



Send data to nearly any software Data Hardware Guide

Small Tool Instruments
and Data Management



MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Data Management Selection

Gage

Select Connector

WIRED



Digimatic Micrometer



Digimatic Indicator



Digimatic Caliper



USB ITN Direct

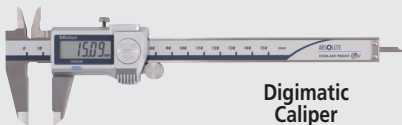


SPC Cable

WIRELESS



Digimatic Micrometer



Digimatic Caliper



Digimatic Gages



Connecting unit

U-WAVE^{fit}



U-WAVE-TM



Connecting unit



U-WAVE-TC



Connecting cable



U-WAVE-T



Digimatic Micrometer



Digimatic Caliper



Connecting unit

Bluetooth
U-WAVE^{fit}



U-WAVE-TMB



Connecting unit



U-WAVE-TCB

See How Gages, Hardware and Software all Connect Together

Select Interface



USB Input Tool



Multiplexer

*Does not support ITPAK

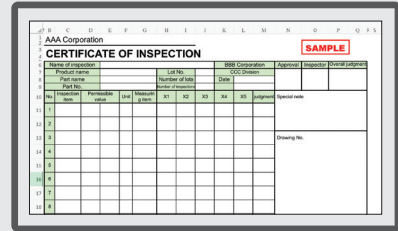


DP-1VA LOGGER

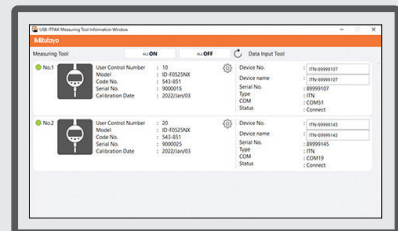


U-WAVE-R

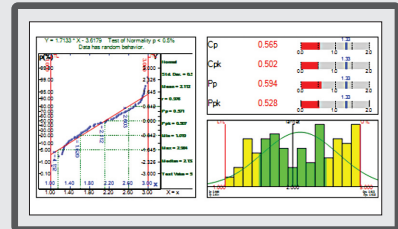
Select Software



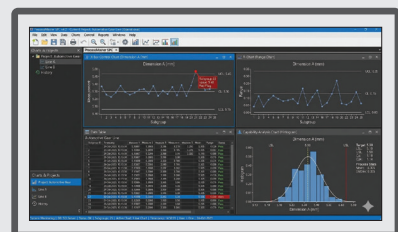
Excel®



ITPAK 3.0



MeasurLink®



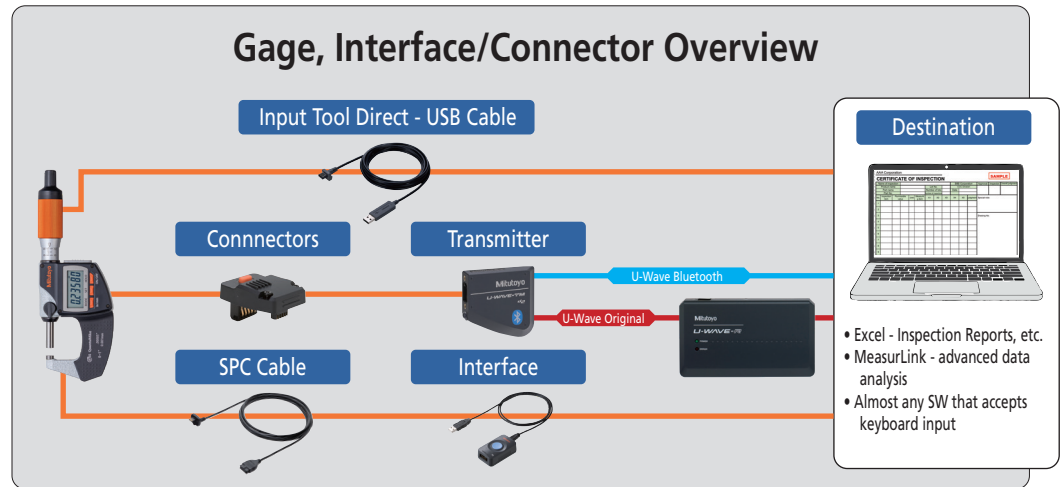
3rd Party Software

Cables & Connectors

These connectors & cables will plug into your gage and then into an interface (or will directly into your PC's USB port for the Input Tool Direct cables).

