (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit Height:** 10 mm
- **Data Interface:** Integrated Wireless
- **Energy Supply:** Battery life approximately 3 years (approximately 6 months in wireless mode) **IP Protection Category:** IP 65
- **Package Contains:** instruction manual, battery, setting values, case

Integrated Wireless

Technical Data

Order No.	Measuring Range	Resolution	Error Limit	Spindle Thread Pitch	Measuring Force
4157100	0 – 25 mm / 0 - 1 in		2 µm		
4157101	25 mm – 50 mm / 1 in - 2 in		2 µm		
4157102	50 mm – 75 mm / 2 in - 3 in		3 µm		
4157103	75 mm – 100 mm/ 3 in - 4 in		3 µm		
4157104	100 mm – 125 mm / 4 in - 5 in	0,001 mm / 0.00005 in	6 µm	0,5 mm	5 – 10 N
4157105	125 mm – 150 mm / 5 in - 6 in		6 µm		
4157106	150 mm – 175 mm / 6 in - 7 in		7 µm		
4157107	175 mm– 200 mm / 7 in - 8 in		7 µm		
4157115	0 – 100 / 0 in - 4 in				
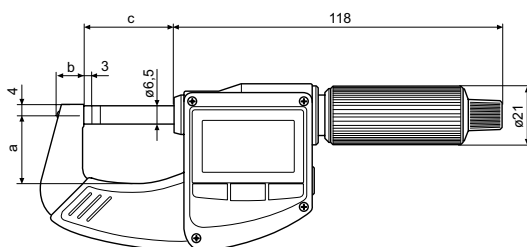
40 EWRi set 4157115

Order No.	a	b	c
4157100	24 mm	9,5 mm	32 mm
4157101	36 mm	11 mm	57 mm
4157102	45 mm	13 mm	82 mm
4157103	57 mm	13 mm	107 mm

Accessories

Order No.	Product Name	Type
4102220	Receiver for instruments with Integrated Wireless	i-Stick
4102520	Battery 3 V, CR 2032	
4158000	Stand for holding outside micrometers	41 H

Micromar 40 EWRi-L
Digital Micrometer

Functions
- RESET (set display to zero)
- ABS (display can be set to zero without losing reference to ORIGIN)
- mm/inch
- ORIGIN (for entering a numerical value)
- LOCK function (key lock)
- TOL (Tolerance and warning limits)
- HOLD (storage of measured values)
- DATA (data transmission via connection cable)
- Bi-directional data interface (external input option of characteristic values and setting of individual lock functions by MarCom Software)

Features
- High contrast analog display
- Hardened and ground stainless spindle
- Hardened and ground stainless spindle
- QUICK DRIVE
- Rapid adjustment
- Sliding spindle
- Ratchet is integrated in the thimble
- Lacquered steel frame, heat insulated
- FREE Marcom Professional Software download: **www.mahr.com/marcom** (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit Height:** 10 mm
- **Data Interface:** Integrated Wireless
- **Energy Supply:** Battery life approximately 2 years (approximately 6 months in wireless mode)
- **IP Protection Category:** IP 65
- **Package Contains:** instruction manual, battery, setting standard (measuring range of 25 mm - 50 mm), case

Application:
- Avoiding workpiece damage: The non-rotating spindle has a infringing touch, which prevents scratch marks on sensitive and finely machined surfaces
- Ideal for measuring thin metal foils without twisting and bending them
- Thread flank measurement by using thread wires: Both wire holders always remain in the engaged position with the non-rotating spindle

Technical Data

Order No.	Measuring Range	Resolution	Error Limit	Spindle Thread Pitch	Measuring Force
4157120	0 - 25 mm / 0 - 1 in	0,001 mm / 0.00005 in	2 µm	0,5 mm	5 N - 10 N
4157121	25 mm - 50 mm / 1 in - 2 in				
4157122	50 mm - 75 mm / 2 in - 3 in		3 µm		
4157123	75 mm - 100 mm / 3 in - 4 in				

