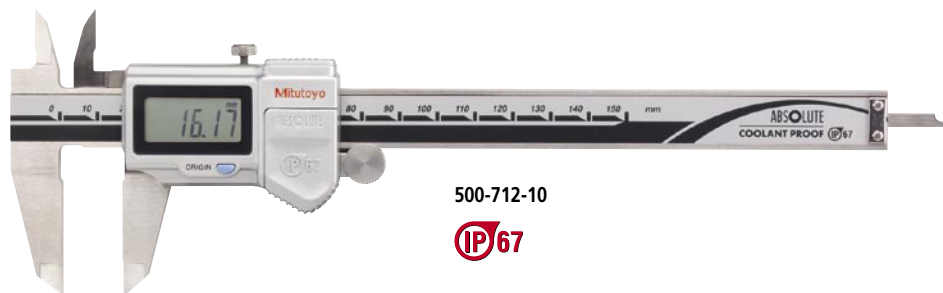


ABSOLUTE Coolant Proof Caliper

SERIES 500 — with Dust/Water Protection Conforming to IP67 Level

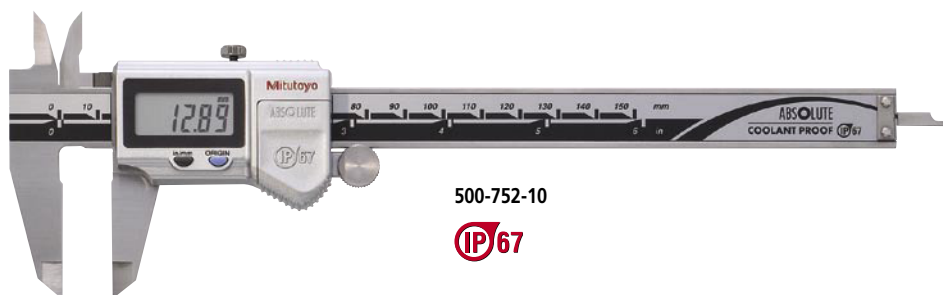
FEATURES

- Can be used in workshop conditions exposed to coolant, water, dust or oil.
- Easy to use - no need to wipe or clean the scale.
- Advanced design styling.
- Incorporates absolute measurement system.
- Automatic power-on/off.
- Data output function.



500-712-10

IP67



500-752-10

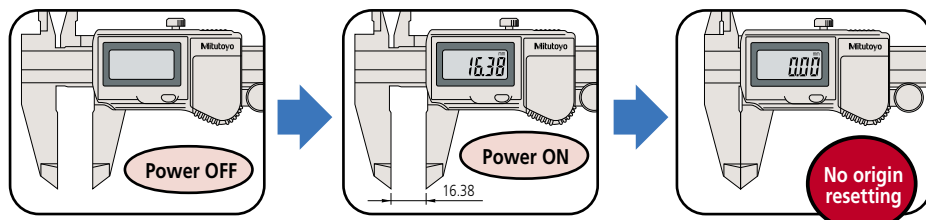
IP67



500-763-10

IP67

Built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting. It's as easy as vernier caliper measurements.



Certificate of inspection

CERTIFICATE OF INSPECTION / CERTIFICAT DE CONTROLE		Inspection result/Résultats		(GB/JP)	
Product name/Désignation	Digital Caliper/à coupeuse Digital	Measuring length	Permissible values	Instrumental error/Erreur	Intermittent
Model No./Modèle	CD-157B	Position de mesure	Erreur admissible	Erreur	Intermittent
Code No./Référence	500-452				
Serial No./No. de série	03415811				
Measuring length/Longueur de mesure	0-150mm				
Minimum indication/Resolution	0.01mm				
Standard Temperature / Température de Référence	20°C				
QC Manager/Responsable Qualité Contrôle					
Inspection standard: Mitutoyo standard					
Based on JISB7507:1993/CPA02:1995					
Traceable to: NIST/JANIST by JCS No.3030/NIST via 6210886M-03					
PTB via 3785 PTB 02-4340 PTB 03					
Overall Judgment: Passed/Passed/Conformité: conforme					

Measurement data output function is available with a water-resistant SPC cable.



SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

(Refer to the page 9 for details.)



IP67

(Refer to the page 9 for details.)



(Refer to the page 9 for details.)

Technical Data

Accuracy: $\pm 0.02\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.03\text{mm}$ ($> 200\text{mm}$)
(excluding quantizing error)
Resolution: 0.01mm or .0005"/0.01mm
Repeatability: 0.01mm
Display: LCD
Length standard: ABSOLUTE electromagnetic induction linear encoder
Max. response speed: Unlimited
Battery: SR44 (1 pc.), **938882**
Battery life: Approx. 3 years under normal use
(1 year: over 300mm models)
Dust/Water protection level: IP67

Function

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)
Alarm: Low voltage, Counting value composition error

Optional Accessory

05CZA624: SPC cable with data switch (1m)

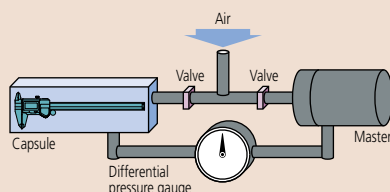
05CZA625: SPC cable with data switch (2m)



