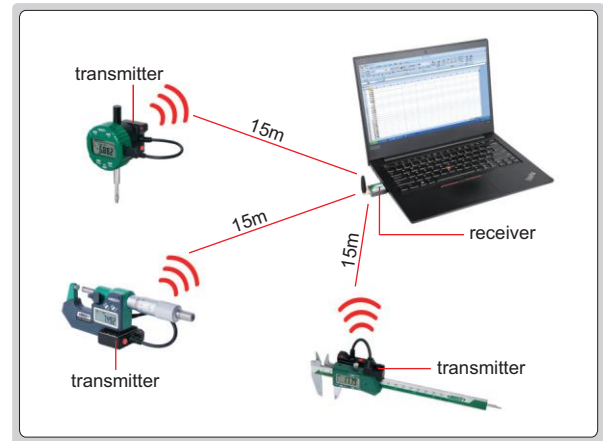# WIRELESS DATA TRANSMISSION SYSTEM (ZIGBEE)

VIDEO

- Through wireless transmission, the readings of measuring tools can be transmitted to computers or mobile phone
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (under the condition of no obstruction and no electromagnetic interference)

Transmitter
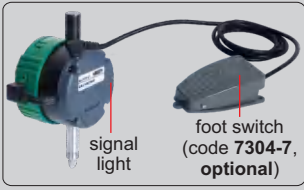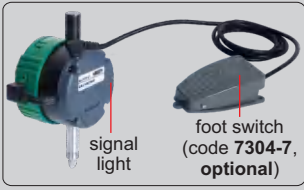
- Connecting to digital measuring tools such as calipers, micrometers and indicators
- CR2032 battery

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-25	transmitter for digital calipers	button, signal light	signal light, button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-22	transmitter for large digital calipers	button, signal light	signal light, button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-30	transmitter for digital micrometers	button, signal light	signal light, "data" button, button, signal light for **3102**, **3128**, **3565** series digital micrometers	■ Press the "data" button of digital micrometer, can also press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on the digital micrometer flashes once
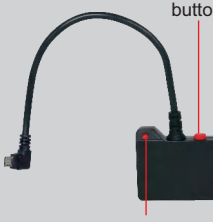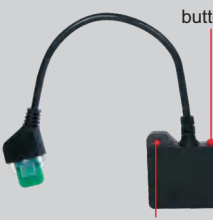
To be continued

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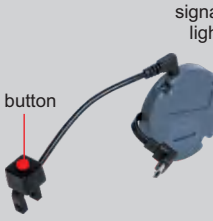| Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-31	transmitter for digital micrometers		IP65 "data" button signal light back	▪ Press the "data" button of digital micrometer ▪ Data is transmitted once, the signal light on the digital micrometer flashes once
7315-50M	transmitter for digital indicators	button signal light	signal light button	▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-51	transmitter for digital indicators	signal light button	"DATA" button signal light button for **2108, 2138, 2139** series digital indicators back signal light foot switch (code **7304-7**, **optional**)	▪ Press the "DATA" button of digital indicator, can also press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital indicator flashes once
			button for other digital indicators back signal light foot switch (code **7304-7**, **optional**)	▪ Press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital indicator flashes once
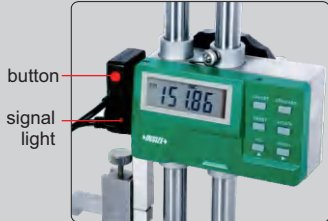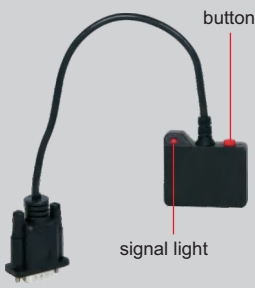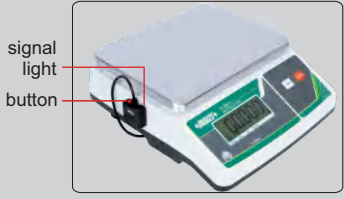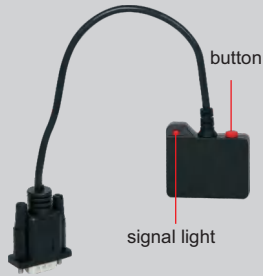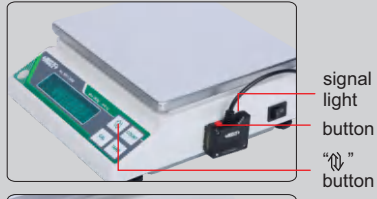
To be continued

