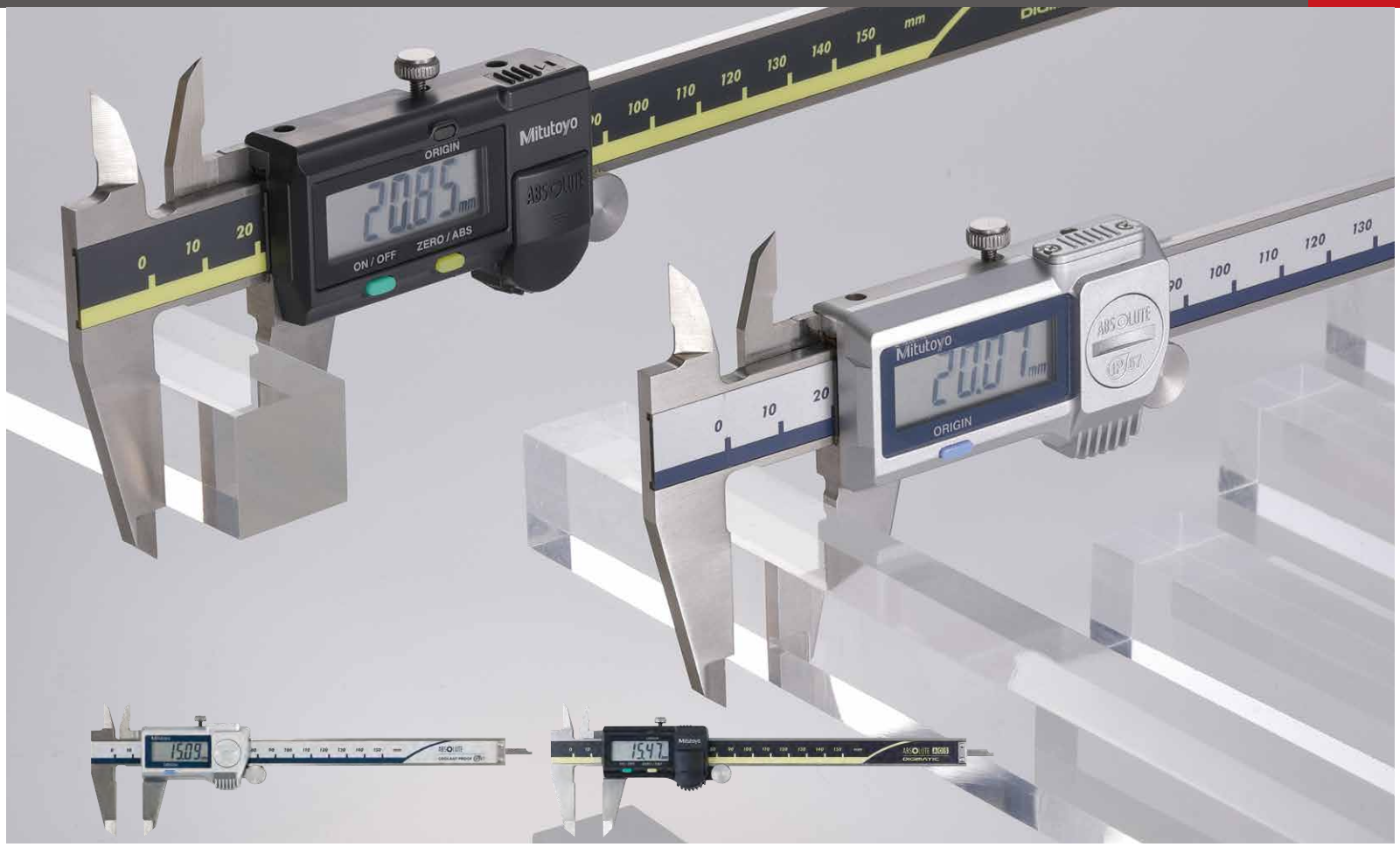
Mitutoyo

SMALL TOOL INSTRUMENTS
AND DATA MANAGEMENT

Digimatic Calipers

IP67 ABS Digimatic Coolant Proof Calipers
ABS Digimatic Calipers



300 mm range model with **11.0 mm** character height for **enhanced visibility.**

500-714-20
Measuring range: 0 - 300 mm
With measurement data output port

With built-in ABS scale,
no need for origin-setting at every power-on.