05CZA624

Air leakage detection system used for water-proof testing

Generally, air leakage tests are performed to evaluate water resistance. Testing begins by placing a measuring tool into the capsule. Next, air with equivalent pressure is supplied to the capsule and the master, then the valves are closed. If none of the air in the capsule seeps into the measuring tool, the capsule's air pressure will remain equal to that in the master, and the differential pressure gauge will continue to point to the center. However, if some air does seep into the measuring tool, it will create an air pressure difference in the amount indicated by the differential pressure gauge. Thus, detection of air pressure differences is used as a criterion for judging leakage. Every single unit of the ABS Coolant Proof calipers and Coolant Proof micrometer is tested this way for air leakage to help ensure product quality.



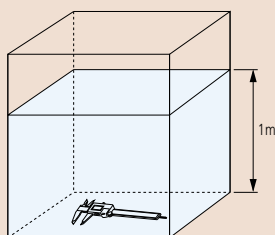
IP66 protection level

- Level 6: Dust-tight
No ingress of dust.
- Level 6: Protected against powerful water jet.
Water projected in powerful jets* against the enclosure from any direction shall have no harmful effects.
*Size of direct jets: uses 12.5 mm (inner diameter) nozzle emitting a 100 kPa jet of water at 100 liters per minute for at least 3 minutes from a distance of approx. 3 meters.



IP67 protection level

- Level 6: Dust-tight
No ingress of dust.
- Level 7: Protected against the effects of temporary immersion in water.
Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed 1 meter in water under standardized conditions of pressure and time (30 min.).



SPECIFICATIONS

Metric				
Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 150mm	500-702-10*	Blade	with thumb roller	—
0 - 150mm	500-712-10	Blade	with thumb roller	—
0 - 150mm	500-706-11*	Blade	—	—
0 - 150mm	500-716-11	Blade	—	—
0 - 150mm	500-709-11*	ø1.9mm rod	—	—
0 - 150mm	500-719-10	ø1.9mm rod	with thumb roller	—
0 - 150mm	500-721-10	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 150mm	500-723-10	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 150mm	500-727-11	Blade	—	Carbide-tipped jaws for OD & ID measurement
0 - 200mm	500-703-10*	Blade	with thumb roller	—
0 - 200mm	500-713-10	Blade	with thumb roller	—
0 - 200mm	500-707-11*	Blade	—	—
0 - 200mm	500-717-11	Blade	—	—
0 - 200mm	500-722-10	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 200mm	500-724-10	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 200mm	500-728-11	—	—	Carbide-tipped jaws for OD & ID measurement
0 - 300mm	500-714-10	—	with thumb roller	—
0 - 300mm	500-718-11	—	—	—
0 - 300mm	500-704-10*	—	with thumb roller	—
0 - 300mm	500-708-11*	—	—	—

*without SPC data output

Inch/Metric				
Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 6"	500-752-10*	Blade	with thumb roller	—
0 - 6"	500-762-10	Blade	with thumb roller	—
0 - 6"	500-768-10*	ø3/40" rod	with thumb roller	—
0 - 6"	500-769-10	ø3/40" rod	with thumb roller	—
0 - 6"	500-731-10*	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 6"	500-735-10	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 6"	500-733-10*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 6"	500-737-10	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-753-10*	Blade	with thumb roller	—
0 - 8"	500-763-10	Blade	with thumb roller	—
0 - 8"	500-732-10*	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 8"	500-736-10	Blade	with thumb roller	Carbide-tipped jaws for ID measurement
0 - 8"	500-734-10*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-738-10	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 12"	500-764-10	—	with thumb roller	—
0 - 12"	500-754-10*	—	with thumb roller	—

*without SPC data output

DIMENSION

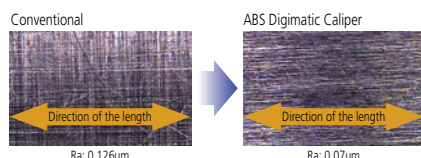
Unit: mm					
Range	L	a	b	c	e
0 - 150mm	233	40	21	16.5	16
0 - 200mm	290	50	24.5	20	16
0 - 300mm	404	64	27.5	22	20

