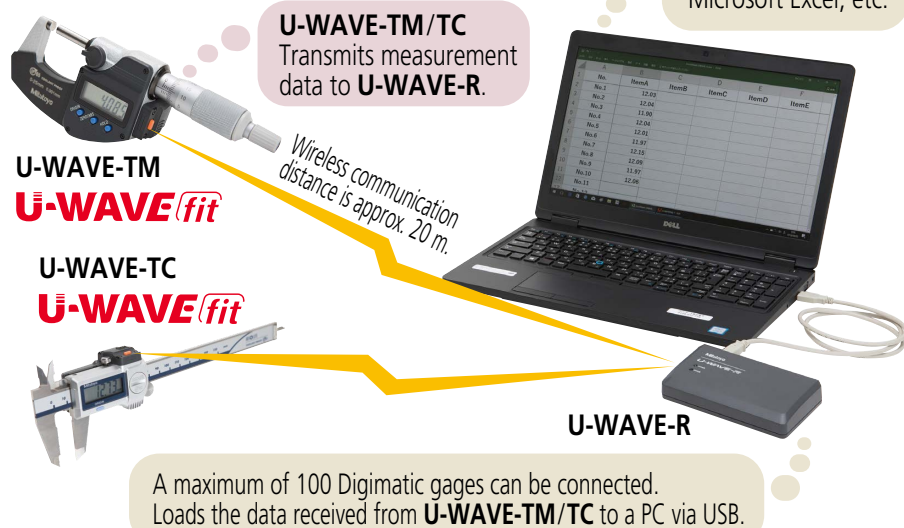


Measurement Data Wireless Communication System U-WAVE-TM/TC (U-WAVE fit)

- While inheriting the functions and performance of **U-WAVE**, these models have been made smaller and thinner, and have improved operability, being designed specifically for use with small Digimatic gages.
- The system using our proprietary transmission method features stable communication and low power consumption, resulting in improved work efficiency.
- Up to 100 Digimatic gages can be registered to a single **U-WAVE-R**, and wireless communication distance is approx. 20 m. Therefore the measurement data can be managed centrally on the shop floor.
- The wireless system without cabling can keep the workplace tidy and increase workability during measurement.
- Installing the optional **USB-ITPAK V3.0/V2.1** software enables the use of Excel to improve measurement efficiency. It makes it possible to populate the data from multiple measuring instruments into separate spreadsheets or input the data collectively at the same time.

U-WAVE fit system configuration



U-WAVE-TM/TC (U-WAVE fit) System Communication Specifications

• Wireless communication	
Wireless specifications	Original <based on IEEE802.15.4 (2.4 GHz)>
Wireless communication distance	Approx. 20 m (line of sight)
Wireless communication speed	250 kbps
Transmission output	2.5 mW (4 dBm) or less
Modulation method	DS-SS (Direct Sequence - Spread Spectrum) Resistant to interfering signals and noise
Communication frequency	2.405-GHz band (ISM band: Universal frequency)
Used band	15 channels (2.405 to 2.475 GHz at intervals of 5 MHz) The noise search function avoids interference with other communication devices.

Note: Please purchase **U-WAVE-TM/TC/R** in the country where you intend to use it.

U-WAVE-R

Model	U-WAVE-R
Code No.*	02AZD810D/02AZD810E/02AZD810F
Power source	USB bus power system
Number of U-WAVE-R units that can be connected to one PC	Up to 15
Number of U-WAVE-T units that can be connected	Up to 100
External dimensions (mm)	140×80×31.6
Mass (g)	130

* Code number differs depending on the destination country.

U-WAVEPAK software (standard accessory)

System Environment: Compatible OS
Windows 2000 Professional (SP4 or later)
Windows XP Home Edition (SP2 or later)
Windows XP Professional (SP2 or later)*
Windows Vista*, Windows 7*, Windows 8/8.1*
Windows 10*
Windows 11 Version 1022B or later
* 32-bit, 64-bit OS supported
<Versions confirmed operational on Windows 10>
• **U-WAVEPAK Version1.020** or later

- Connectability confirmed for tablet PC
- Microsoft Surface Pro 6 (the version whose operation on Windows 10 Professional is confirmed)
 - Required environment: DVD drive (required for installation), USB port x2 ports or more

Note: Cannot be connected to a device other than a PC (such as **DP-1VA LOGGER**, sequencer etc.).

U-WAVEPAK software can be downloaded here.



U-WAVE-R main unit



USB2.0 cable (1 m) attached

U-WAVEPAK



Main specifications of U-WAVEPAK

- Setup of dedicated driver software (USB and virtual COM port)
- Initial setting of ID number and frequency selection (required only once for the first time)
- Load data to Microsoft Excel or Notepad through the data interface function

Product catalog
E12051



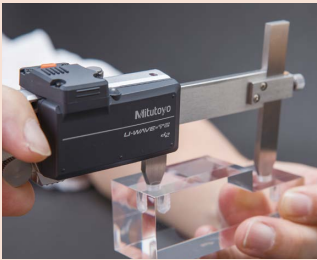
Video



Typical applications



U-WAVE-TM (264-622)



U-WAVE-TC (264-621)

Transmitter/connecting unit



264-622



02AZF310



264-621



02AZF300

SPECIFICATIONS

IP67 type is resistant to water and dust ingress. Buzzer type notifies data reception by buzzer sound and LED.