Highly resistant to water, oil, and staining

with Dust/Water Protection Conforming to IP67 Level

IP67 ABS Digimatic Coolant Proof Calipers

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®.

ABSOLUTE™

IP67

TÜVRheinland® CERTIFIED
Dust- and Water-Protected
www.tuv.com ID 0000045042

PROPRIETARY INSPECTION CERTIFICATE
Mitutoyo guarantees the product quality. Mitutoyo guarantees the product quality.

An inspection certificate is supplied as standard.

U-WAVE fit

Note: MeasurLink® is a registered trademark of Mitutoyo Corporation in Japan and Mitutoyo America Corporation in the United States.

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500-714-20, with 20 mm main beam width, provides high rigidity and excellent straightness of the scale.

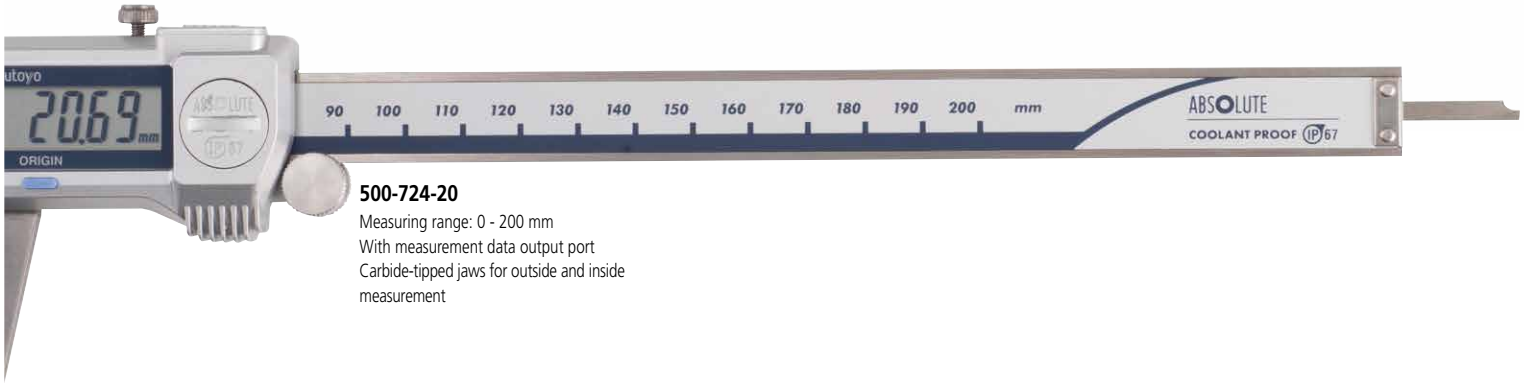
Note: **500-714-20** measuring range: 0 - 300 mm

Environmentally friendly 5-year long-life battery for less frequent battery replacement.

500-712-20
Measuring range: 0 - 150 mm
With measurement data output port

No more handwritten records thanks to the built-in measurement data output function. Centralized data management with U-WAVE fit and DP-1VA LOGGER.

There is no screw on the battery lid. Easy, quick battery replacement.



500-724-20
Measuring range: 0 - 200 mm
With measurement data output port
Carbide-tipped jaws for outside and inside measurement

COOLANT PROOF™ IP67

COOLANT PROOF* is the universal term for Mitutoyo Digimatic Small Tool Instruments that are not only resistant to dust and water ingress but also to deterioration of materials due to contact with the cutting oil or coolant fluids in normal use.

* Some types of aggressive cutting oil or coolant may degrade the sealing materials over time.

IP67 protection level

IP 6 7

First characteristic number	Protection from solid objects (people or things)	
	Brief description	Description
6	Dust-proof	No ingress of dust allowed.