ABSOLUTE Digimatic Caliper

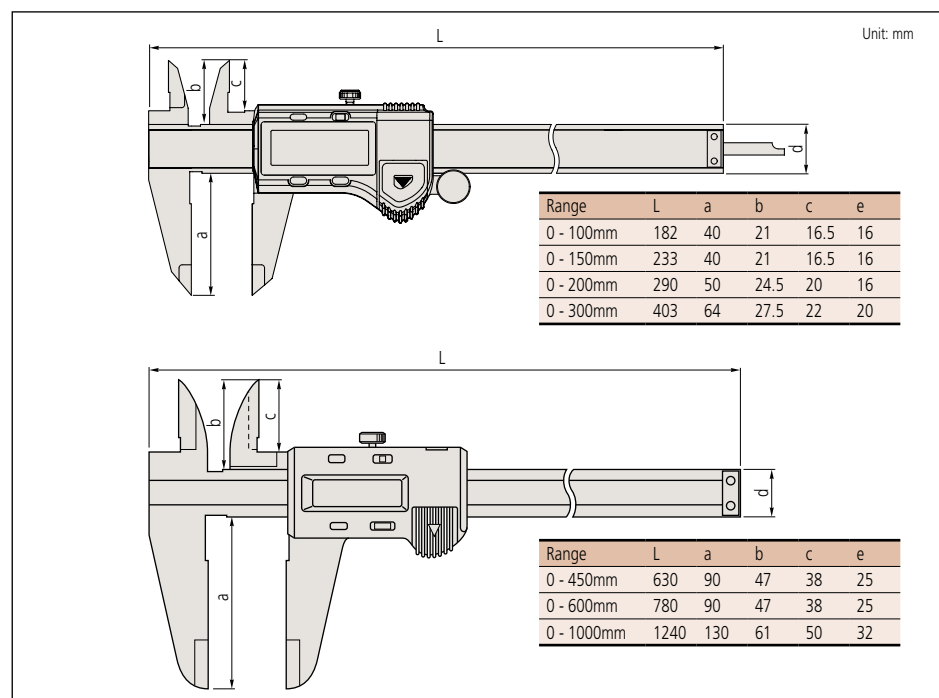
SERIES 500 — with Exclusive ABSOLUTE Encoder Technology

Mitutoyo's absolute Digimatic Caliper is the next generation of electronic calipers. It keeps track of its origin point once set. Whenever turned on, the large LCD screen displays the actual slider position ready to start measurement. No more repeated zero setting is necessary with the absolute encoder technology as well as no more care for overspeed errors.

High quality guide surface finish for smooth slider movement



DIMENSION



FEATURES

- Large and clear LCD readout.
- The ZERO/ABS key allows the display to be Zero-Set at any slider position along the scale for incremental comparison measurements. This switch will also allow return to the absolute (ABS) coordinate and display of the true position from the origin point (usually jaws-closed point).
- Data Hold Unit (959143) is optional.
- Carbide-tipped jaw type calipers are also available.

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

(Refer to the page 9 for details.)



(Refer to the page 9 for details.)

Technical Data

Accuracy: $\pm 0.02\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.03\text{mm}$ ($\leq 300\text{mm}$)
 $\pm 0.05\text{mm}$ ($\leq 600\text{mm}$), $\pm 0.07\text{mm}$ ($\leq 1000\text{mm}$)
(excluding quantizing error)
Resolution: 0.01mm or .0005"/0.01mm
Repeatability: 0.01mm
Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type
linear encoder
Max. response speed: Unlimited
Battery: SR44 (1 pc.), **938882**
Battery life: Approx. 3.5 years under normal use

Function

Origin-set, Zero-setting, Data output, inch/mm conversion
(inch/mm models)
Alarm: Low voltage, Counting value composition error

Optional Accessory

- 959143:** Data hold unit
959149: SPC cable with data switch (1m)
959150: SPC cable with data switch (2m)

959143



959149

SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 100mm	500-150-20	ø1.9mm rod	with thumb roller	—
0 - 100mm	500-180-20*	ø1.9mm rod	—	—
0 - 150mm	500-151-20	Blade	with thumb roller	—
0 - 150mm	500-154-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 150mm	500-155-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 150mm	500-158-20	ø1.9mm rod	with thumb roller	—
0 - 150mm	500-181-20*	Blade	—	—
0 - 200mm	500-152-20	Blade	with thumb roller	—
0 - 200mm	500-156-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 200mm	500-157-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 200mm	500-182-20*	Blade	—	—
0 - 300mm	500-153	Blade	with thumb roller	—
0 - 450mm	500-500-10	—	—	—
0 - 600mm	500-501-10	—	—	—
0 - 1000mm	500-502-10	—	—	—

*without SPC data output

Inch/Metric

Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 4"	500-170-20	ø3/40" rod	with thumb roller	—
0 - 4"	500-195-20*	ø3/40" rod	with thumb roller	—
0 - 6"	500-171-20	Blade	with thumb roller	—
0 - 6"	500-174-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 6"	500-175-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 6"	500-178-20	ø3/40" rod	with thumb roller	—
0 - 6"	500-196-20*	Blade	with thumb roller	—
0 - 6"	500-159-20*	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 6"	500-160-20*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-172-20	Blade	with thumb roller	—
0 - 8"	500-176-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 8"	500-177-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-197-20*	Blade	with thumb roller	—
0 - 8"	500-163-20*	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 8"	500-164-20*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 12"	500-173	Blade	with thumb roller	—
0 - 12"	500-167	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 12"	500-168	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 12"	500-193*	Blade	with thumb roller	—
0 - 12"	500-165*	Blade	—	Carbide-tipped jaws for OD measurement
0 - 12"	500-166*	Blade	—	Carbide-tipped jaws for OD & ID measurement
0 - 18"	500-505-10	—	with thumb roller	—
0 - 24"	500-506-10	—	with thumb roller	—
0 - 40"	500-507-10	—	with thumb roller	—

*without SPC data output

