

# Mitutoyo



## Absolute Digimatic Caliper (without SPC data output)

Order No.	Range	Resolution	Accuracy*
500-196-30	0-6"/150mm	0.0005"/0.01mm	±0.001"/0.02mm
500-197-30	0-8"/200mm	0.0005"/0.01mm	±0.001"/0.02mm
500-193-30	0-12"/300mm	0.0005"/0.01mm	±0.0015"/0.03mm

\*Excluding quantizing error of ±1 count in LSD

## Absolute Digimatic Caliper (with SPC data output)

Order No.	Range	Resolution	Accuracy*
500-171-30	0-6"/150mm	0.0005"/0.01mm	±0.001"/0.02mm
500-172-30	0-8"/200mm	0.0005"/0.01mm	±0.001"/0.02mm
500-173-30	0-12"/300mm	0.0005"/0.01mm	±0.0015"/0.03mm

\*Excluding quantizing error of ±1 count in LSD



## Absolute Digimatic Caliper (without SPC data output)

Order No.	Range	Resolution	Accuracy*
500-181-30	0-150mm	0.01mm	0.02mm
500-182-30	0-200mm	0.01mm	0.02mm
500-153-30**	0-300mm	0.01mm	0.03mm

\*Excluding quantizing error of ±1 count in LSD

\*\* with SPC data output and with thumb roller

# Calipers

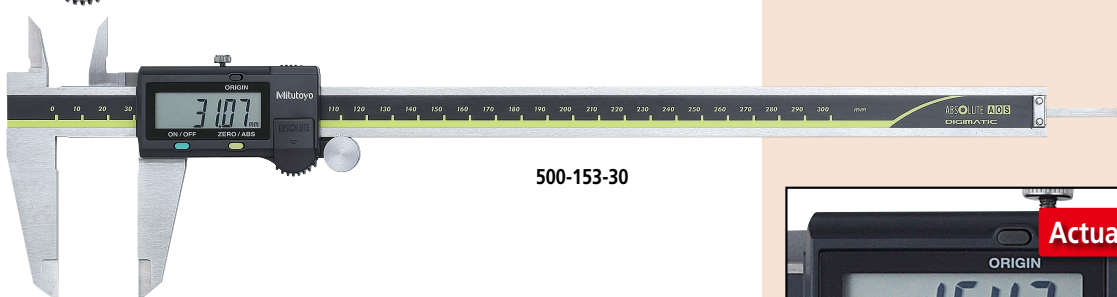
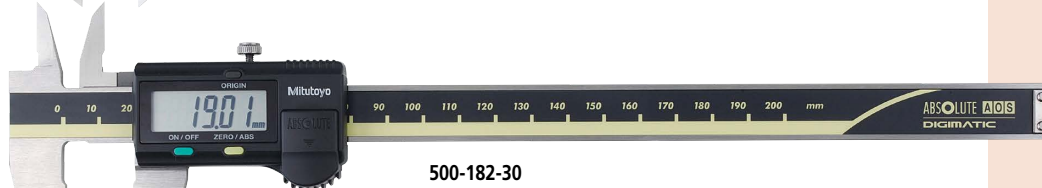
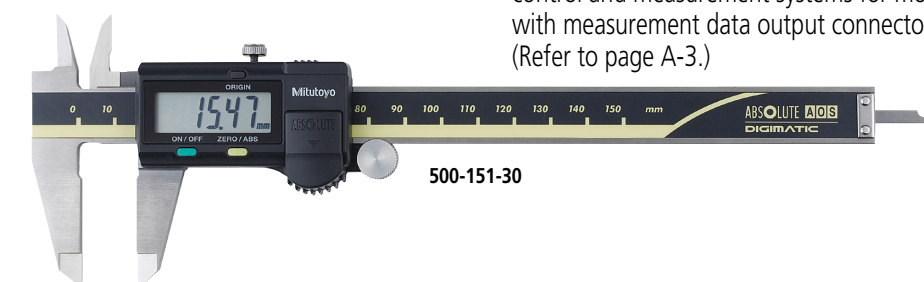
An industry standard measuring tool

