

Data Management Softwares
Page 2-3

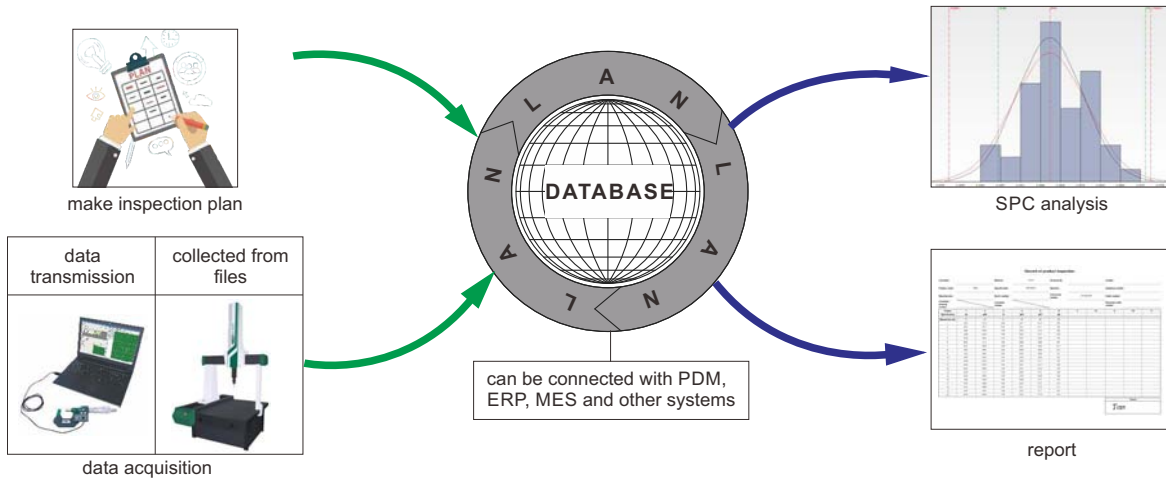


Wireless Data Transmission Systems
Page 4-7



Data Output Cables
Page 8-15

MEASUREMENT DATA MANAGEMENT AND ANALYSIS SOFTWARE CODE 7317



Make inspection plan

- Define the dimensions, tolerances, control range and other parameters of workpieces

define the drawing of workpieces

define association items of data

define the measured dimension and tolerance

Seq	Data Member Code	Data Member Name	Measuring Tool	1	2	3	4	5	6
1	DC04070001	Check type		2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27
2	DC04070002	Serial number							
3	DC04070003	Furnace No.							
4	DC02070001	Flatness0.008	CHN1						
5	DC02070002	2.39+0.01/-0.03	Vernier caliper						
6	DC02070003	Verticality0.008	CHN1						
7	DC02070004	2.335±0.004	Vernier caliper						
8	DC02070005	Outside diameterΦ=45±0.002	Micrometer						
9	DC02070006	Inner diameterΦ=45±0.002	Micrometer						
10	DC02070007	Wall thickness							
		Input User		Administrator	Administrator	Administrator	Administrator	Administrator	Administrator

Other Related Info: 3DIZE -> TOL -> Workpiece A

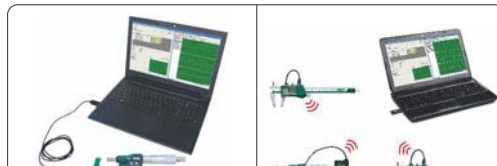
Enable Serial Port Data ID: All No Auto Match Auto Match By Data ID Auto Match By Specification Auto Switch Record

Enable Data File Import Rule: Workpiece A C:\Users\3DIZE-ENGINEER\Desktop\7317\ Data import for workpiece A.xlsx Import