Second characteristic number	Protection from liquids (water, etc.)	
	Brief description	Description
7	Protected against water penetration.	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time.

Note: For details of the test conditions used in evaluating each degree of protection, please refer to the original standard.

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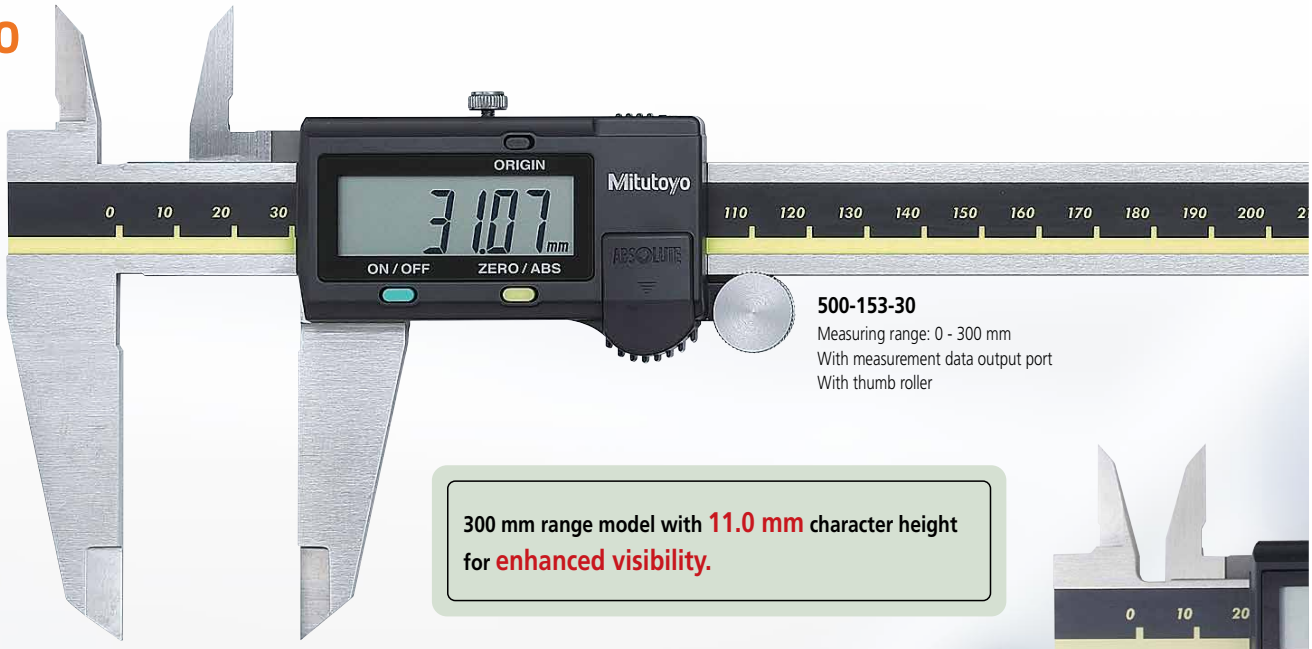

500-153-30
Measuring range: 0 - 300 mm
With measurement data output port
With thumb roller

300 mm range model with 11.0 mm character height for enhanced visibility.

500-151-30
Measuring range: 0 - 150 mm
With measurement data output port●
With thumb roller

With built-in ABS scale,
no need for origin-setting at every power-on.

The Standard for Digimatic Calipers

ABS Digimatic Calipers

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Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink®.

