

Micrometer

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

Outside Micrometers SERIES 340, 104 — with Interchangeable Anvils

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink[®] (refer to page A-25 for details).

IP 65

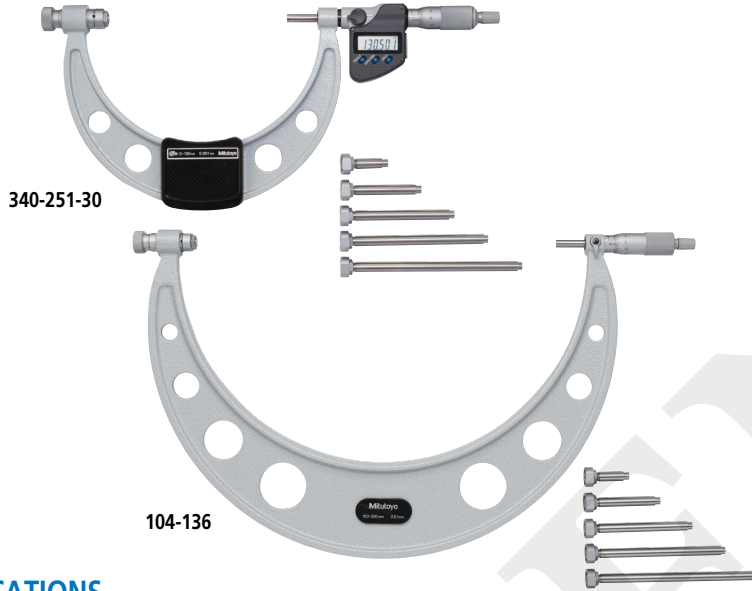
These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.

TÜVRheinland[®]
CERTIFIED

Dust- and Water-Protected
www.tuv.com
ID 0000040191

Applicable models:
**340-251-30, 340-252-30,
340-351-30, 340-352-30**

- Wide measuring range with interchangeable anvils.
- Measuring face of the spindle is carbide tipped (standard model).
- IP 65 water/dust protection (**340-251-30, 340-252-30, 340-351-30, 340-352-30**).
- Equipped with Ratchet Stop for constant measuring force.



IP Codes (340-251-30, 340-252-30, 340-351-30, 340-352-30)

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

- Spindle feed error: 3 µm/0.00015 in
- Flatness
Measuring range 0 to 300: 0.6 µm
Measuring range 300 to 1000: 1.0 µm
- Parallelism
Measuring range 0 to 75: 2 µm
Measuring range 75 to 150: 3 µm
Measuring range 150 to 1000
(2+R/100) µm, R=max. range (mm) (fraction rounded up)

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				4 pcs.		4	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)	Graduation (in)	Interchangeable anvils	Setting Standard		Micrometer head stroke (in)
				Qty	Size (in)	
Analog						
104-165	0 - 2	0.0001	1 pc.	1	1	1
104-149	0 - 4		4 pcs.	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				12 - 17	
104-153	16 - 20				16 - 19	
104-202	18 - 24		6 pcs.	6	18 - 23	
104-154	20 - 24				20 - 23	
104-155	24 - 28		4 pcs.	4	24 - 27	
104-203	24 - 30				24 - 29	
104-156	28 - 32		4 pcs.	4	28 - 31	
104-204	30 - 36				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

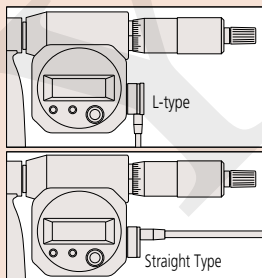
- Battery for **series 340**
340-251-30, 340-252-30,
340-351-30, 340-352-30: SR44 (1 pc.)
340-520 to 340-526
340-720 to 340-723: SR44 (2 pcs.)
938882, for initial operational checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use
 (for **340-2XX, 340-3XX**)
 Approx. 1.8 years under normal use
 (for **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 340-352-30
 1 m: **05CZA662**
 2 m: **05CZA663**
- 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)
- U-WAVE-TMB** Transmitter
Mitutoyo Bluetooth® U-WAVE
264-626 (IP67 type)
264-627 (Buzzer type)
 Refer to page A-10 for details.
- Connecting unit for **U-WAVE-TM/TMB**
02AZF310 (IP67/buzzer type common specification)
 Refer to pages A-10 and A-12 for details
 * Only **340-251-30, 340-252-30, 340-351-30** and
340-352-30 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**



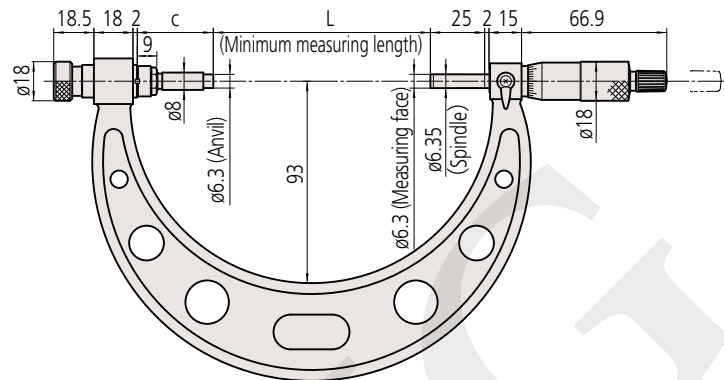
Refer to page A-21 for detailed information about recommended cables.



DIMENSIONS

104-135A

Unit: mm

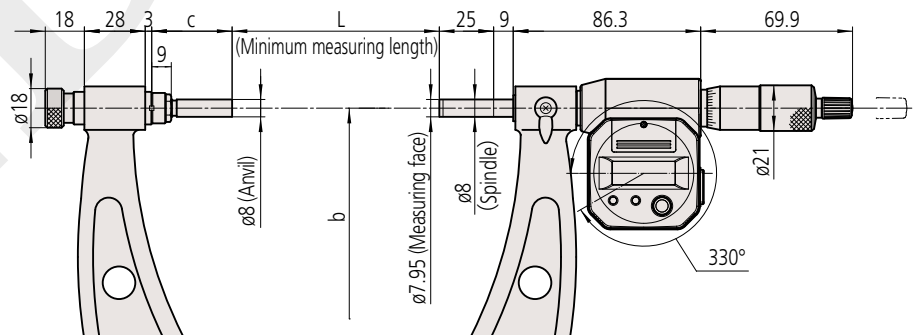


Interchangeable Anvil

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

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