Order No.	a	b	c
4157120	24 mm	9,5 mm	32 mm
4157121	36 mm	11 mm	57 mm
4157122	45 mm	13 mm	82 mm
4157123	57 mm	13 mm	107 mm
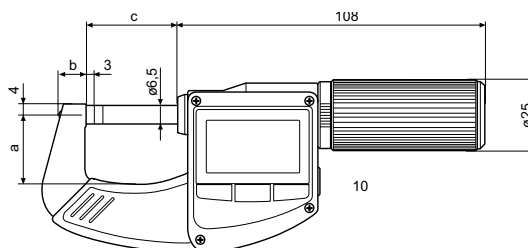
Accessories

Order No.	Product Name	Type
4102220	Receiver for instruments with Integrated Wireless	i-Stick
4102520	Battery 3 V, CR 2032	
4158000	Stand for holding outside micrometers	41 H

41 H   i-Stick

Micromar 40 EWRi-V
Digital Micrometer

| TOL | LOCK | ABS | # ID | MarConnect integrated wireless | IP65 | REFERENCE |

Functions

- RESET (set display to zero)
- ABS (display can be set to zero without losing reference to ORIGIN)
- mm/inch
- ORIGIN (for entering a numerical value)
- LOCK function (key lock)
- TOL (Tolerance and warning limits)
- HOLD (storage of measured values)
- DATA (data transmission via connection cable)
- Bi-directional data interface (external input option of characteristic values and setting of individual lock functions by MarCom Software)
- **Package Contains:** instruction manual, battery, case
- **For each pair of measuring anvils:**
  - 40 Ef flat Ø 6.5 mm
  - 40 Ea offset Ø 2 x 4 mm
  - 40 Et plate Ø 11.3 mm
  - 40 Eb spherical R= 5 mm
  - 40 Ep tapered 60° Ø 0.3 mm −5.5 mm
  - 40 Es blade 0.75 x 4 mm

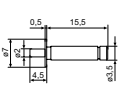**Integrated** Wireless

Application:

- Universal adjustment to different workpieces and measurement situations using individual interchangeable measuring anvils
- Thread flanks and spherical measuring anvils (optional accessories) can also be used
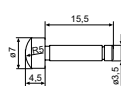
Technical Data

Order No.	Measuring Range	Resolution	Error Limit	Spindle Thread Pitch	Measuring Force	Standard
4157150	0 – 25 mm / 0 - 1 in	0,001 mm / 0.00005 in	4 μm	5 mm	5 N – 10 N	DIN 863–3
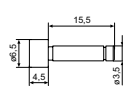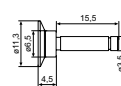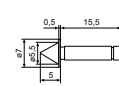
| 40 Ef | 40 Ea | 40 Er | 40 Et | 40 Ep | 40 Es |
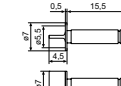
Accessories

Order No.	Product name	Type
4102220	Receiver for instruments with Integrated Wireless	i-Stick

i-Stick

Micromar 40 EWRi-V
Digital Micrometer

| TOL | 🔒 | ABS | #ID | MarConnect integrated wireless | IP65 | REFERENCE |

Features

- High contrast analog display
- Hardened stainless spindle
- With mounting bores for measuring anvils with a shaft Ø 3,5 mm
- Quick drive
- Rapid adjustment
- Sliding spindle
- Ratchet integrated in the thimble
- Lacquered and heat insulated steel frame
- FREE Marcom Professional Software download: **www.mahr.com/marcom** (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit Height:** 10 mm
- **Data Interface:** MarConnect (bidirectional), USB, Digimatic
- **Energy Supply:** Battery life approximately 3 years
- **IP Protection Category:** IP 65
- Package Contains: instruction manual, battery, case

Application:
- Universal adjustment to different workpieces and measurement situations using individual interchangeable measuring anvils
- Thread flanks and spherical measuring anvils (optional accessories) can also be used

Technical Data

Order No.	Measuring Range	Resolution	Error Limit	Spindle Thread Pitch	Measuring Force	Standard
4157145	0 - 25 mm / 0 - 1 in		4 µm			
4157146	25 mm - 50 mm / 1 in - 2 in	0,001 mm / 0.00005 in		5 mm	5 N – 10 N	DIN 863–3
4157147	50 mm - 75 mm / 2 in - 3 in		6 µm			
4157148	75 mm - 100 mm / 3 in - 4 in					