Connectable measuring instruments	Micrometer		Caliper	
Code No.	264-622	264-623	264-620	264-621
Model	U-WAVE-TM (IP67 type)	U-WAVE-TM (buzzer type)	U-WAVE-TC (IP67 type)	U-WAVE-TC (buzzer type)
Protection Rating	IP67	N/A	IP67	N/A
Data reception indication	LEDs	buzzer and LEDs	LEDs	buzzer and LEDs
Power source	Lithium battery CR2032×1			
Battery life	Approx. 400,000 times continuous data transmission			
External dimensions (mm)	41.9×12.9×38.8		56×11.45×30.4	
Mass (g)	18			

Fixed to transmission unit and inserted into output connector of Digimatic gage.

Code No.	02AZF310	02AZF300	02AZF960	02AZF700
Protection level	IP67	N/A	IP67	N/A
Mass (g)	6			10
Connectable transmitter	U-WAVE-TM/TC (IP67 type)	U-WAVE-TC (for standard type)	U-WAVE-TM (for QuantuMike*)	ID-CNX/ID-FNX (12.7mm type only)



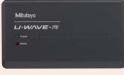








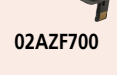




Note 1: **02AZF310** ensures water-proof performance only when attached to measuring instruments of IP67 type.

For information on supported connecting units, please contact your local Mitutoyo sales office.

Note 2: Water-proof performance is ensured only when attached to measuring instruments of IP67 type.

* **02AZF960** is applicable to new models (**293-14X-40/293-18X-40**). Refer to 02-5.

Compatibility of measuring tool and unit

Digimatic gage	Connecting unit/connecting cable	Transmitter	Receiver
Digimatic Micrometers	Standard type  02AZF310	 Buzzer type U-WAVE-TM 264-623	 U-WAVE-R 02AZD810D Design registered in Japan
	QuantuMike* (Refer to 02-5)  02AZF960	 IP67 type U-WAVE-TM 264-622	
Digimatic Calipers	Standard type  02AZF300	 Buzzer type U-WAVE-TC 264-621	
	Coolant-proof type  02AZF310	 IP67 type U-WAVE-TC 264-620	
Digimatic Indicators and Others	ID-CNX/ID-FNX Series (12.7 mm type only)  02AZF700	 Buzzer type U-WAVE-TM 264-623	
	Connecting cable  Other  Bracket	 IP67 type U-WAVE-TM 264-622	
		 Buzzer type U-WAVE-T 02AZD880G	
		 IP67 type U-WAVE-T 02AZD730G	

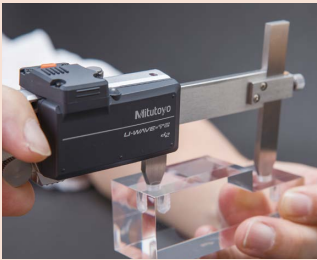
* To use this product, conformity to the applicable radio law in each country is required. Code number differs depending on the destination country. Please contact your nearest Mitutoyo sales office.

* **02AZF960** is applicable to new models (**293-14X-40/293-18X-40**). Refer to 02-5.

Typical applications



U-WAVE-TM (264-622)



U-WAVE-TC (264-621)

Transmitter/connecting unit



264-622



02AZF310



264-621



02AZF300

SPECIFICATIONS

IP67 type is resistant to water and dust ingress. Buzzer type notifies data reception by buzzer sound and LED.

Connectable measuring instruments	Micrometer		Caliper	
Code No.	264-622	264-623	264-620	264-621
Model	U-WAVE-TM (IP67 type)	U-WAVE-TM (buzzer type)	U-WAVE-TC (IP67 type)	U-WAVE-TC (buzzer type)
Protection Rating	IP67	N/A	IP67	N/A
Data reception indication	LEDs	buzzer and LEDs	LEDs	buzzer and LEDs
Power source	Lithium battery CR2032×1			
Battery life	Approx. 400,000 times continuous data transmission			
External dimensions (mm)	41.9×12.9×38.8		56×11.45×30.4	
Mass (g)	18			

Fixed to transmission unit and inserted into output connector of Digimatic gage.

Code No.	02AZF310	02AZF300	02AZF960	02AZF700
Protection level	IP67	N/A	IP67	N/A
Mass (g)	6			10
Connectable transmitter	U-WAVE-TM/TC (IP67 type)	U-WAVE-TC (for standard type)	U-WAVE-TM (for QuantuMike*)	ID-CNX/ID-FNX (12.7mm type only)












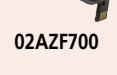




Note 1: **02AZF310** ensures water-proof performance only when attached to measuring instruments of IP67 type.

For information on supported connecting units, please contact your local Mitutoyo sales office.

Note 2: Water-proof performance is ensured only when attached to measuring instruments of IP67 type.

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Compatibility of measuring tool and unit

Digimatic gage	Connecting unit/connecting cable	Transmitter	Receiver
Digimatic Micrometers	Standard type  02AZF310	 Buzzer type U-WAVE-TM 264-623	 U-WAVE-R 02AZD810D Design registered in Japan
	QuantuMike* (Refer to 02-5)  02AZF960	 IP67 type U-WAVE-TM 264-622	
Digimatic Calipers	Standard type  02AZF300	 Buzzer type U-WAVE-TC 264-621	
	Coolant-proof type  02AZF310	 IP67 type U-WAVE-TC 264-620	
Digimatic Indicators and Others	ID-CNX/ID-FNX Series (12.7 mm type only)  02AZF700	 Buzzer type U-WAVE-TM 264-623	
	Connecting cable  Other  Bracket	 IP67 type U-WAVE-TM 264-622	
		 Buzzer type U-WAVE-T 02AZD880G	
		 IP67 type U-WAVE-T 02AZD730G	

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* **02AZF960** is applicable to new models (**293-14X-40/293-18X-40**). Refer to 02-5.