Data acquisition



manual input



data transmission



collected from files



screen capture

Seq	Data Member Code	Data Member Name	Measuring Tool	1	2	3	4	5
1	DC04070001	Check type		2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27	2022-06-08 11:16:27
2	DC04070002	Serial number		20220608001	20220608001	20220608001	20220608002	20220608002
3	DC04070003	Furnace No.		P00120	P00120	P00120	P00120	P00120
4	DC02070001	Flatness0.008	CHN1	0.0080	0.0080	0.0080	0.0082	
5	DC02070002	2.39+0.01/-0.03	Vernier caliper	2.391	2.391	2.391	2.410	
6	DC02070003	Verticality0.008	CHN1	0.0080	0.0080	0.0080	0.0080	
7	DC02070004	2.335±0.004	Vernier caliper	2.3350	2.3350	2.3350	2.3350	
8	DC02070005	Outside diameterΦ=45±0.002	Micrometer	45.0030	45.0030	45.0030	44.9977	
9	DC02070006	Inner diameterΦ=45±0.002	Micrometer	45.0010	45.0010	45.0010	45.0010	
10	DC02070007	Wall thickness		0.0010	0.0020	0.0010	-0.0033	
		Input User		Administrator	Administrator	Administrator	Administrator	Admin

Other Related Info: 3DIZE -> TOL -> Workpiece A

Enable Serial Port Data ID: All No Auto Match Auto Match By Data ID Auto Match By Specification Auto Switch Record

Enable Data File Import Rule: Workpiece A C:\Users\3DIZE-ENGINEER\Desktop\7317\ Data import for workpiece A.xlsx Import

measurement interface

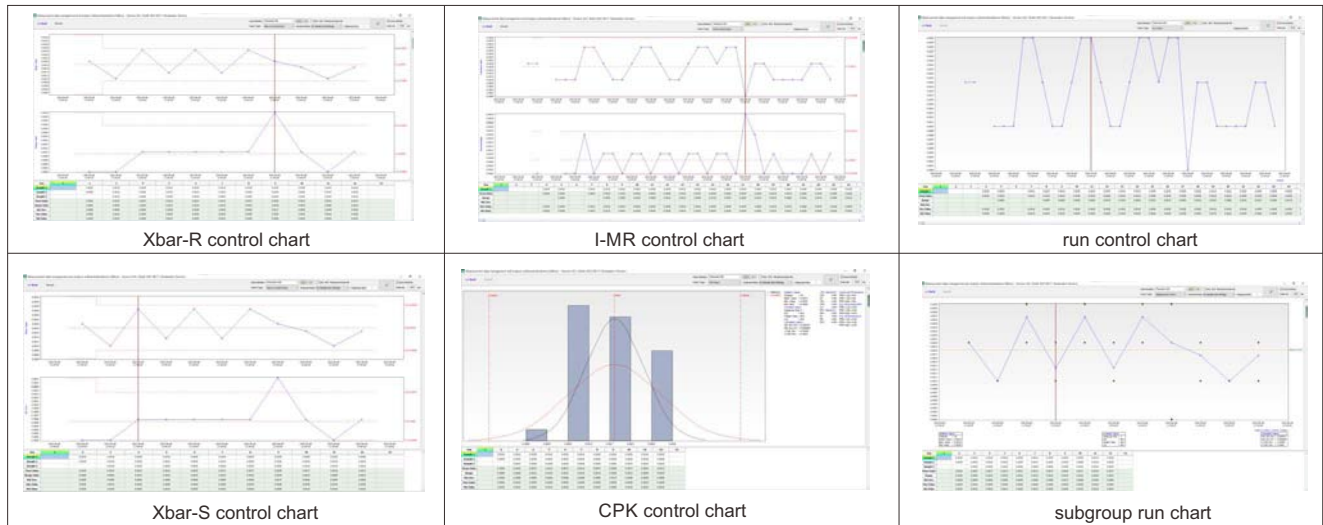
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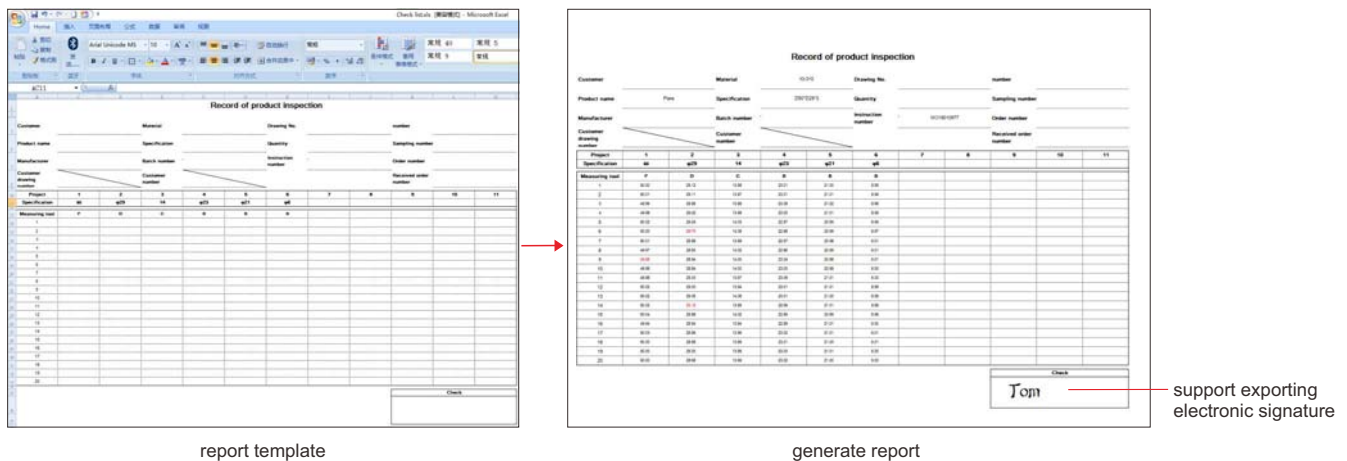
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SPC