## ABSOLUTE Digimatic Caliper SERIES 500 — with exclusive ABSOLUTE Encoder Technology

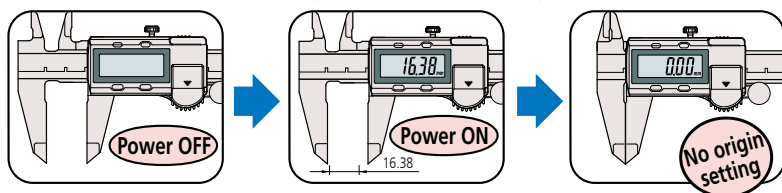
**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

- 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.)



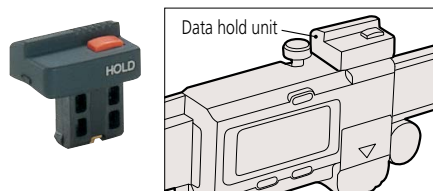
### No need to reset the origin after switching on



### 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<sup>®</sup>**  
U-WAVE-TC: 264-621 (Buzzer type)

• U-WAVE-TCB Transmitter  
(Mitutoyo Bluetooth<sup>®</sup> U-WAVE)  
264-625 (Buzzer type)

Refer to page A-15 for details.

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



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<sup>™</sup>**



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

### Technical Data

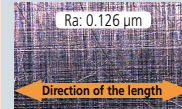
- Accuracy:  $\pm 0.02$  mm ( $\leq 200$  mm),  $\pm 0.03$  mm ( $\leq 300$  mm) (excluding quantizing error)
- Resolution: 0.01 mm or 0.0005 in/0.01 mm
- Repeatability: 0.01 mm
- Scale type: ABSOLUTE electromagnetic induction linear encoder
- Max. response speed: Unlimited
- Battery: SR44 (1 pc), **938882**, 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

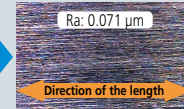
Conventional

ex. 500-151



ABSOLUTE Digimatic Caliper

ex. 500-151-30



Remarkably easy to read display

## 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.

## SPECIFICATIONS

### POPULAR ITEM

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			168	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-154-30				—	—	Carbide-tipped jaws for outside and inside measurement
500-155-30	0 - 150	±0.02	168	Blade	with thumb roller	—
500-158-30				—	—	
500-181-30*1			198	ø1.9 mm rod	—	—
500-152-30				—	—	
500-156-30	0 - 200	±0.02	198	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-157-30				—	—	Carbide-tipped jaws for outside and inside measurement
500-182-30*1			350	—	—	—
500-153-30				—	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			162	Blade		Carbide-tipped jaws for outside measurement
500-174-30				—		Carbide-tipped jaws for outside and inside measurement
500-175-30	0 - 6	±0.001 in/ ±0.02 mm	162	0.075 inch rod	with thumb roller	—
500-178-30				—		
500-196-30*1			192	Blade		Carbide-tipped jaws for outside measurement
500-159-30*1				—		Carbide-tipped jaws for outside and inside measurement
500-172-30	0 - 8	±0.0015 in/ ±0.03 mm	192	Blade	with thumb roller	—
500-176-30				—		
500-177-30			350	Blade		Carbide-tipped jaws for outside measurement
500-197-30*1				—		Carbide-tipped jaws for outside and inside measurement
500-163-30*1	0 - 12	±0.0015 in/ ±0.03 mm	350	Blade	with thumb roller	—
500-164-30*1				—		
500-173-30			350	Blade		Carbide-tipped jaws for outside measurement
500-167-30				—		Carbide-tipped jaws for outside and inside measurement
500-168-30	0 - 12	±0.0015 in/ ±0.03 mm	350	Blade	with thumb roller	—
500-193-30*1				—		
500-165-30*1			350	Blade		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