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U-WAVE fit

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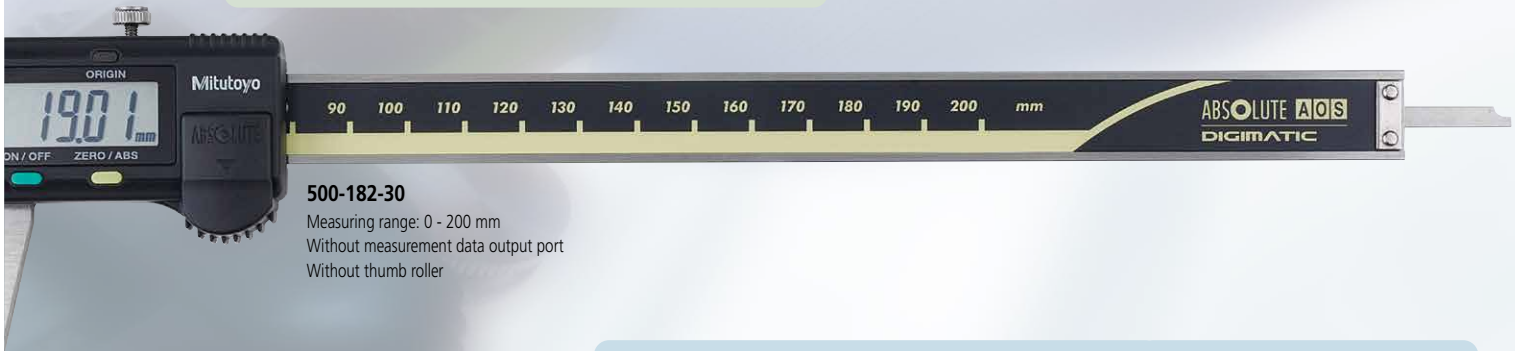
500-153-30, with **20 mm** main beam width, provides **high rigidity and excellent straightness of the scale.**

Note: **500-153-30** measuring range: 0 - 300 mm

Environmentally friendly 5-year long-life battery for less frequent battery replacement.



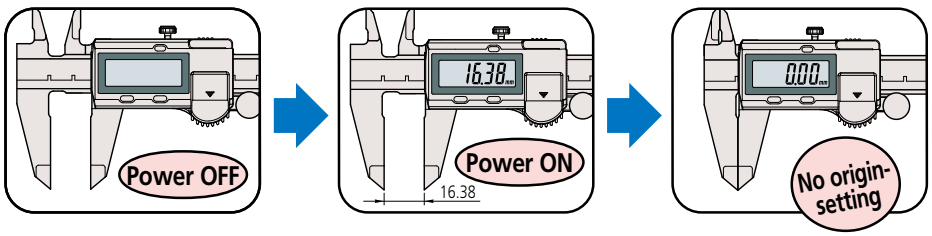
500-182-30
Measuring range: 0 - 200 mm
Without measurement data output port
Without thumb roller

No more handwritten records thanks to the built-in measurement data output function. **Centralized data management** with U-WAVE fit and DP-1VA LOGGER.

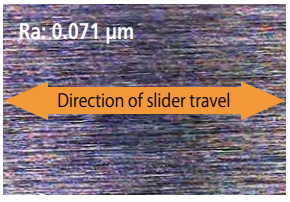
500-181-30
Measuring range: 0 - 150 mm
Without measurement data output port
Without thumb roller

Displayed value clearing (zero-setting) at any position. Comparison measurement has never been easier.

ABS (Absolute) scale makes origin-setting at every power-on unnecessary, and the allowable slider speed is unlimited with this type of scale.



High quality guide surface finish for smooth slider movement



ABS Digimatic Caliper
ex. **500-151-30**

Common specifications

(IP67 ABS Digimatic Coolant Proof Calipers, ABS Digimatic Calipers)

- Digital step: 0,01 mm
- Power supply: Silver oxide button cell battery SR44 (938882), 1 pc. supplied for testing purposes only. Replace with a fresh cell as soon as the caliper is put into use.
- Battery life: Approx. 5 years under normal use
- Max. response speed: Unlimited

Common functions

(IP67 ABS Digimatic Coolant Proof Calipers, ABS Digimatic Calipers)

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.

ORIGIN button:

Sets the Absolute origin at the current slider position when pressed.

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.