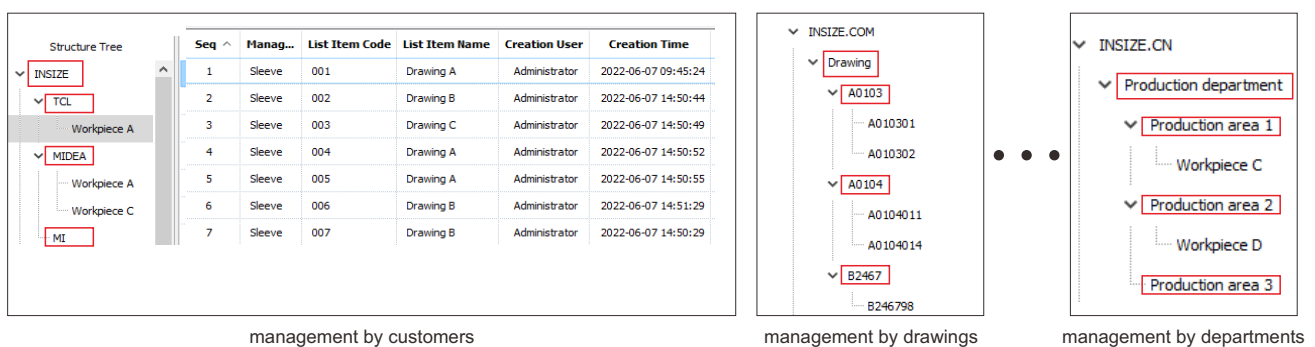
- Provide variety of quality analysis control charts



Report



Management of inspection plan

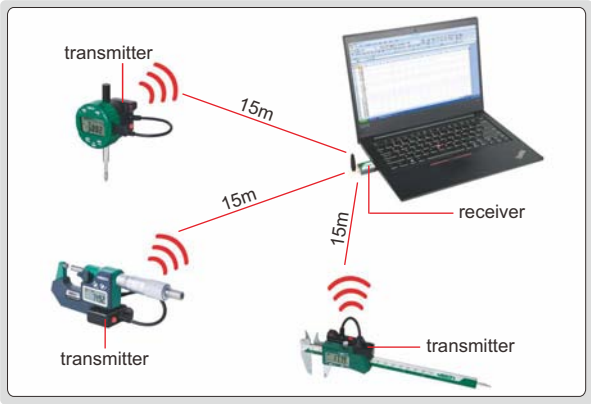


1 WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the measurement data can be transmitted to computers or mobile phones
- 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