		Gage Connector Type										
		A	B	C	CR	D	E	F	FB	FR	FL	
Appearance of port on gage												
Plug - Gage Side (Plugs into port on gage)												
Connector type		Water proof type - output button	Water proof type - output button - Back	Straight -output button	Right angle -output button	Rectangular	Round	Flat Straight	Flat - 90° Back	Flat - 90° Right	Flat - 90° Left	
# of pins		5		5		10	6	5				
WIRED	Input Tool Direct (USB-ITN)	06AFM380A	06AFM380B	06AFM380C		06AFM380D	06AFM380E	06AFM380F				
	SPC Cable	05CZA624	05CZA662	959149	04AZB512	936937	937387	905338	905689	905691	905693	
WIRELESS	Connector to attach to FIT wireless transmitter (Bluetooth + standard)	02AZF310		02AZF300				06AFM380F For most, standard calipers with output				
	Transmitter connecting cable	02AZD790A	02AZD790B	02AZD790C		02AZD790D	02AZD790E	02AZD790F				
	Transmitter connecting cable (w/ footswitch port)	02AZE140A	02AZE140B	02AZE140C		02AZE140D	02AZE140E	02AZE140F				
COMPATIBILITY	Product Connection NOTE	Most IP67 Calipers	Most IP65 Mics (except S1)	Most standard Calipers	Most Micrometers larger than 12"	Many Hardness Testers, QMH	Many HM Series & Caliper Gages	Many previous gen IDC & IDS indicators, Digimatic Scale Units				
	Popular Products with this Connector	 500-762-20	 293-330-32	 500-171-32	 293-782	 64PKA094C	 64AAB305PA	 543-312B-10	 572-210-30			

	G	SA	SF
	Flat Straight	Flat Straight Waterproof	Flat Straight



					Plugs Into	Plug - Interface/PC Side	Purpose	Note
	8	8						
06AFM380G	06AGQ001A	06AGQ001F	➔		USB port on PC		Excel - direct	Easiest. Plug and play.
21EAA194	06AGL111	06AGL011	➔		Interfaces with 10 pin receptacle/port: MIG1,2,3,4 EC Counter Input Tool Data Logger - DP-1VA		Excel - direct Remote display Data Logging	
	02AZF960	02AZF700 (for SF plug indicators)			U-wave FIT transmitters		Connect to FIT Transmitters	
02AZD790G		02AZG011	➔		U-wave and U-wave FIT transmitters		Connect to FIT and standard Transmitters	
02AZE140G		02AZG021	➔		U-wave and U-wave T		Connect to FIT and standard Transmitters	
ID-N & ID-B indicators	New QuantuMikes	New IDC and IDF indicators						
543-576	293-180-40	543-702B-02						