Order No.	a	b	c	Mounting Hole
4157145	32 mm	11,5 mm	57 mm	
4157146	44 mm	13,5 mm	82 mm	For measuring anvils with a shaft diameter 3,5 mm x 15,5 mm
4157147	57 mm	15,5 mm	107 mm	
4157148	73 mm	17 mm	132,5 mm	
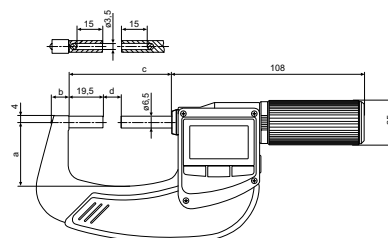
Accessories

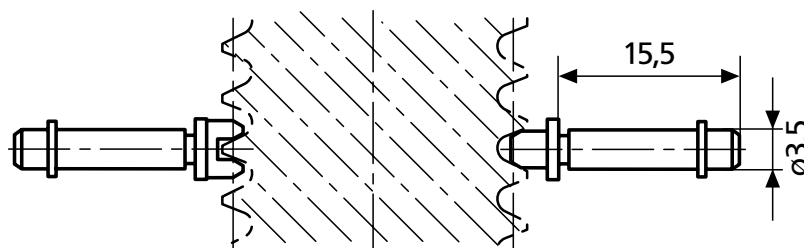| Order No.	Product name	Type
4102220	Receiver for instruments with Integrated Wireless	i-Stick

i-Stick

Micromar Thread Anvils

Digital Micrometer

Features

- Hardened and wear resistant special steel
- Cylindrical mounting shank and retainer ring for rotatable mounting in the bore of the measuring spindle and anvil
- Pair comprised of V-anvil and cone

Notes

With a pitch of 0,2 mm - 0,45 mm, the V-anvil bridges 3 turns. It should therefore be set with 715 E thread adjustment pins, otherwise with 43 Z setting standards.

Thread Pitch	Taper Order No.	V-anvil Order No.
Pitch diameter, external thread		
Metric 60°		
0,2	4173407	4173007
0,25	4173408	4173008
0,3	4173409	4173009
0,35	4173410	4173010
0,4	4173411	4173011
0,45	4173412	4173012
0,5 – 0,7	4173400	4173000
0,7 – 1	4173401	4173001
1,25 – 2	4173402	4173002
2 – 3,5	4173403	4173003
3,5 – 5	4173404	4173004
5 – 7	4173405	4173005
7 – 9	4173406	4173006
Trapezoid 30°		
1	4173650	4173250
1,5	4173651	4173251
2	4173652	4173252
3	4173653	4173253
4	4173654	4173254
5	4173655	4173255
6	4173656	4173256
7	4173657	4173257
8	4173658	4173258
9	4173659	4173259
10	4173660	4173260
12	4173661	4173261
14	4173662	4173262
16	4173663	4173263
18	4173664	4173264
20	4173665	4173265

Thread Pitch in TPI	Taper Order No.	V-anvil Order No.
Pitch diameter, external thread		
UST 60°		
60 – 48	4173513	4173113
48 – 40	4173514	4173114
40 – 32	4173515	4173115
32 – 24	4173516	4173116
24 – 18	4173517	4173117
18 – 14	4173518	4173118
14 – 10	4173519	4173119
10 – 7	4173520	4173120
7 – 4,5	4173521	4173121
4,5 – 3	4173522	4173122
Whitworth 55 °		
40 – 32	4173443	4173043
32 – 24	4173444	4173044
24 – 18	4173445	4173045
18 – 14	4173446	4173046
14 – 10	4173447	4173047
10 – 7	4173448	4173048
7 – 4,5	4173449	4173049
4,5 – 3	4173450	4173050
3 – 2,5	4179409	4179408
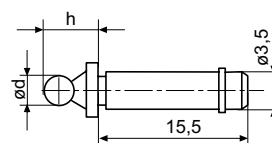
MaraMeter
Ball contact
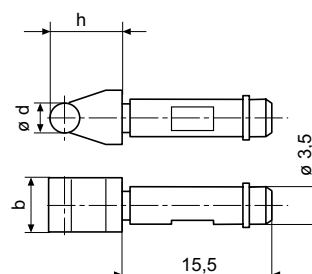
MaraMeter
Roller blades, carbide