IP67 ABS Digimatic Coolant Proof Calipers

Specifications

Metric

Order No.	Measuring range (mm)	Maximum permissible error (mm)*		Measurement data output port	Thumb roller	Remarks
		E_{MPE}	S_{MPE}			
500-706-20	0 - 150	±0,02	±0,04	—	—	—
500-709-20				—	—	Depth bar: ø1,9 mm
500-702-20				—	✓	—
500-716-20				✓	—	—
500-712-20				✓	✓	—
500-719-20				✓	✓	Depth bar: ø1,9 mm
500-721-20				✓	✓	Carbide-tipped jaws for outside measurement
500-727-20				✓	—	Carbide-tipped jaws for outside & inside measurement
500-723-20				✓	✓	Carbide-tipped jaws for outside & inside measurement
500-707-20	0 - 200			—	—	—
500-703-20				—	✓	—
500-717-20				✓	—	—
500-713-20				✓	✓	—
500-722-20				✓	✓	Carbide-tipped jaws for outside measurement
500-728-20				✓	—	Carbide-tipped jaws for outside & inside measurement
500-724-20				✓	✓	Carbide-tipped jaws for outside & inside measurement
500-708-20	0 - 300	±0,03	±0,05	—	—	—
500-704-20				—	✓	—
500-718-20				✓	—	—
500-714-20				✓	✓	—

* Partial Surface Contact Error, E_{MPE} and Shift Error, S_{MPE} are terms (notations) used in ISO 13385-1:2019.

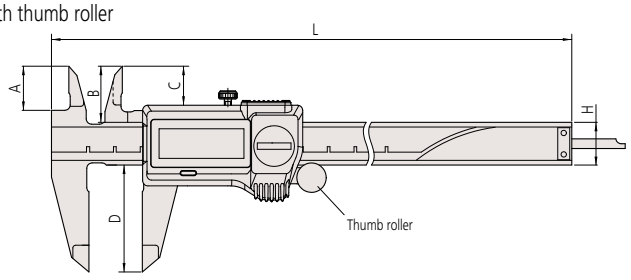
Inch / Metric

Order No.	Measuring range (in)	Maximum permissible error*		Measurement data output port	Thumb roller	Remarks
		E_{MPE}	S_{MPE}			
500-752-20	0 - 6	±0.001 in	±0.002 in	—	✓	—
500-768-20				—	✓	Depth bar: Ø 1,9 mm
500-762-20				✓	✓	—
500-769-20				✓	✓	Depth bar: Ø 1,9 mm
500-731-20				—	✓	Carbide-tipped jaws for outside measurement
500-733-20				—	✓	Carbide-tipped jaws for outside/inside measurement
500-735-20				✓	✓	Carbide-tipped jaws for outside measurement
500-737-20				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-753-20	0 - 8			—	✓	—
500-763-20				✓	✓	—
500-732-20				—	✓	Carbide-tipped jaws for outside measurement
500-734-20				—	✓	Carbide-tipped jaws for outside/inside measurement
500-736-20				✓	✓	Carbide-tipped jaws for outside measurement
500-738-20				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-754-20	0 - 12	±0.0015 in	±0.0025 in	—	✓	—
500-764-20				✓	✓	—

* Partial Surface Contact Error, E_{MPE} and Shift Error, S_{MPE} are terms (notations) used in ISO 13385-1:2019.

DIMENSIONS

With thumb roller



Unit: mm

Measuring range	A	B	C	D	H	L
0 - 150	16.5	21	14.6	40	16	233
0 - 200	20	24.5	18.1	50		290
0 - 300	22	27.5	19.8	64	20	404

Outside jaw thickness = 3.5 mm for 0 to 150 mm / 0 to 200 mm models
3.8 mm for 0 to 300 mm model

