

Calipers

An industry standard measuring tool

ABSOLUTE Digimatic Caliper SERIES 500 — with exclusive ABSOLUTE Encoder Technology

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- An ABSOLUTE electromagnetic induction linear encoder system is incorporated.
- New ergonomic design with finger rest.
- The ZERO/ABS button allows the display to be Zero-Set at any slider position along the scale for comparison measurements. Scale overspeed-error has been eliminated for maximum reliability.
- Large and clear LCD readout.
- Smooth slider movement makes for comfortable operation.
- Extended battery life of Approx. 5 years due to low current integrated circuit (except for 0 to 300 mm/0 to 12 inch models).
- Allows step measurement.
- Carbide-tipped jaw calipers are optimal for rough finished parts, castings, grinding stones, etc.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. (Refer to page A-3.)

MeasurLink[®] ENABLED
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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).

ABSOLUTE[™]



An inspection certificate is supplied as standard. Refer to page U-11 for details.

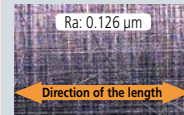
Technical Data

- Accuracy: ± 0.02 mm (≤ 200 mm), ± 0.03 mm (≤ 300 mm) (excluding quantizing error)
- Resolution: 0.01 mm or 0.0005 in/0.01 mm
- Repeatability: 0.01 mm
- Scale type: ABSOLUTE electromagnetic induction linear encoder
- Max. response speed: Unlimited
- Battery: SR44 (1 pc), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 5 years under normal use

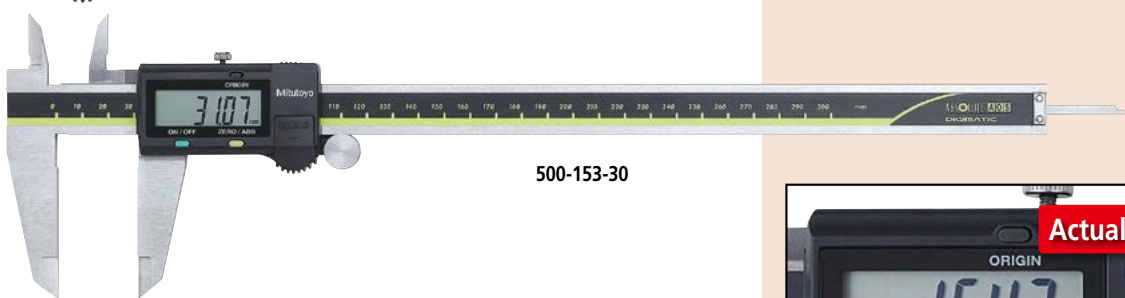
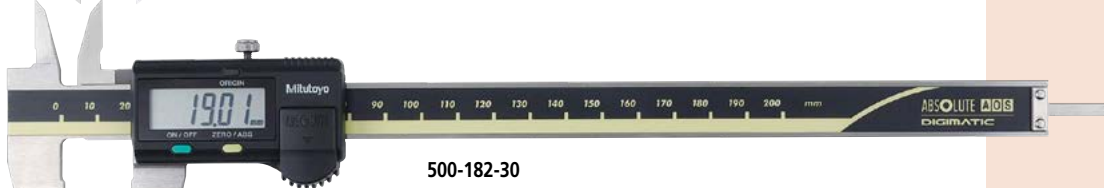
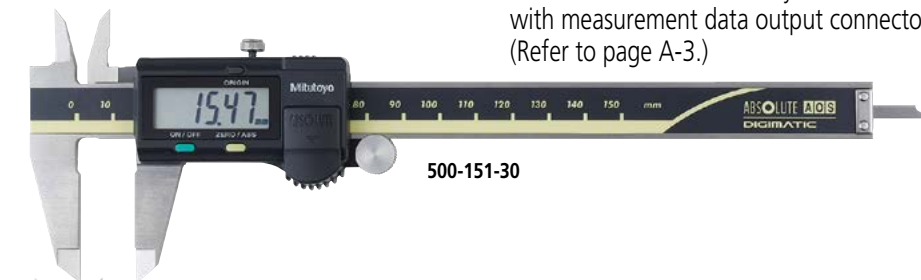
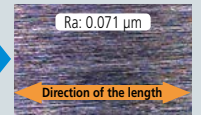
Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement

Conventional ex. 500-151

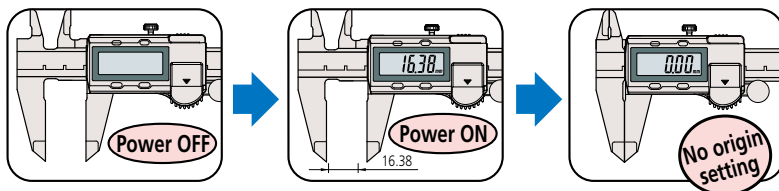


ABSOLUTE Digimatic Caliper ex. 500-151-30



Remarkably easy to read display

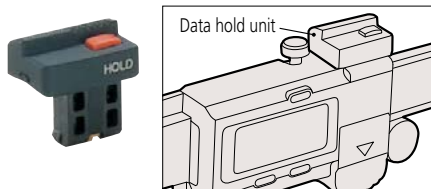
No need to reset the origin after switching on



Optional accessories

Dedicated for the models equipped with a digimatic output function. For details, refer to page A-27.