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-51B	transmitter for bore gauges	signal light button	"DATA" button signal light button	■ Press the "DATA" button of digital indicator, can also press the button of the transmitter ■ Data is transmitted once, the signal light on digital indicator flashes once
7315-2183	transmitter for digital indicators	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-60	transmitter for high precision digital indicators	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-80	transmitter for digital calipers/ micrometers	button signal light	"SET" button button signal light	■ Press the "SET" button of the calipers/micrometers, can also press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-3350	transmitter for digital micrometers	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-1150	transmitter for digital height gauges	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once

Continued from previous page

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-1151	transmitter for digital height gauges	button signal light	button signal light	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-2172	transmitter for digital protractors	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-2771	transmitter for digital protractors	button signal light	signal light button	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-8001	transmitter for electronic balances	button signal light	signal light button back for **8001-6D**, **8001-15D**, **8001-30D** series weighing scales and **8501** series platform scales	■ Press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once
7315-8301	transmitter for electronic balances	button signal light	signal light button " " button back	■ Press the " " button of the electronic balances, can also press the button of the transmitter ■ Data is transmitted once, the signal light of the transmitter flashes once

To be continued
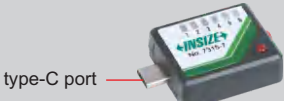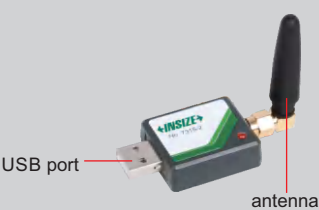
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Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34↙. No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal

Code	Product	Description	Remark
7315-3	USB port	single channel receiver	connected with 1 transmitter only
7315-6	USB port	multichannel receiver	connected with 6 transmitters, each channel has status indicator
7315-7	type-C port		
7315-8	micro USB port		
7315-9	lightning port		

Receiver (text format, virtual com port)

- For computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with Excel directional input software
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

Code	Product	Description	Remark
7315-2	USB port antenna	multichannel receiver	connected with maximum 16 transmitters, each of them has unique identification code

Receiver (485 communication)

- Modbus-RTU protocols , baud rate 9600
- Can be connected to a PC or PLC
- The communication address is configurable

Code	Product	Description	Remark
7315-485	signal light	multichannel receiver	connected with 6 transmitters, each channel has status indicator

Excel directional input software

- Supplied with **7315-2** receiver
- The readings of measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency

Excel directional input software (included in **7315-2**),
application example 1

Set the display area of caliper at B4-B9, the readings of caliper are displayed at B4, B5...B9.
Set the display area of micrometer at C4-C9, the readings of micrometer are displayed at C4, C5... C9.
Set the display area of height gauge at D4-D9, the readings of height gauge are displayed at D4, D5... D9.

	A	B	C	D
1	Project	Length	Width	Height
2	Dimension and Tolerance	50±0.05	24±0.01	10+0.05/-0.06
3	Measuring tool	Caliper	Micrometer	Height gage
4	1	50.02	24.004	9.98
5	2	50.01	24.010	10.01
6	3	49.99	23.990	10.02
7	4	50.00	23.996	9.99
8	5	50.04	24.000	10.01
9	6	Channel 1	Channel 2	Channel 3

serial of workpieces   the next data display area is indicated in green

Excel directional input software (included in **7315-2**),
application example 2

Set the display area of micrometer at B4-C9, data input is from the left to the right,
the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9.
Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5... D9.
Set the display area of depth gauge at E4-E9, the readings of depth gauge are displayed at E4, E5... E9.