Mahr

Micromar

Digital Micrometers for Special Applications
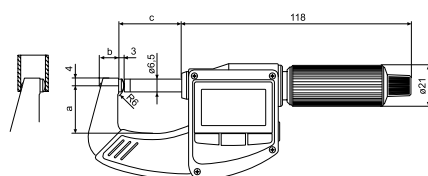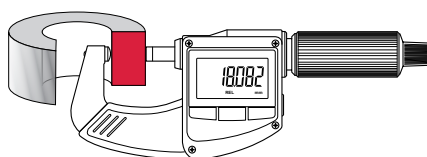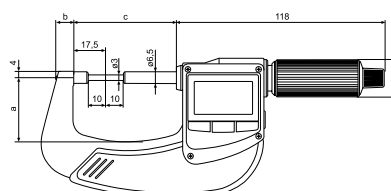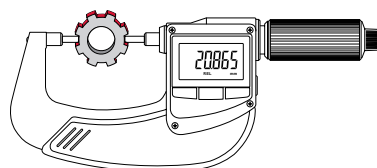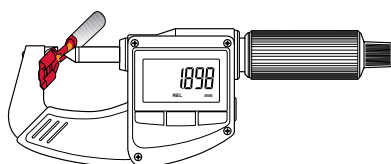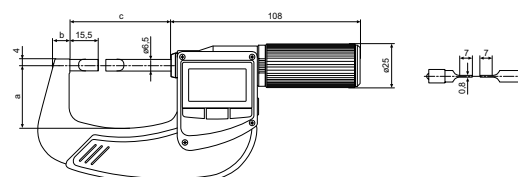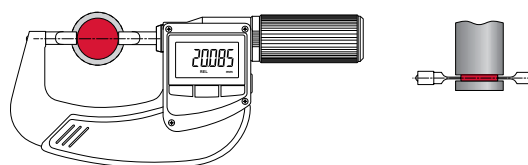
40 EWRi-R

40 EWRi-B

40 EWRi-K
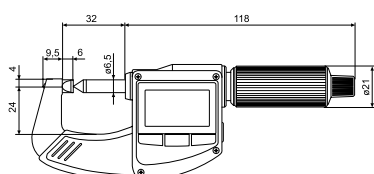
40 EWRi-S

Functions

- RESET (set display to zero)
- ABS (display can be set to zero without losing reference to ORIGIN)
- mm/inch
- ORIGIN (for entering a numerical value)
- LOCK function (key lock)
- TOL (tolerance and warning limits)
- HOLD (storage of measured values)
- DATA (data transmission)
- Bi-directional data interface (external input option of characteristic values and setting of individual lock functions by MarCom Software)

Features

- High contrast analog display
- Hardened and ground stainless spindle
- Ratchet is integrated in the thimble
- Lacquered and heat insulated steel frame
- FREE Marcom Professional Software download: **www.mahr.com/marcom** (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 10 mm
- **Data interface:** Integrated Wireless
- **Energy Supply:** battery, life span approximately 2 years
- **IP Protection Category:** IP 65
- **Package Contains:** operation manual, battery, setting standard (from measuring range 25 mm - 50 mm), case

Technical Data

Order No.	Model	Measuring Range	Measuring Face	Resolution	Error Limit	Spindle Thread Pitch	Measuring Force	Standard
4157132	40 EWRi-B	0 - 25 mm / 0 - 1 in	carbide	0,01 mm / 0.0005 in	4 μm	5 mm	5 N – 10 N	DIN 863–3
4157133		25 mm - 50 mm / 1 in - 2 in						
4157130	40 EWRi-R	0 - 25 mm / 0 - 1 in						
4157131		25 mm - 50 mm / 1 in - 2 in						
4157141	40 EWRi-S	0 - 25 mm / 0 - 1 in	hardened steel					
4157142		25 mm - 50 mm / 1 in - 2 in						
4157143		50 mm - 75 mm / 2 in - 3 in						
4157144		75 mm - 100 mm / 3 in - 4 in						
4157140	40 EWRi-K	0 – 20 mm / 0 in - 0.787 in	carbide			0,5 mm		Factory standard

Accessories

Order No.	Product Name	Type
4102220	Receiver for instruments with Integrated Wireless	i-Stick

i-Stick