

Calipers

An industry standard in measuring tools

ABSOLUTE Digimatic Caliper 500 Series — with exclusive ABSOLUTE Encoder Technology

- ABSOLUTE electromagnetic induction linear encoder system is introduced (except for 0 - 300mm/0 - 12" models).
- 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. This button will also allow return to the absolute (ABS) mode and display of the true position from the origin (usually jaws closed point).
- Large and clear LCD readout.
- Smooth slider movement makes for comfortable operation.
- 18,000 hours battery life.
- 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.

ABSOLUTE™ (Refer to page X for details.)



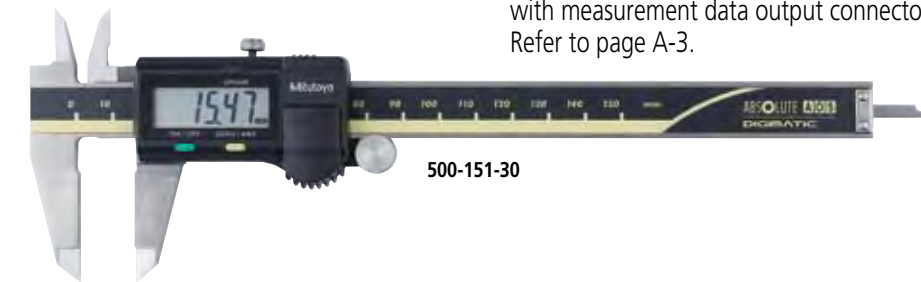
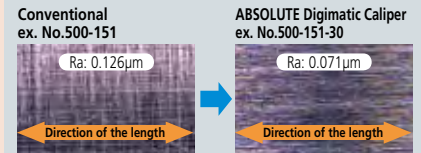
An inspection certificate is supplied as standard. Refer to page X for details.

Technical Data

Accuracy: $\pm 0.02\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.03\text{mm}$ ($\leq 300\text{mm}$) (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm
 Repeatability: 0.01mm
 Display: LCD
 Scale type*: ABSOLUTE electromagnetic induction linear encoder
 *ABSOLUTE electrostatic capacity static linear encoder for 0 - 300mm/0 - 12" models.
 Max. response speed: Unlimited
 Battery: **SR44** (1 pc), **938882**, for initial operational checks (standard accessory)
 Battery life: Approx. 5 years under normal use (18,000 hours for continuous use)

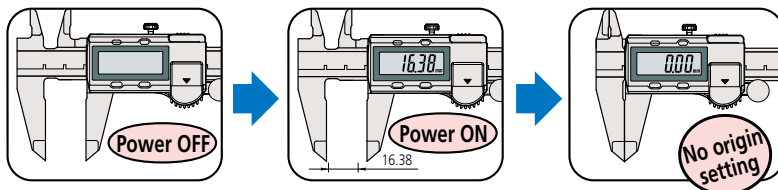
Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement



Remarkably easy to read display

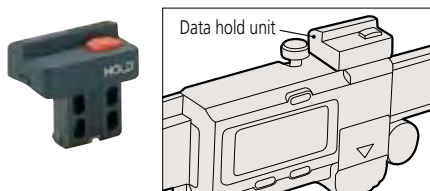
A built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting – just like using a vernier caliper.



Optional accessories

Dedicated for the models equipped with a digimatic output function. For details, refer to page D-39.

959143: Data hold unit



Connecting cables for IT/DP/MUX

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



USB Input Tool Direct

- 06ADV380C: SPC cable for USB-ITN-C (2m)

Connecting cables for U-WAVE-T

- 02AZD790C: SPC cable for U-WAVE with data button (160mm)
- 02AZE140C: SPC cable for footswitch

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 (option), measurement data can be output.

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

SPECIFICATIONS

Metric						
Order No.	Range	Accuracy**	Mass	Depth bar	Fine adjustment	Remarks
500-150-30	0 - 100mm	±0.02mm	137	ø1.9mm rod	with thumb roller	—
500-180-30*					—	
500-151-30					with thumb roller	
500-154-30	0 - 150mm	±0.02mm	162	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-155-30						Carbide-tipped jaws for outside and inside measurement
500-158-30						—
500-181-30*						—
500-152-30	0 - 200mm	±0.02mm	192	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*						—
500-153	0 - 300mm	±0.03mm	350	—	with thumb roller	—

* Without SPC data output

* Not including quantizing error of ±1 count in LSD

Inch/Metric						
Order No.	Range	Accuracy**	Mass	Depth bar	Fine adjustment	Remarks
500-170-30	0 - 4"	±0.001"/ ±0.02mm	137	.075" rod	with thumb roller	—
500-195-30*						—
500-171-30						Blade
500-174-30	0 - 6"	±0.001"/ ±0.02mm	162	.075" 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*						Carbide-tipped jaws for outside measurement
500-159-30*	0 - 8"	±0.001"/ ±0.02mm	192	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
500-160-30*						—
500-172-30						Carbide-tipped jaws for outside measurement
500-176-30						Carbide-tipped jaws for outside and inside measurement
500-177-30	0 - 8"	±0.001"/ ±0.02mm	192	Blade	with thumb roller	—
500-197-30*						Carbide-tipped jaws for outside measurement
500-163-30*						Carbide-tipped jaws for outside and inside measurement
500-164-30*						—
500-173	0 - 12"	±0.0015"/ ±0.03mm	350	—	—	Carbide-tipped jaws for outside measurement
500-167						Carbide-tipped jaws for outside and inside measurement
500-168						—
500-193*						—
500-165*	0 - 12"	±0.0015"/ ±0.03mm	350	—	—	Carbide-tipped jaws for outside measurement
500-166*						Carbide-tipped jaws for outside and inside measurement

* Without SPC data output

* Not including quantizing error of ±1 count in LSD

DIMENSIONS