	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28.01
5	2	23.010	21.000	49.98	27.98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	50	28
8	5	23.000	20.985	50.01	28.01
9	6	23.008	Channel 1	Channel 2	Channel 3

serial of workpieces   the next data display area is indicated in green

1

BLUETOOTH TRANSMITTERS

- Through bluetooth transmission, the readings of measuring tools can be transmitted to computers or mobile phones
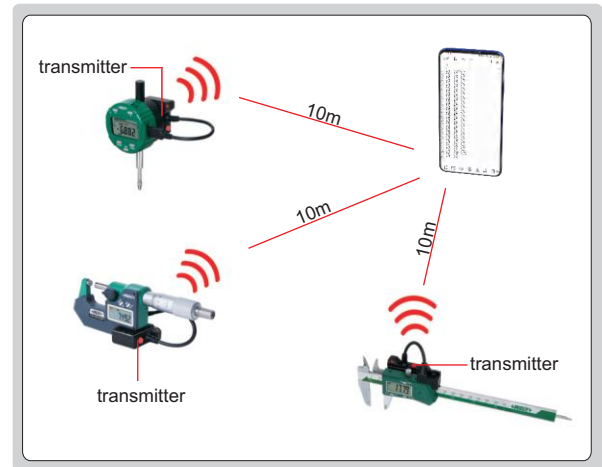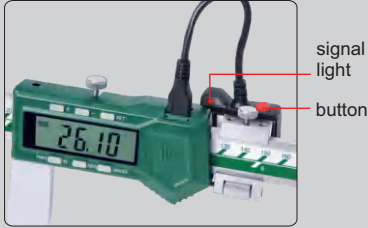- 2.4GHz band
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34 ↙
- No need to install drivers and softwares, data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Connecting to digital measuring tools such as calipers, micrometers and indicators
- CR2032 battery

connecting with computer

transmitter
10m
10m
10m
transmitter
transmitter
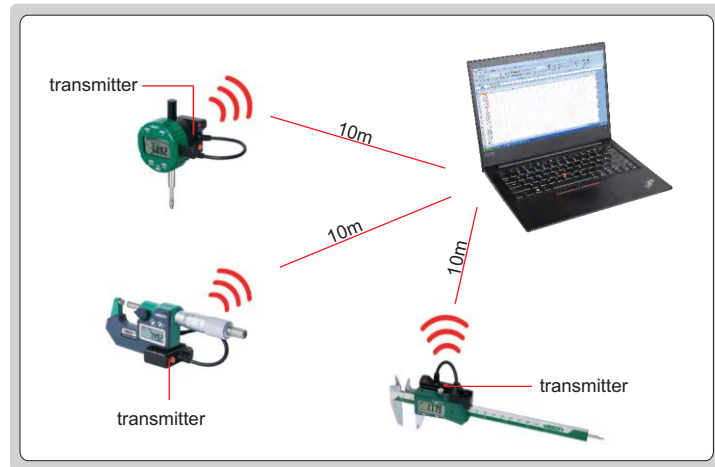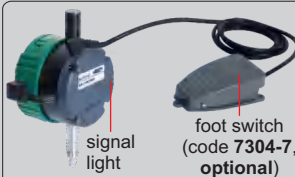
connecting with mobile phone

transmitter
10m
10m
10m
transmitter
transmitter

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7214-25	transmitter for digital calipers	button signal light	signal light button	- Press the button of the transmitter - Data is transmitted once, the signal light of the transmitter flashes once
7214-22	transmitter for large digital calipers	button signal light	signal light button	- Press the button of the transmitter - Data is transmitted once, the signal light of the transmitter flashes once
7214-30	transmitter for digital micrometers	button signal light	signal light "data" button button signal light for **3102**, **3128**, **3565** series digital micrometers	- Press the "data" button of the digital micrometer, can also press the button of the transmitter - Data is transmitted once, the signal light of the transmitted flashes once, at the same time, the signal light on the digital micrometer flashes once