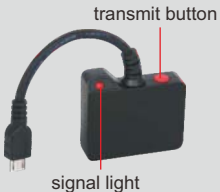
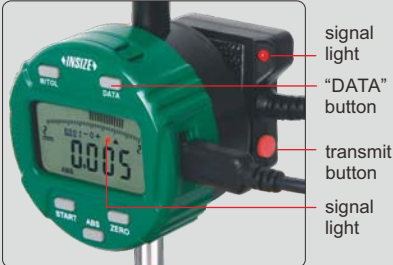




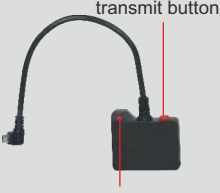

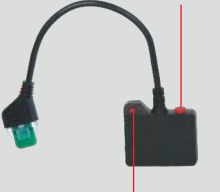

- Connecting to digital measuring tools such as calipers, micrometers and indicators
- CR2032 battery



Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-21	transmitter for digital calipers			<ul style="list-style-type: none"> Press the transmit button on the plug of cable, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-22	transmitter for large digital calipers			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-30	transmitter for digital micrometers			<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit 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
7315-31	transmitter for digital micrometers			<ul style="list-style-type: none"> Press the "data" button of digital micrometer Data is transmitted once, the signal light on the digital micrometer flashes once

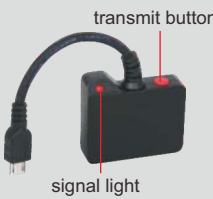

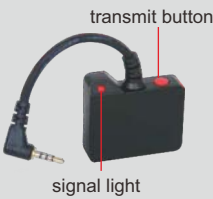

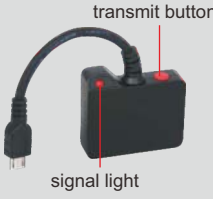

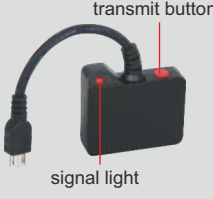

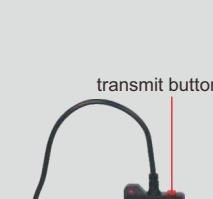
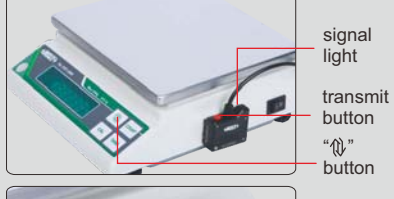

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-50M	transmitter for digital indicators	 <p>transmit button</p> <p>signal light</p>	 <p>for 2108, 2138, 2139 series digital indicators</p>	<ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on digital indicator flashes once
			 <p>for other digital indicators</p>	<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-51	transmitter for digital indicators		 <p>for 2108, 2138, 2139 series digital indicators</p>  <p>foot switch (code 7304-7, optional)</p> <p>back</p>	<ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the foot switch (code 7304-7, optional) Data is transmitted once, the signal light on digital indicator flashes once
7315-60	transmitter for high precision digital indicators	 <p>transmit button</p> <p>signal light</p>		<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-80	transmitter for digital calipers/micrometers	 <p>transmit button</p> <p>signal light</p>	 <p>"SET" button</p> <p>transmit button</p>	<ul style="list-style-type: none"> Press the "SET" button of the calipers/micrometers, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once

To be continued

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-3350	transmitter for digital micrometers			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-1150	transmitter for digital height gages			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-1151	transmitter for digital height gages			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-2771	transmitter for digital protractor			<ul style="list-style-type: none"> Press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once
7315-8301	transmitter for electronic balances		 	<ul style="list-style-type: none"> Press the "⏏" transmit button of the electronic balances, can also press the transmit button of the transmitter Data is transmitted once, the signal light of the transmitter flashes once





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, 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


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Code	Product	Description	Remark
7315-6		multichannel receiver	connected with 6 transmitters, each channel has status indicator
7315-7			
7315-8			
7315-9			