ABS Digimatic Calipers
Specifications

Metric

Order No.	Measuring range (mm)	Maximum permissible error (mm)*		Measurement data output port	Thumb roller	Remarks
		E_{MPE}	S_{MPE}			
500-180-30	0 - 100	±0,02	±0,04	—	—	Depth bar ø1,9 mm
500-201-30				✓	—	Depth bar ø1,9 mm
500-150-30				✓	✓	Depth bar ø1,9 mm
500-181-30	0 - 150			—	—	—
500-184-30				—	—	Depth bar ø1,9 mm
500-161-30				✓	—	—
500-203-30				✓	—	Depth bar ø1,9 mm
500-151-30				✓	✓	—
500-158-30				✓	✓	Depth bar ø1,9 mm
500-233-30				✓	—	Carbide-tipped jaws for outside measurement
500-234-30				✓	—	Carbide-tipped jaws for outside/inside measurement
500-154-30				✓	✓	Carbide-tipped jaws for outside measurement
500-155-30				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-182-30	0 - 200			—	—	—
500-162-30				✓	—	—
500-152-30				✓	✓	—
500-235-30				✓	—	Carbide-tipped jaws for outside measurement
500-236-30				✓	—	Carbide-tipped jaws for outside/inside measurement
500-156-30				✓	✓	Carbide-tipped jaws for outside measurement
500-157-30				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-205-30	0 - 300	±0,03	±0,05	✓	—	—
500-153-30				✓	✓	—

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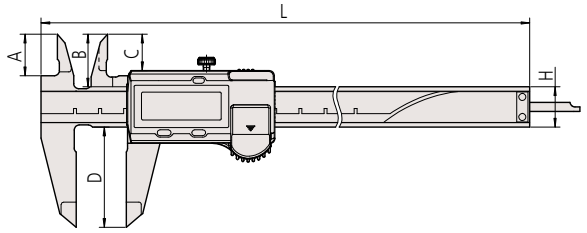
Inch / Metric

Order No.	Measuring range (in)	Maximum permissible error*		Measurement data output port	Thumb roller	Remarks
		E_{MPE}	S_{MPE}			
500-195-30	0 - 4	±0,001 in	±0,002 in	—	✓	Depth bar: Ø 1,9 mm
500-170-30				✓	✓	Depth bar: Ø 1,9 mm
500-191-30	0 - 6			—	—	—
500-196-30				—	✓	—
500-202-30				✓	—	—
500-171-30				✓	✓	—
500-178-30				✓	✓	Depth bar: Ø 1,9 mm
500-159-30				—	✓	Carbide-tipped jaws for outside measurement
500-160-30				—	✓	Carbide-tipped jaws for outside/inside measurement
500-174-30				✓	✓	Carbide-tipped jaws for outside measurement
500-175-30				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-197-30	0 - 8			—	✓	—
500-204-30				✓	—	—
500-172-30				✓	✓	—
500-163-30				—	✓	Carbide-tipped jaws for outside measurement
500-164-30				—	✓	Carbide-tipped jaws for outside/inside measurement
500-176-30				✓	✓	Carbide-tipped jaws for outside measurement
500-177-30				✓	✓	Carbide-tipped jaws for outside/inside measurement
500-193-30	0 - 12	±0,0015 in	±0,0025 in	—	✓	—
500-173-30				✓	✓	—
500-165-30				—	—	Carbide-tipped jaws for outside measurement
500-166-30				—	—	Carbide-tipped jaws for outside/inside measurement
500-167-30				✓	✓	Carbide-tipped jaws for outside measurement
500-168-30				✓	✓	Carbide-tipped jaws for outside/inside measurement

*Partial Surface Contact Error, E_{MPE} and Shift Error, S_{MPE} are terms (notations) used in ISO 13385-1:2019.