See INTERFACE OPTIONS on pages 8 and 9



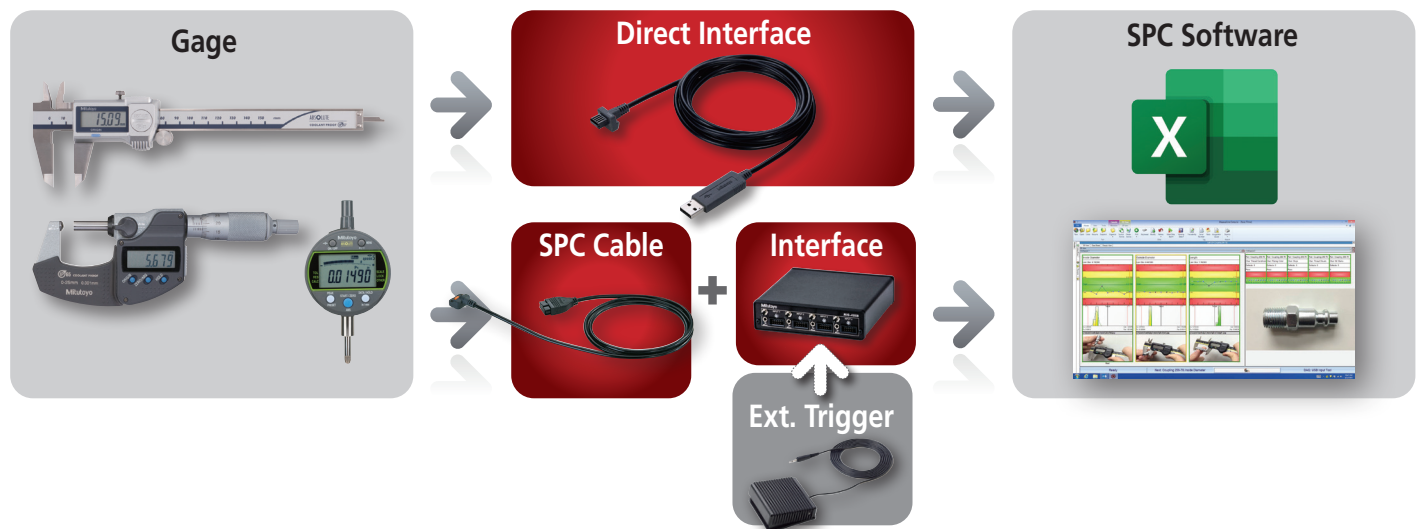
Online Data Interface Selector

Plug and Play Interfaces

Collect data quickly and easily with any of Mitutoyo's Data Management products. Whether your need is to manage and retain incoming data, gather data from multiple tools to create a customer report, perform SPC, or simply send data into Excel, Mitutoyo has the solution.

Benefits:

- No drivers, downloads, or installs required
- Send data into any program by converting your measuring tools into a HID device (virtual USB keyboard)
- Request data from the PC
- Request data on a timed interval
- Supports VCP (Virtual COM Port)
- Converter cables easily transfer data from RS-232 devices to a PC or interface without special software and set-up



Interface USB Input Tool 264-020

- **264-020 (IT-020U)** is an easy-to-use, USB adapter with a large data switch and a port for an optional foot switch.
- It can be connected to various types of measuring instruments using required SPC cables.
- Easily create Microsoft Excel worksheets, enabling further improvement of work efficiency.



Interface USB Multiplexers

The USB Multiplexer is an interface that connects multiple gages with SPC Output to a PC.

- Transfer data from the gage into any software such as Excel or MeasurLink®
- Allows multiple gages to connect to a single USB port
- Keyboard emulation (HID), Virtual COM Port (VCP) and RS232 connections
- MAX, MIN and TIR collection modes
- Data input from Digimatic (d1,d2, S1), and RS-232 devices
- Timed and continuous data streaming
- Map ports to specified spreadsheet columns or rows
- Date and timestamp options



WIRELESS

U-WAVE (2 OPTIONS)

U-Wave Wireless

Mitutoyo original communication

(based on IEEE 802.15.4 protocol)

Up to 400,000 data transmission per battery

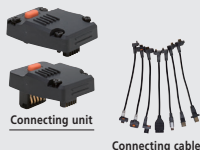
20 m range

Up to 100 transmitters/receiver

Connection

■ Connecting unit/cable

- A compact connecting unit or cable connects the U-WAVE transmitter to the Digimatic gage.



Transmitters

■ U-WAVE-TM/TC/T

- Transmits the measurement data displayed on the gage to U-Wave Receiver.

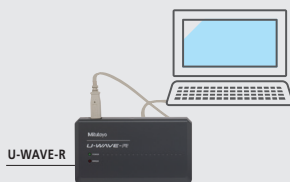


20 m range

Receiver

■ U-WAVE-R

- Receives measurement data and transmits to the PC via USB.
- Powered via USB bus.
- U-WAVEPAK software is required (free download).
- Band ID Scan identifies the optimal frequency for data transmission



Connect up to 100 transmitters

U-Wave Bluetooth

Bluetooth 4.2

communication protocol

Up to 200,000 data transmissions per battery

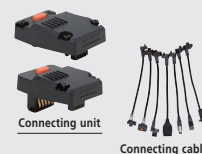
16 m range

Up to 7 connections/PC

Connection

■ Connecting unit/cable

- A compact connecting unit or cable connects the U-WAVE transmitter to the Digimatic gage.