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		multichannel receiver	connected with maximum 16 transmitters, each of them has unique identification code

Excel directional input software

- Supplied with 7315-2 receiver
- The measurement data of multiple 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 gage at D4-D9, the readings of height gage 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

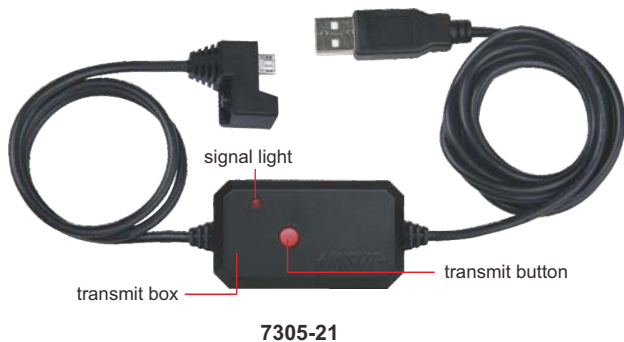
Set the display area of micrometer at B4-C9, data input is from the left to the right, the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9. Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5... D9. Set the display area of depth gage at E4-E9, the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

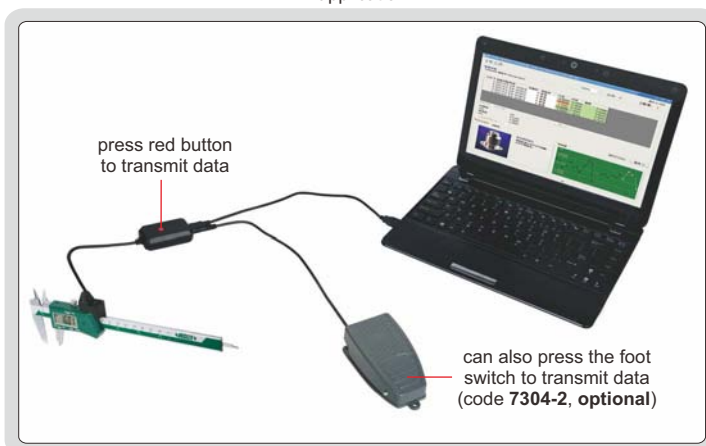
DATA OUTPUT CABLES (TEXT FORMAT, VIRTUAL COM PORT)

1) Data output cables with transmit box



7305-21

application











Single transmit (can be switched to continuous transmit)

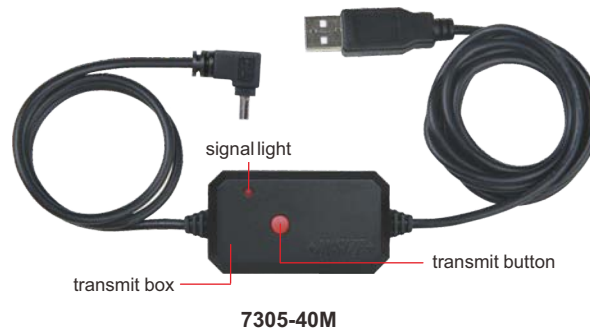
Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-21	cable for digital calipers (length 3m)				<ul style="list-style-type: none"> Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R21					
7305-22	cable for large digital calipers (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R22					
7305-30	cable for digital micrometers (length 2.5m)			 	<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7305-R30					
7305-31	cable for digital micrometers (length 2.5m)			 	<ul style="list-style-type: none"> Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7305-R31					

To be continued





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1

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-50M	cable for digital gages (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R50M					
7305-1150	cable for digital height gages (length 2.5m)				<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7305-R1150					



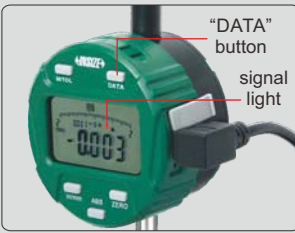



Continuous transmit (can be switched to single transmit)

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-40M	cable for digital indicators (length 2.5m)			 <p>for 2108, 2138, 2139 series digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>
				 <p>for other digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>