DIMENSIONS

Without thumb roller

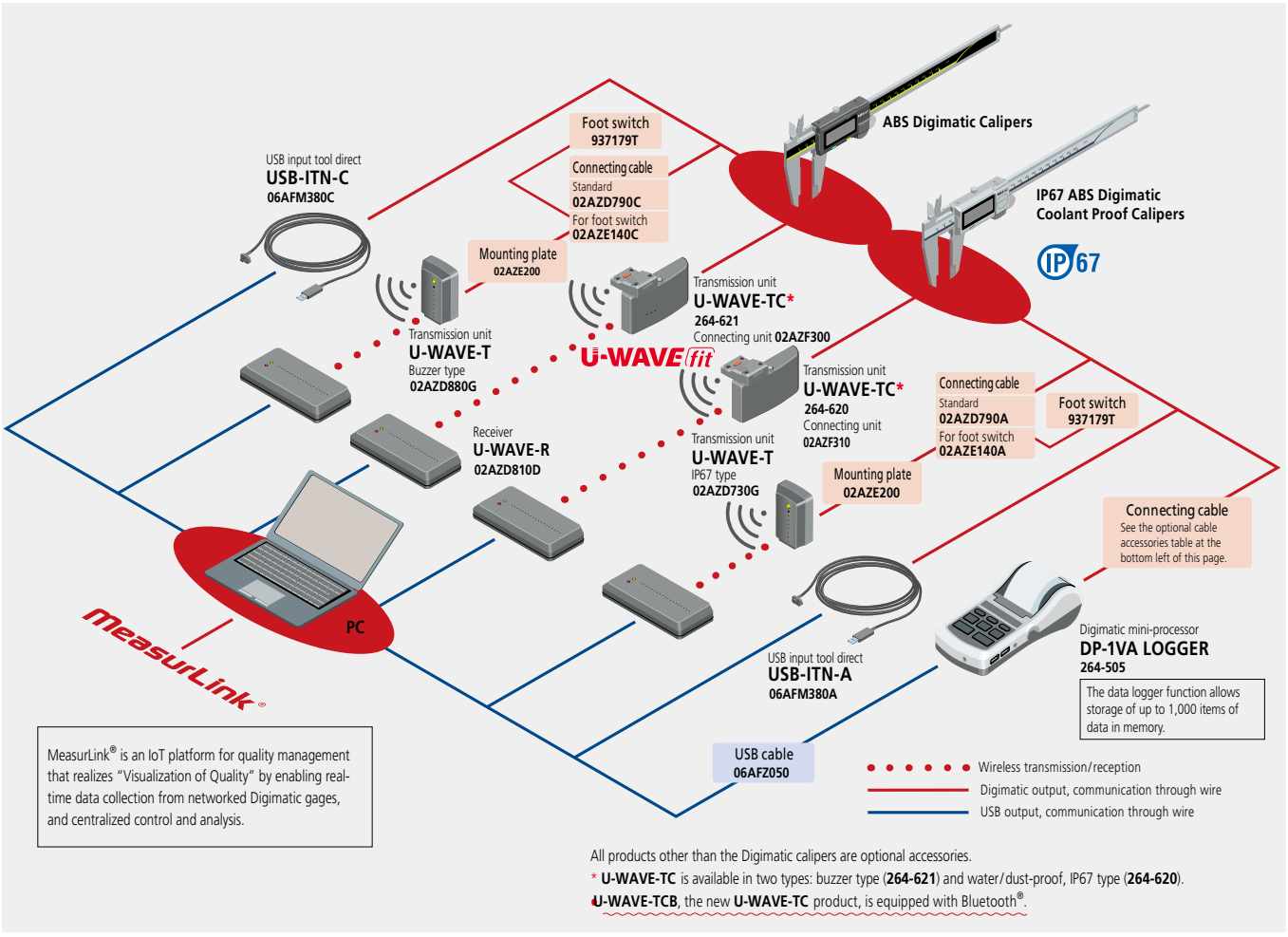


Unit: mm

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

Outside 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

Centralized data management



MeasurLink® is an IoT platform for quality management that realizes "Visualization of Quality" by enabling real-time data collection from networked Digimatic gages, and centralized control and analysis.

All products other than the Digimatic calipers are optional accessories.

* **U-WAVE-TC** is available in two types: buzzer type (**264-621**) and water/dust-proof, IP67 type (**264-620**).
U-WAVE-TCB, the new **U-WAVE-TC** product, is equipped with Bluetooth®.

Optional cable accessories

	Product	Order No.
ABS Digimatic Calipers	Connecting cable	**959149** (1 m)
		959150 (2 m)
	Hold unit	**959143**
IP67 ABS Digimatic Coolant Proof Calipers	Connecting cable	**05CZA624** (1 m)
		05CZA625 (2 m)

Combining optional accessories enables not only wireless measurement data recording but also advanced statistical processing management.

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