Transmitters

■ U-WAVE-TMB/TCB

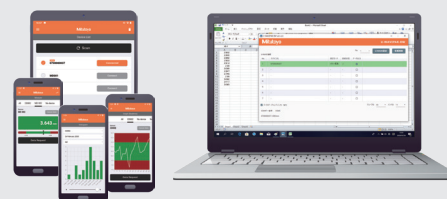
- Transmits the measurement data displayed on the gage to a Bluetooth enabled device.



16 m range

Receiver

- Bluetooth enabled PC, tablet or mobile device receives data.
- Free, optional software available for Windows and mobile devices



Connect up to 3 transmitters

Connect up to 7 transmitters

■ Function comparison table

	U-Wave Wireless	U-Wave Bluetooth
Communication protocol	Mitutoyo Original <based on IEEE802.15.4>	Bluetooth® 4.2
Communication distance	Approx. 20 m (line of sight)	Approx. 16 m (line of sight)
Communication frequency	2.405 to 2.475 GHz	2.402 to 2.480 GHz
Selectable frequency	Yes	Frequency hopping spread spectrum
Selectable control key	Yes (enter, tab, left, right, up, down)	No (simulates enter key only)
Battery life	Up to 400,000 transmissions	Up to 200,000 transmissions
Operating system	Windows	Windows, iOS, Android
Receiver Required	Yes (P/N: 02AZD810D)	No
Maximum number of connections	100	7 (PC) 3 (mobile devices)
Operation modes	Keyboard emulator (HID) or VCP	
Measurement modes	Button or event driven (data request from PC or on timed interval)	
Long button press	Cancel data command	
LED	Data confirmation and low battery warning	
Data export	Microsoft® Excel® or SPC software applications	
Durability	Dust/waterproof and shop-hardened with proprietary fiber-reinforced plastic housing	

✓ Bluetooth® type models have the Bluetooth mark.



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Interfaces

WIRED																																	
USB Input Tool Direct	USB Input Tool	MIG Interfaces (multiple input gathering)	Other Wired Interfaces																														
- No software or app needed - Automatically sets itself up as USB keyboard (HID) - No other interfaces required	- No software or app needed - Automatically sets itself up as USB keyboard (HID) - No other interfaces required - SEND button on interface - Optional Foot/Hand switches - SPC Cable required	- No software or app needed - Automatically sets itself up as USB keyboard (HID) - Multiple gages into single USB port - MAX, MIN, and TIR modes (even if your gage doesn't have this feature built-in) - Timed and continuous output modes - Date and timestamp features - SPC Cable required	Data Logger/processor/printer: DP-1VA - Data can be stored, printed and/or sent to PC - Timer function - Tolerances can be set - Statistics can be calculated and printed without any software required - Data can be triggered by the gage button, cable or the DP-1VA button - Footswitch option - SPC Cable required Remote Display: EC Counter - Large, LED remote display - Functions: zero, preset, GO/NG judgement and signal - SPC Cable required																														
<table><tr><th>Type</th><th>Order No.</th><th>Data switch</th></tr><tr><td>A</td><td>06AFM380A</td><td>✓</td></tr><tr><td>B</td><td>06AFM380B</td><td>✓</td></tr><tr><td>C</td><td>06AFM380C</td><td>✓</td></tr><tr><td>D</td><td>06AFM380D</td><td>–</td></tr><tr><td>E</td><td>06AFM380E</td><td>–</td></tr><tr><td>F</td><td>06AFM380F</td><td>–</td></tr><tr><td>G</td><td>06AFM380G</td><td>–</td></tr><tr><td>SA</td><td>06AGQ001A</td><td>✓</td></tr><tr><td>SF</td><td>06AGQ001F</td><td>–</td></tr></table>	Type	Order No.	Data switch	A	06AFM380A	✓	B	06AFM380B	✓	C	06AFM380C	✓	D	06AFM380D	–	E	06AFM380E	–	F	06AFM380F	–	G	06AFM380G	–	SA	06AGQ001A	✓	SF	06AGQ001F	–			
Type	Order No.	Data switch																															
A	06AFM380A	✓																															
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C	06AFM380C	✓																															
D	06AFM380D	–																															
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F	06AFM380F	–																															
G	06AFM380G	–																															
SA	06AGQ001A	✓																															
SF	06AGQ001F	–																															
Examples  06AFM380  06AGQ001A	 264-020	 64AAB637 1 Input 64AAB638 2 Input 64AAB639 4 Input 64AAB640 8 Input	 Data Logger 264-506A  EC Counter 542-007A																														
ACCESSORIES																																	
	Switches - Footswitch: 937179T - Footswitch (heavy duty): 12AAJ088 - Push button: 64AAB644	Switches - Footswitch: 937179T - Footswitch (heavy duty): 12AAJ088 - Push button: 64AAB644	DP-1VA Accessories - USB Cable (A-microB): 06AFZ050 (1m) - RS-232C Output Cable: 09EAA084 (1m, DB 9 pin) - GO/NG Judgement Cable: 965516 (2m, 10 pin terinal/separate) Switches - Footswitch: 937179T - Footswitch (heavy duty): 12AAJ088 - Push button: 64AAB644																														