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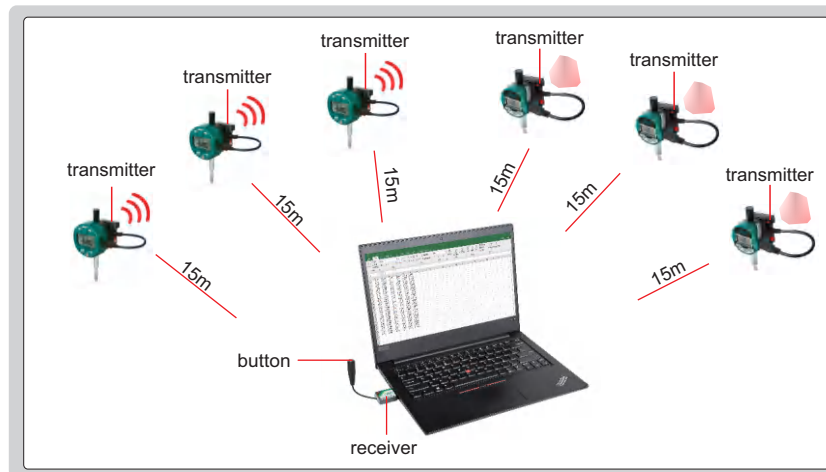| Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7214-31	transmitter for digital micrometers		"data" button signal light back	▪ Press the "data" button of digital micrometer ▪ Data is transmitted once, the signal light on the digital micrometer flashes once
7214-50M	transmitter for digital indicators	button signal light	signal light button for digital indicators without data button	▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7214-51	transmitter for digital indicators	signal light button	"DATA" button signal light button for digital indicators with data button back signal light foot switch (code **7304-7**, **optional**)	▪ Press the "DATA" button of digital indicator, can also press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital indicator flashes once
7214-51B	transmitter for bore gauges	signal light button	"DATA" button signal light button for bore gauges with data button	▪ Press the "DATA" button of digital indicator, can also press the button of the transmitter ▪ Data is transmitted once, the signal light on digital indicator flashes once

WIRELESS DATA TRANSMISSION SYSTEM OF DIGITAL INDICATORS (REMOTE CONTROL)

VIDEO

- The readings of digital indicators can be transmitted to computers or mobile phones
- Data acquisition can be remotely controlled through the receiver
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (under the condition of no obstruction and no electromagnetic interference)

transmission method: the button on receiver is pressed once,
the readings of all digital indicators are transmitted

	channel 1	channel 2	channel 3	channel 4	channel 5	channel 6
	A	B	C	D	E	F
1	24.35	0.4045	57.72	1.949	0.4075	0.03568
2	24.45	0.5045	57.82	2.049	0.5075	0.13568
3	26.35	0.4045	57.72	1.949	0.4075	0.00078
4	27.35	0.4045	57.72	1.7575	0.4075	0.0762
5	28.35	0.4045	57.72	1.7575	0.4075	0.0762
6	29.35	0.4045	57.72	1.7575	0.4075	0.07618
7	30.35	0.4045	57.72	1.7575	0.4075	0.55334
8	31.35	0.4045	57.72	1.7575	0.4075	0.61198
9	24.35	0.4045	57.72	1.7575	0.4075	0.6172

Transmitter

- Suitable for digital indicators
- CR2032 battery
- 80 hours of operation on a single battery in measurement mode

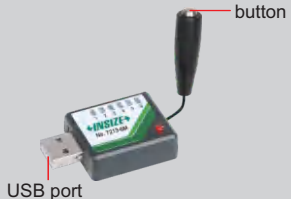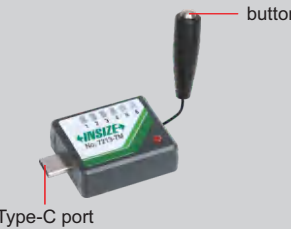| Code	Transmitter	Connecting with digital indicators	Transmit data
7213-56			■ Press and hold the button to enter the measurement mode ■ Press the receiver button in measurement mode to acquire data

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Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34↙. No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- Suitable for any softwares which can receive keyboard signal

