

# Micrometer

The origin of Mitutoyo's trustworthy brand of small tool instruments

## Outside Micrometers SERIES 340, 104 — with Interchangeable Anvils

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

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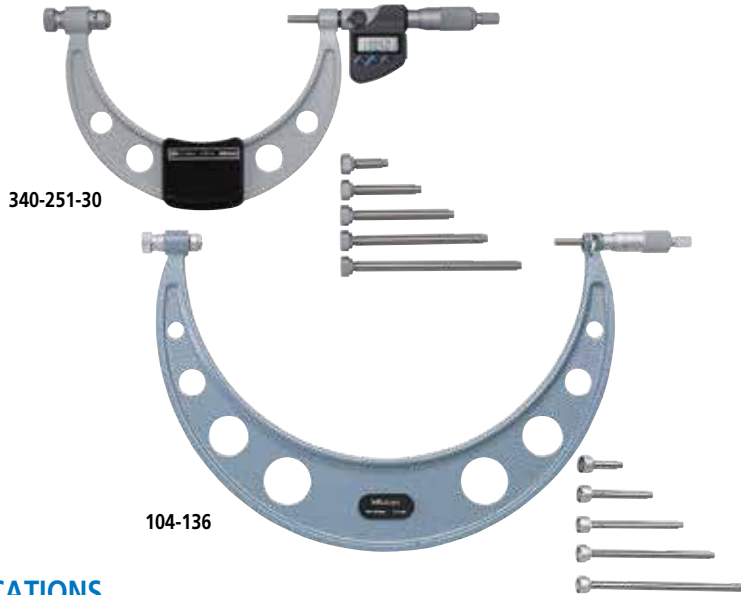
Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).



These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



- Wide measuring range with interchangeable anvils.
- Measuring face of the spindle is carbide tipped (standard model).
- IP 65 water/dust protection (**series 340**)\*.
- \* Models with a measuring range up to 300 mm.
- Equipped with Ratchet Stop for constant measuring force.



### IP Codes (series 340)

Level 6: Dust -proof.

No ingress of dust allowed.

Level 5: Protected against water jets.

Water projected in jets against the enclosure from any direction shall have no harmful effects.

### Technical Data

- Flatness:  
0.6 μm/0.00024 in for models up to 300 mm/12 in  
1.0 μm/0.00004 in for models over 300 mm/12 in
- Parallelism:  
2 μm/0.00008 in for models up to 75 mm/3 in  
3 μm/0.00012 in for models up to 150 mm/6 in  
(2 + R/100) μm for models over 150 mm,  
R=max. range (mm)  
Fraction rounded up  
±[0.00008 + 0.00004 (R/4)] in for models over 6 in,  
R= max. range (inch)  
Fraction rounded up
- Accuracy:  
±(4 + R/75) μm, R = max. range (mm)  
±[0.00016 + 0.00004 (R/3)] in, R = max. range (inch)  
(excluding quantizing error for digital models)  
Fraction rounded up
- Excluding quantizing error

## SPECIFICATIONS

Metric						
Order No.	Range (mm)	Resolution (mm)	Interchangeable anvils	Setting Standard		Micrometer head stroke (mm)
				Qty	Size (mm)	
Digimatic (LCD)						
340-251-30	0 - 150	0.001	6 pcs.	5	25 - 125	25
340-252-30	150 - 300			6	150 - 275	
340-520	300 - 400		4 pcs.	4	300 - 375	
340-521	400 - 500				400 - 475	
340-522	500 - 600				500 - 575	
340-523	600 - 700				600 - 675	
340-524	700 - 800				700 - 775	
340-525	800 - 900				800 - 875	
340-526	900 - 1000				900 - 975	

Inch/Metric						
Order No.	Range (in)	Resolution	Interchangeable anvils	Setting Standard		Micrometer head stroke (in)
				Qty	Size (in)	
Digimatic (LCD)						
340-351-30	0 - 6	0.00005 in/ 0.001 mm	6 pcs.	5	1 - 5	1
340-352-30	6 - 12	0.0001 in/ 0.001 mm		6	6 - 11	
340-720	12 - 18				12 - 17	
340-721	18 - 24				18 - 23	
340-722	24 - 30				24 - 29	
340-723	30 - 36				30 - 35	