WIRELESS				
Bluetooth U-WAVE		U-WAVE Standard		
- No receiver needed - Up to 200,000 transmission per battery - 16m range - Max Number of Connections: - 7 (PC) - 3 (mobile devices) - Connector or U-WAVE Cable required		- Receiver required - Up to 400,000 transmissions per battery - 20m range - Max Number of Connections: - 100 (per receiver) - Connector or U-WAVE Cable required		
Caliper	Micrometer	Caliper	Micrometer	General
 264-624: IP-rated	 264-626: IP-rated	 264-620: IP-rated	 264-622: IP-rated	 02AZD730G: IP67-rated
 264-625: Buzzer type	 264-627: Buzzer type	 264-621: Buzzer Type	 264-623: Buzzer Type	 02AZD880G: Buzzer Type
		 02AZD810D: Receiver		

U-WAVE Wireless Packages

U-WAVE

"U-WAVE", the measurement data wireless communication system, collects data in the inspection process swiftly and accurately, and increases a company's competitiveness based on detailed data analysis. In addition, together with MeasurLink, "IoT of Quality Control envisioned by Mitutoyo" can be achieved.

– U-Wave Wireless packages require U-Wave R Part #02AZD810D, sold separately.

– Gages sold separately.

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Order Number	Description	Components	
264-622-IP-M	U-Wave Wireless Package for Micrometers		
264-622	Transmitter (IP67)	264-622	02AZF310
02AZF310	Connector		
264-620-IP-S	U-Wave Wireless Package for Standard Calipers		
264-620	Transmitter (IP67)	264-620	02AZF300
02AZF300	Connector		
264-620-IP	U-Wave Wireless Package for Coolant-proof Calipers		
264-620	Transmitter (IP67)	264-620	02AZF310
02AZF310	Connector		
02AZD730G-TYPD	U-Wave Wireless Package for QMH, and LSM		
02AZD730G	Transmitter	02AZD730G	02AZE200
02AZD790D	Connecting Cable		
02AZE200	Mounting Bracket		
02AZD730G-HG	U-Wave Wireless Package for 192 and 570 Series Height Gages		
02AZD730G	Transmitter	02AZD730G	02AZE200
02AZD790F	Connecting Cable		
02AZE200	Mounting Bracket		
02AZF960-TM	U-Wave Fit Package for S1 Micrometer		
264-622	Transmitter (IP67)	264-622	02AZF960
02AZF960	Connector		
02AZF700-TM	U-Wave Wireless Package for .5" (12mm) Stroke S1 Indicator		
264-622	Transmitter (IP67)	264-622	02AZF700
02AZF700	Connector		
02AZG011-TM	U-Wave Wireless Package for 1" (25mm) Stroke or Larger S1 Indicators		
264-622	Transmitter (IP67)	264-622	02AZF670
02AZG011	Connecting Cable		
02AZF670	Mounting Bracket		
264-622-TYPF	U-Wave Wireless Package for F-Plug Indicators		
264-622	Transmitter (IP67)	264-622	02AZF670
02AZD790F	Connecting Cable		
02AZF670	Transmitter Mounting Bracket		
264-622-TYPF-FSW	U-Wave Wireless Package w/ Footswitch for F-Plug Indicators		
264-622	Transmitter (IP67)		
02AZE140F	Connecting Cable	02AZE140F	937179T
937179T	Foot Switch		
02AZF670	Transmitter Mounting Bracket		