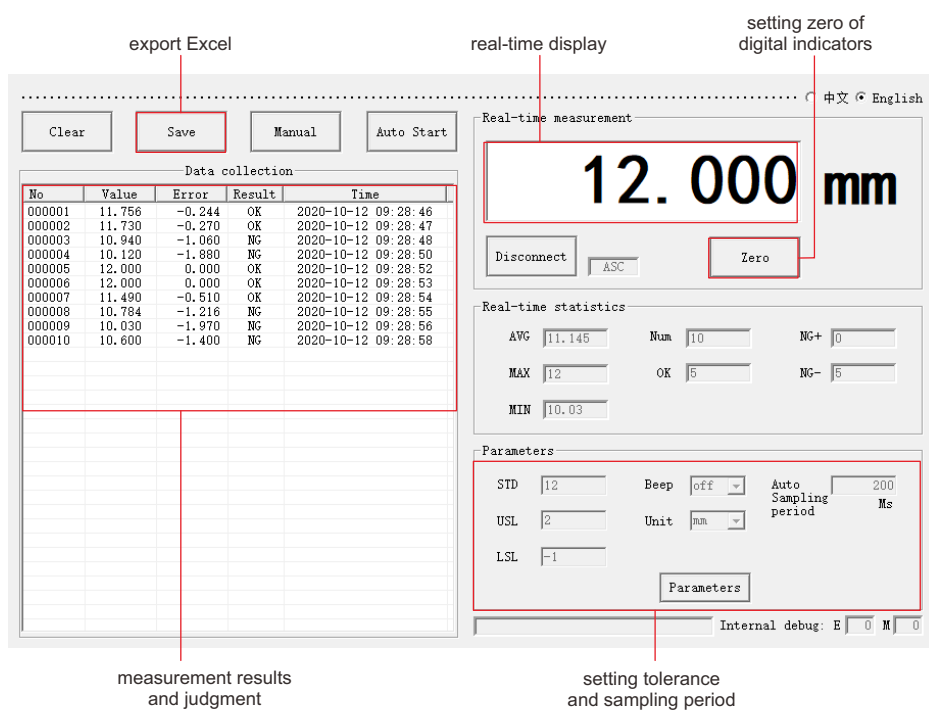
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Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-R40M	cable for digital indicators (length 2.5m)			 <p>for 2108, 2138, 2139 series digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>
				 <p>for other digital indicators</p>	<p>Continuous transmit is controlled in software</p> <p>Single transmit:</p> <ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators; software of data transmit is included</p>

Software (included in 7305-40M and 7305-R40M)

- Real-time display
- Tolerance setting, automatic judgment, out-of-tolerance alarm
- Real time statistics: max, min, average, Go/No-Go number
- Can save results as Excel



The screenshot displays the INSIZE software interface with several key features highlighted by red boxes and labels:

- export Excel:** Points to the 'Save' button in the top toolbar.
- real-time display:** Points to the large digital display showing '12.000 mm'.
- setting zero of digital indicators:** Points to the 'Zero' button below the display.
- measurement results and judgment:** Points to the 'Data collection' table, which lists measurement data including No., Value, Error, Result, and Time.
- setting tolerance and sampling period:** Points to the 'Parameters' section, which includes settings for STD, USL, LSL, Beep, Unit, and Auto Sampling period.

To be continued

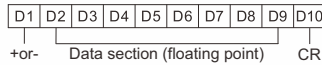
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communication protocol

1

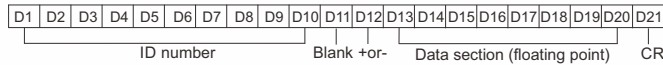
- Baud: 9600bps
Data bit: 8
Stop bit 1
Check bit: None
No flow control

▪ Data output format



Data format example	
Display	Output
1.234	→ +0001.234 ✓
-1.234	→ -0001.234 ✓

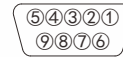
▪ Data output format with ID number



Data format example	
Display	Output
1.234	→ 4109210605 +0001.234 ✓
-1.234	→ 4109210605 -0001.234 ✓