Metric						
Order No.	Range (mm)	Graduation (mm)	Interchangeable anvils	Setting Standard		Micrometer head stroke (mm)
				Qty	Size (mm)	
Analog						
104-171*	0 - 50	0.01	1 pc.	1	25	25
104-139A	0 - 100		4 pcs.	3	25 - 75	
104-135A	0 - 150		6 pcs.	5	25 - 125	
104-161A	50 - 150		4 pcs.	4	50 - 125	
104-140A	100 - 200				100 - 175	
104-136A	150 - 300		6 pcs.	6	150 - 275	
104-141A	200 - 300				200 - 275	
104-142A	300 - 400				300 - 375	
104-143A	400 - 500				400 - 475	
104-144A	500 - 600				500 - 575	
104-145A	600 - 700				600 - 675	
104-146A	700 - 800				700 - 775	
104-147A	800 - 900				800 - 875	
104-148A	900 - 1000		900 - 975			

Inch						
Order No.	Range (in)	Interchangeable anvils	Graduation (in)	Setting Standard		Micrometer head stroke (in)
				Qty	Size (in)	
Analog						
104-165	0 - 2	1 pc.	0.0001	1	1	1
104-149	0 - 4	4 pcs.	0.001	3	1 - 3	
104-137	0 - 6	6 pcs.		5	1 - 5	
104-162	2 - 6	4 pcs.		4	2 - 5	
104-150	4 - 8				4 - 7	
104-138	6 - 12	6 pcs.		6	6 - 11	
104-151	8 - 12	4 pcs.		4	8 - 11	
104-152	12 - 16				12 - 15	
104-201	12 - 18	6 pcs.		6	12 - 17	
104-153	16 - 20	4 pcs.		4	16 - 19	
104-202	18 - 24	6 pcs.		6	18 - 23	
104-154	20 - 24	4 pcs.		4	20 - 23	
104-155	24 - 28				24 - 27	
104-203	24 - 30	6 pcs.		6	24 - 29	
104-156	28 - 32	4 pcs.		4	28 - 31	
104-204	30 - 36	6 pcs.		6	30 - 35	
104-157	32 - 36	4 pcs.		4	32 - 35	
104-158	36 - 40				36 - 39	
104-205	36 - 42	6 pcs.	6	36 - 41		

\* The frame is fitted with a heat shield.

Note 1: For functional details of 340-251-30, 340-252-30, 340-351-30, 340-352-30, refer to page B-8.

Please note that origin setting of these models is by presetting.

Optional connecting cable is available only for water-proof type (Digimatic model).

Note 2: For functional details of 340-520 to 340-723, refer to page B-9.

## Technical Data

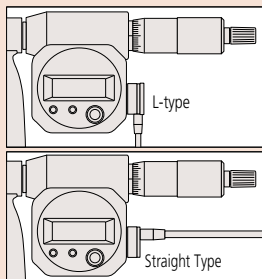
- Battery for **series 340 SR44** (1 pc.), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for **series 340-2XX, 340-3XX**)  
Approx. 1.8 years under normal use (for **series 340-5XX, 340-7XX**)
- Length standard: Electromagnetic rotary sensor (for **series 340**)
- Standard accessories: Spanner (**301336**), 1 pc. (for maximum measuring range up to 300 mm (12 in))
- Spanner (**200154**), 1 pc. (for maximum measuring range 400 mm (16 in) or over)

## Optional Accessories

- Connecting cables for **340-251-30, 340-252-30, 340-351-30** and **340-252-30**
- USB Input Tool Direct **USB-ITN-B** (2 m): **06AFM380B**
- SPC cables for **U-WAVE-T** w/data switch (160 mm): **02AZD790B**
- For foot switch: **02AZE140B**

## Wireless Data Output **U-WAVE™**

- U-WAVE-TM\*** **264-622** (IP67 type) **264-623** (Buzzer type)
- Connecting unit for **U-WAVE-TM\*** **02AZF310** (IP67/buzzer type common specification)  
Refer to page A-15 for details  
\* Only **340-251-30/340-252-30** can be attached
- Connecting cables for **340-5XX, 340-7XX**  
Recommended cables:  
L-Type (does not interfere with operating the thimble.)  
1 m: **04AZB512**  
2 m: **04AZB513**  
Straight type (may interfere with operating the thimble.)  
1 m: **959149**  
2 m: **959150**