959143: Data hold unit



Connecting cables for IT / DP / MUX

- 959149: SPC cable with data button (1 m)
- 959150: SPC cable with data button (2 m)

USB Input Tool Direct

- 06AFM380C: SPC cable for USB-ITN-C (2 m)

Connecting cables for U-WAVE-T

- 02AZD790C: SPC cable with data button (160 mm)
- 02AZE140C: SPC cable for foot switch

Wireless data output **U-WAVE[™]**
U-WAVE-TC: 264-621 (Buzzer type)

- U-WAVE-TCB Transmitter (Mitutoyo Bluetooth[®] U-WAVE) 264-625 (Buzzer type)

Refer to page A-15 for details.

Connecting unit for U-WAVE-TC/TCB 02AZF300 (Buzzer type)



SPECIFICATIONS

Functions

Absolute measurement: After power is turned ON, measurement can be started without zero-setting if origin-setting was previously performed. The Absolute origin position can be changed by the ORIGIN button.

Incremental measurement: Display can be set to zero at any arbitrary position for comparative measurements.

Low-voltage alert: If the battery voltage becomes low, a "B" appears in the display to alert the user before measurement is no longer possible. A battery change advisory alert precedes this alert.

Data output: By using the connecting cable (optional), measurement data can be output.

Data hold: By using the data hold unit (optional), the displayed value can be held. This cannot be used with the data output function.

Metric						
Order No.	Range (mm)	Accuracy (mm)*2	Mass (g)	Depth bar	Fine adjustment	Remarks
500-150-30	0 - 100	±0.02	143	ø1.9 mm rod	with thumb roller	—
500-180-30*1					—	
500-151-30					with thumb roller	
500-154-30	0 - 150	±0.02	168	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-155-30						Carbide-tipped jaws for outside and inside measurement
500-158-30						ø1.9 mm rod
500-181-30*1						—
500-152-30	0 - 200	±0.02	198	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-156-30						Carbide-tipped jaws for outside and inside measurement
500-157-30						—
500-182-30*1						—
500-153-30	0 - 300	±0.03	350	—	with thumb roller	—

*1 Without SPC data output

*2 Excluding quantizing error of ±1 count in LSD

Inch / Metric							
Order No.	Range (in)	Accuracy*2	Mass (g)	Depth bar	Fine adjustment	Remarks	
500-170-30	0 - 4	±0.001 in/ ±0.02 mm	137	0.075 inch rod	with thumb roller	—	
500-195-30*1							—
500-171-30							Blade
500-174-30	0 - 6	±0.001 in/ ±0.02 mm	162	0.075 inch rod	with thumb roller	Carbide-tipped jaws for outside measurement	
500-175-30						Carbide-tipped jaws for outside and inside measurement	
500-178-30						—	
500-196-30*1						—	
500-159-30*1	0 - 8	±0.0015 in/ ±0.03 mm	192	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-160-30*1						Carbide-tipped jaws for outside and inside measurement	
500-172-30						—	
500-176-30						—	
500-177-30	0 - 12	±0.0015 in/ ±0.03 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-197-30*1						Carbide-tipped jaws for outside and inside measurement	
500-163-30*1						—	
500-164-30*1						—	
500-173-30	0 - 12	±0.0015 in/ ±0.03 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-167-30						Carbide-tipped jaws for outside and inside measurement	
500-168-30						—	
500-193-30*1						—	
500-165-30*1	0 - 12	±0.0015 in/ ±0.03 mm	350	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-166-30*1						Carbide-tipped jaws for outside and inside measurement	

*1 Without SPC data output

*2 Excluding quantizing error of ±1 count in LSD

DIMENSIONS

With thumb roller

Unit: mm

Without thumb roller

Range (mm)	A	B	C	D	H	L
0 - 100	16.5	21	14.5	40	16	182
0 - 150	16.5	21	14.5	40	16	233
0 - 200	20	24.5	18	50	16	290
0 - 300	22	27.5	19.8	64	20	404

Jaw thickness: 3.5 mm for 0 to 100 mm/0 to 150 mm/0 to 200 mm models and 3.8 mm for 0 to 300 mm model