U-WAVE Bluetooth® Packages

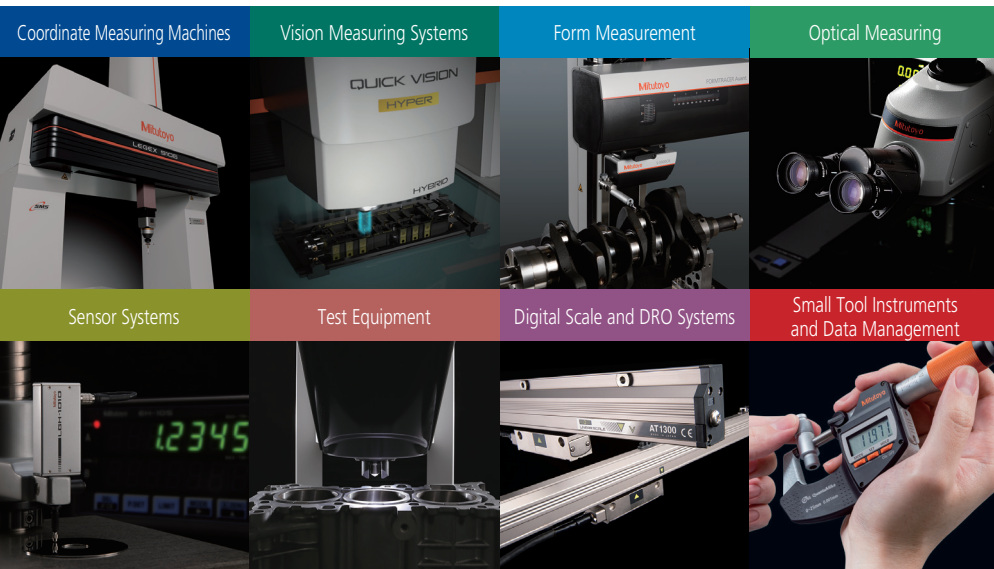
U-WAVE-TMB/ TCB are transmitter models using Bluetooth® wireless technology. No receiver required, and one PC can connect up to seven units of U-Wave Bluetooth®. U-Wave Bluetooth packages require a BLE4.2 enabled device.

– Gages sold separately.



Order Number	Description	Components
264-626-MIC	U-Wave Bluetooth Package for Micrometers	
264-626	Transmitter	 264-626
02AZF310	Connector	 02AZF310
264-624-CALIPER	U-Wave Bluetooth Package for Standard Calipers	
264-624	Transmitter	 264-624
02AZF300	Connector	 02AZF300
264-624-CALIPER67	U-Wave Bluetooth Package for Coolant-proof Calipers	
264-624	Transmitter	 264-624
02AZF310	Connector	 02AZF310
264-624-TYPD	U-Wave Bluetooth Package for SJ Units, QMH, and LSM	
264-624	Transmitter	 264-624
02AZD790D	Connecting Cable	 02AZD790D
264-624-HG	U-Wave Bluetooth Package for 192 and 570 Series Height Gages	
264-624	Transmitter	 264-624
02AZD790F	Connecting Cable	 02AZD790F
02AZF960-TM	U-Wave Bluetooth Package for S1 Micrometer	
264-626	Transmitter (IP67)	 264-626
02AZF960	Connector	 02AZF960
02AZF700-TMB	U-Wave Bluetooth Package for .5" (12mm) Strokes S1 Indicator	
264-626	Transmitter (IP67)	 264-626
02AZF700	Connector	 02AZF700
02AZG011-TMB	U-Wave Bluetooth Package for 1" (25) Strokes or Larger S1 Indicator	
264-626	Transmitter (IP67)	 264-626
02AZG011	Connecting Cable	 02AZG011
02AZF670	Mounting Bracket	 02AZF670
264-626-TYPF	U-Wave Bluetooth Package for F-Plug Indicators	
264-626	Transmitter	 264-626
02AZD790F	Connecting Cable	 02AZD790F
02AZF670	Mounting Bracket	 02AZF670
264-626-TYPF-FSW	U-Wave Bluetooth Package w/Footswitch for F-Plug Indicators	
264-626	Transmitter	 264-626
02AZE140F	Connecting Cable	 02AZE140F
937179T	Foot Switch	 937179T
02AZF670	Mounting Bracket	 02AZF670

For more detailed information, click or scan the QR code below to product-specific data brochures or the catalog



Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.

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