- The data transmission mode can be switched: single or continuous;
The data output format can be switched: with ID number or without ID number;
Data of digital indicators can be transmitted by instruction;
The digital indicators can be zeroed by instruction

▪ Pin definition of RS232 plug:



Pin No.	Symbol	Description
2	TXD	Data OUT
3	RXD	Data IN
4	VDD	+5V Power
5	GND	Ground

2) Data output cables without transmit box

application



7305-G3350



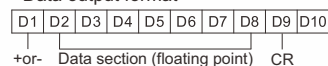
Single transmit

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-G60	cable for high precision digital indicators (length 3m)				<ul style="list-style-type: none"> ▪ Press the "DATA" button of high precision digital indicator
7305-G3350	cable for digital micrometers (length 3m)				<ul style="list-style-type: none"> ▪ Press the "DATA" button of digital micrometer

communication protocol

- Baud: 9600bps
Data bit: 8
Stop bit 1
Check bit: None
No flow control

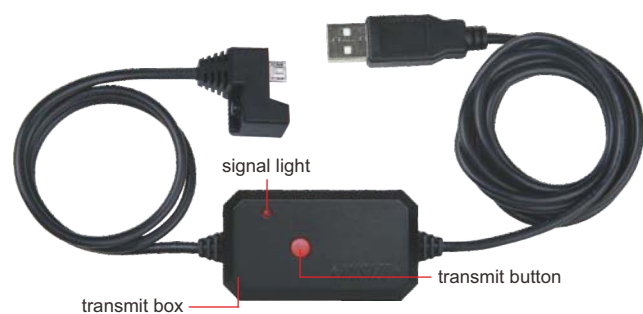
▪ Data output format



Data format example	
Display	Output
1.234	→ +0001.234 ✓
-1.234	→ -0001.234 ✓

- Data of high precision digital indicators can be transmitted by instruction;
The high precision digital indicators can be zeroed by instruction

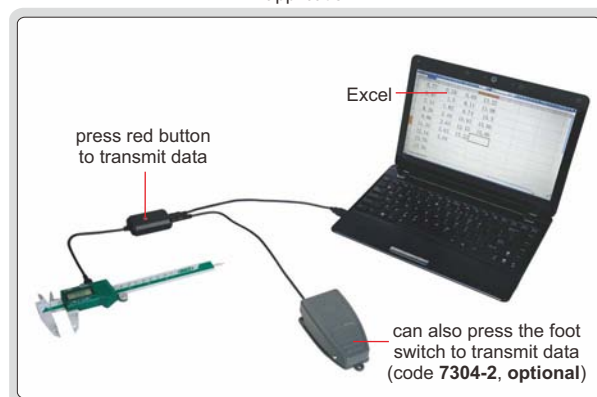
DATA OUTPUT CABLES (KEYBOARD FORMAT)



7302-21

- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter, such as 12.34↵)
- For any softwares which can receive keyboard signal
- Optional accessory: foot switch (code: **7304-2**), hub (code: **7324-HUB4**, **7324-HUB7**), extension cables (code: **7325-ADD5**, **7325-ADD10**)

application
















Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-21	cable for digital calipers (length 3m)			<ul style="list-style-type: none"> ■ Press the transmit button on the plug of cable, can also press the transmit button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-22	cable for large digital calipers (length 2.5m)			<ul style="list-style-type: none"> ■ Press the transmit button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-30	cable for digital micrometers (length 2.5m)			<ul style="list-style-type: none"> ■ Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7302-31	cable for digital micrometers (length 2.5m)			<ul style="list-style-type: none"> ■ Press the "data" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once

To be continued











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1

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-50M	cable for digital gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-40M	cable for digital indicators (length 2.5m)		 <p>for 2108, 2138, 2139 series digital indicators</p> <p>"DATA" button signal light</p>	<ul style="list-style-type: none"> Press the "DATA" button of digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once <p>Note: long press transmit button to zero the digital indicators</p>
			 <p>for other digital indicators</p>	<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once <p>Note: long press transmit button to zero the digital indicators</p>
7302-60	cable for high precision digital indicators (length 2.5m)		 <p>"DATA" button</p>	<ul style="list-style-type: none"> Press the "DATA" button of high precision digital indicator, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-3350	cable for digital micrometers (length 2.5m)		 <p>"DATA" button</p>	<ul style="list-style-type: none"> Press the "DATA" button of digital micrometer, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-1151	cable for digital height gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-SPC7	cable for digital height gages (length 2.5m)			<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once