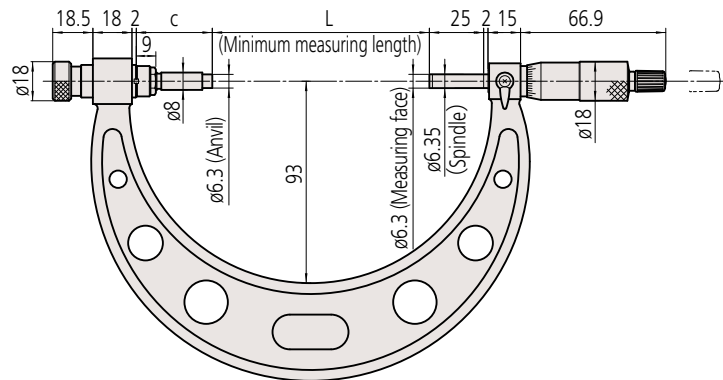
Refer to page B-68 for detailed information about recommended cables.



## DIMENSIONS

104-135A

Unit: mm

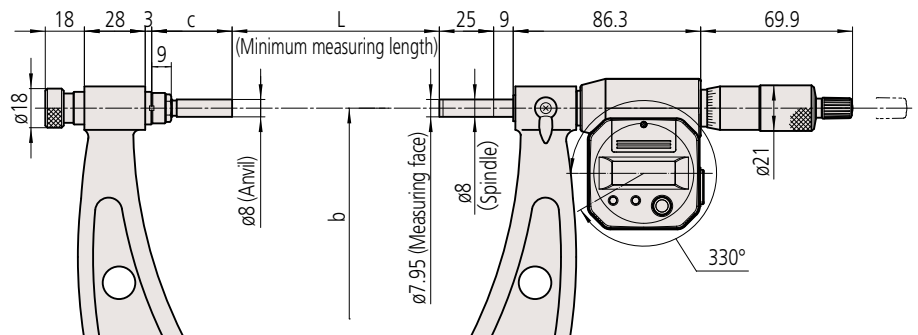


### Interchangeable Anvil

		L : Range (mm)					
Range	0 to 150 mm models	0 - 25	25 - 50	50 - 75	75 - 100	100 - 125	125 - 150
Range	150 to 300 mm models	150 - 175	175 - 200	200 - 225	225 - 250	250 - 275	275 - 300
	<b>Order No.</b>	<b>303950</b>	<b>303951</b>	<b>303952</b>	<b>303953</b>	<b>303954</b>	<b>303955</b>
	c: Overall length (mm)	135	110	85	60	35	10
	Interchangeable anvil	M1	M2	M3	M4	M5	M6

		L : Range (mm)			
Range	300 to 400 mm models	300 - 325	325 - 350	350 - 375	375 - 400
Range	400 to 500 mm models	400 - 425	425 - 450	450 - 475	475 - 500
Range	500 to 600 mm models	500 - 525	525 - 550	550 - 575	575 - 600
Range	600 to 700 mm models	600 - 625	625 - 650	650 - 675	675 - 700
Range	700 to 800 mm models	700 - 725	725 - 750	750 - 775	775 - 800
Range	800 to 900 mm models	800 - 825	825 - 850	850 - 875	875 - 900
Range	900 to 1000 mm models	900 - 925	925 - 950	950 - 975	975 - 1000
	<b>Order No.</b>	<b>304001</b>	<b>304002</b>	<b>304003</b>	<b>304004</b>
	c: Overall length (mm)	87	62	37	12
	Interchangeable anvil	M3	M4	M5	M6

### Over 400 mm up to 1000 mm



		L : Range (mm)				b
Range	300 to 400 mm models	300 - 325	325 - 350	350 - 375	375 - 400	224
Range	400 to 500 mm models	400 - 425	425 - 450	450 - 475	475 - 500	273
Range	500 to 600 mm models	500 - 525	525 - 550	550 - 575	575 - 600	332
Range	600 to 700 mm models	600 - 625	625 - 650	650 - 675	675 - 700	382
Range	700 to 800 mm models	700 - 725	725 - 750	750 - 775	775 - 800	430
Range	800 to 900 mm models	800 - 825	825 - 850	850 - 875	875 - 900	480
Range	900 to 1000 mm models	900 - 925	925 - 950	950 - 975	975 - 1000	530
	<b>Order No.</b>	<b>304001</b>	<b>304002</b>	<b>304003</b>	<b>304004</b>	
	c: Overall (mm)	87	62	37	12	
	Interchangeable anvil	M3	M4	M5	M6	