Code	Product	Description	Remark	Transmit data
7213-6M	button / USB port	multichannel receiver	connected with 6 transmitter, each channel has status indicator	- Press the button of the receiver - Data is transmitted once, the signal light of the receiver flashes once
7213-7M	button / Type-C port			
7213-8M	button / Micro USB port			
7213-9M	button / Lightning port			

hand switch, code **7213-SW** (included), length 2m

COMPARISON TABLE

ZIGBEE Wireless Transmission

receiver

receiver

15m

15m

receiver

15m
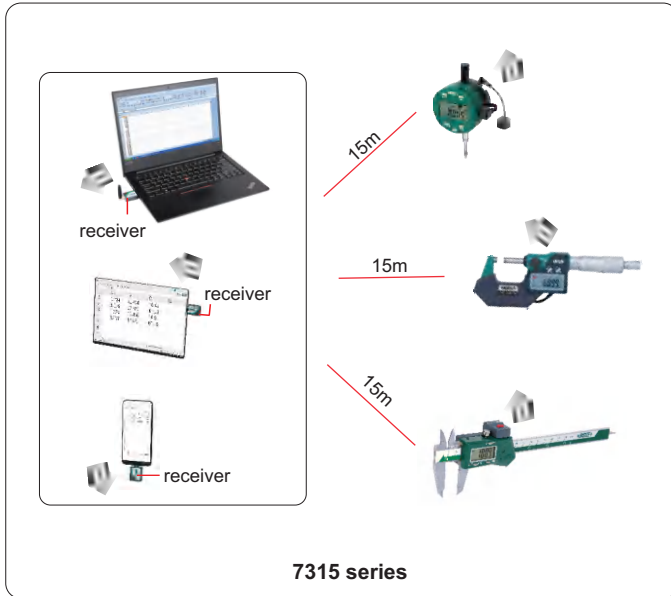
7315 series

Bluetooth Wireless Transmission

Bluetooth connection

Bluetooth connection

Bluetooth connection

10m

10m

10m
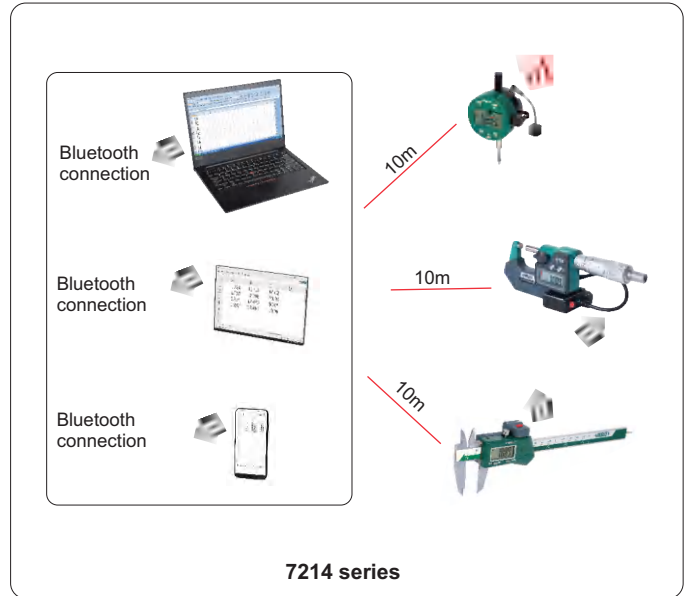
7214 series

Code	7315 series	7214 series
Function	wireless transmission of measurement data from measuring tools to computers or mobile phones	
Operation system	Windows, Android or iOS	
Wireless module	Zigbee	Bluetooth 5.0
Receiver	need receiver (one receiver can be connected to 16 transmitters)	receiver is not needed, Bluetooth connection (one computer/mobile phone can be connected to 7 transmitters)

Communication type	keyboard format
	(suitable for any software or APP
	which can receive keyboard input values)
	
	text format, virtual com port
	(a. connect to software which recognizes different
	    channels and IDs according to serial communication
	    protocols and defines data entry area for different
	    measurement tools;
	b. can also use the software (included in the
	    7315-2 receiver) to transmit measurement data from
	    multiple measuring tools to the designated area in
	    Excel for easy data management)
		keyboard format
		(suitable for any software or APP
		which can receive keyboard input values)

Acquisition method	press-button single transmission	
Transmission performance	transmission performance with low power consumption, high speed, accurate and stable data, and strong anti-interference performance	transmission performance depends on the Bluetooth performance of computers/mobile phones
Transmission distance	15m	10m
Connection memory	matching operation is not needed after the computer/mobile phone is turned off and on again	need to press the button to match after the computer/mobile phone is turned off and on again