To be continued

Continued from the previous page

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-8001	cable for weighing scales (length 2.5m)		 <p>back</p>  <p>for 8301 and 8305 series electronic balances</p>	<ul style="list-style-type: none"> Press the “” button of electronic balances, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
			 <p>back</p>  <p>for 8001-6D, 8001-15D, 8001-30D series weighing scales and 8501 series platform scales</p>	<ul style="list-style-type: none"> Press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once
7302-8304	cable for electronic balances (length 3m)		 <p>back</p> 	<ul style="list-style-type: none"> Press the “” button of electronic balances, can also press the transmit button of the transmit box, or press the foot switch Data is transmitted once, the signal light of the transmit box flashes once

DISPLAY UNIT CODE 7106-1A

REFER TO PAGE 261
FOR DETAILS



connected with digital indicator



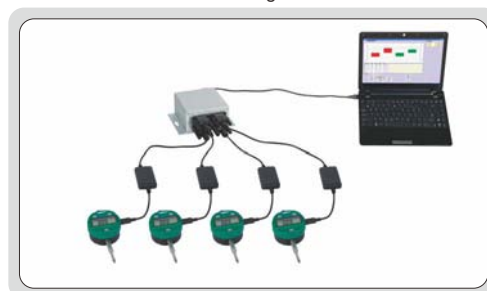
MULTICHANNEL INTERFACE BOXES

REFER TO PAGE 262
FOR DETAILS



7107-1

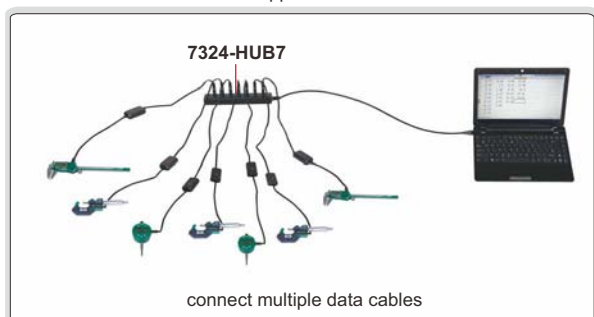
connected with digital indicators



HUBS

1

application



7324-HUB4



7324-HUB7

Code	Description	Applicable products
7324-HUB4	4-channel hub (length 0.2m, USB computer plug)	7302 series data cables
7324-HUB7	7-channel hub (length 1m, USB computer plug)	7305 series data cables (USB plug)

- For USB plug data cable

EXTENSION CABLES

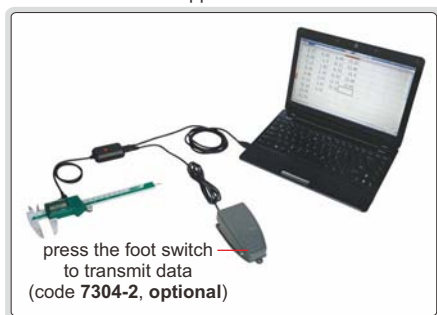
application



7325-ADD5

Code	Description	Applicable products
7325-ADD5	data extension cable (length 5m, USB plug)	7302 series data cables
7325-ADD10	data extension cable (length 10m, USB plug)	7305 series data cables (USB plug)

application



7304-2

FOOT SWITCH

- For data transmission

Code	Description	Applicable products
7304-2	data transmission foot switch with cable (length 2m)	7302 series data cables 7305 series data cables

OK/NG INPUT SWITCHES



7327-FS



7327-SW

Code	Description
7327-FS	foot switch for OK/NG input
7327-SW	hand switch for OK/NG input

- Used with 7317 software, output OK or NG
- USB plug, length 1.5m

application

