Wireless Thermo Recorder

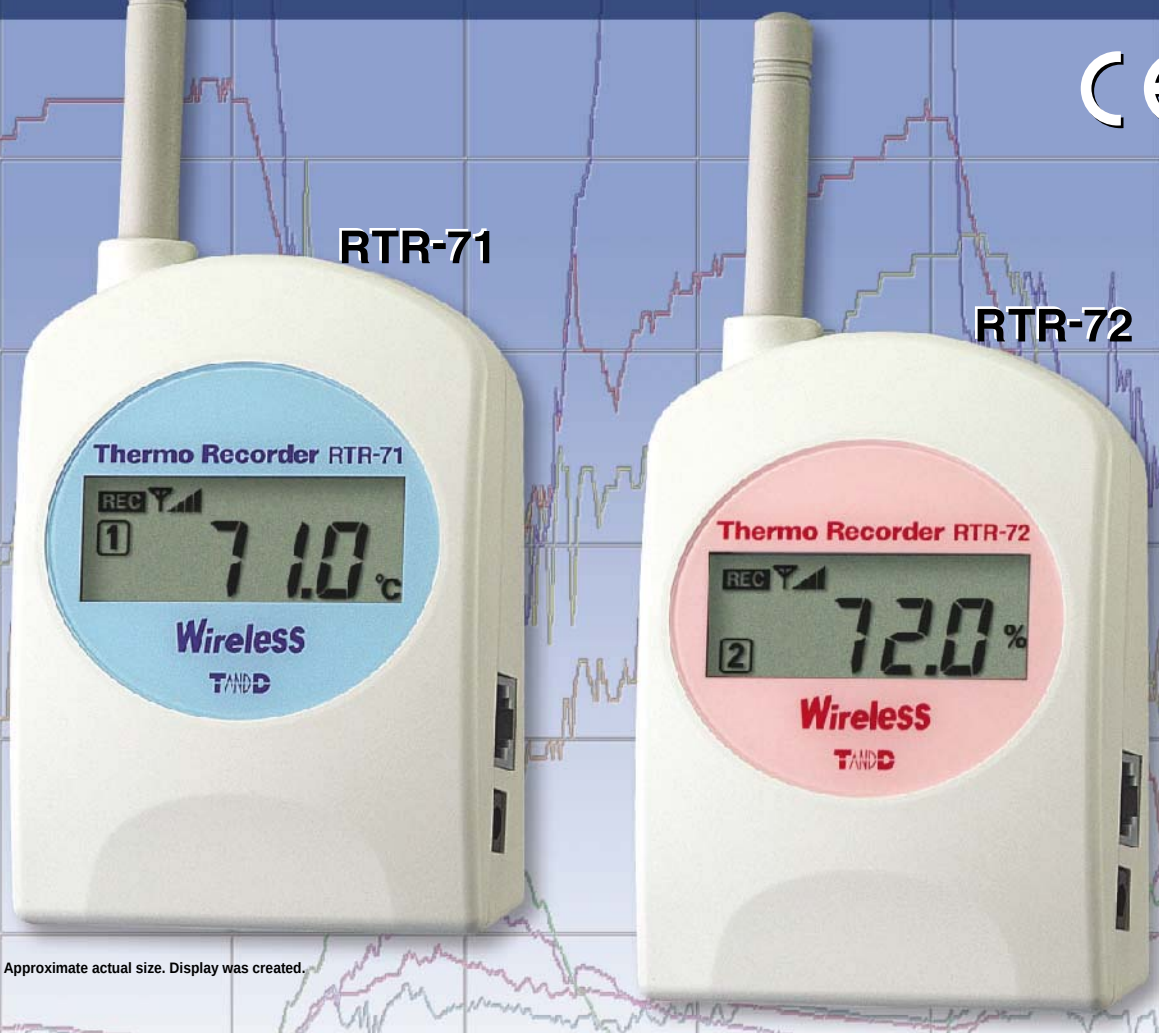
Temp. and Humidity Wireless Communication Data Loggers

Wireless Data Logger

Our Revolutionary Wireless Series (RTR) is a system that allows you to not only measure and record both Temperature and Humidity, but gives you the freedom to transfer that data by way of short wave wireless communication to your computer for processing into clear colorful graphs or tables.
It also boasts a variety of functions, including Auto Downloading and Warning Monitoring functions.

RTR-71

RTR-72



Approximate actual size. Display was created.

Measure and Record Temperature and Humidity. Transfer Data via Wireless Communication to Computer for Data Management.

RTR-71 Thermo Recorder Two Temperature Channels Wireless Data Communication Data Logger

RTR-72 Thermo Recorder One Temperature Channel / One Humidity Channel Wireless Data Communication Data Logger

T&D CORPORATION

Wireless Thermo Recorder

Temperature and Humidity Data Loggers RTR-71 / 72

Collect, Manage, and Monitor Temperature and Humidity Data via Wireless Communication.

Temperature / Humidity Measurement and Recording

With sensors connected

Collect Data via Wireless Communication

Effortless Computer Processing

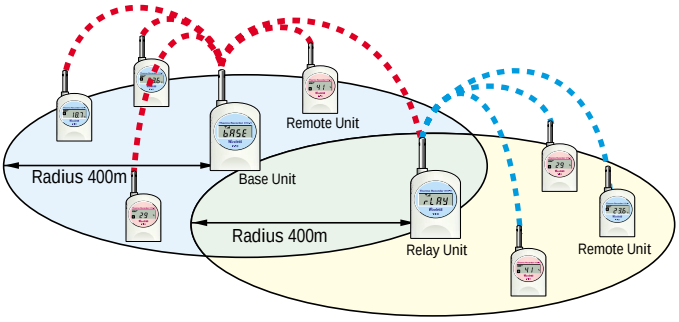
Image created for display purpose.

Wireless Communication Function

Collect temperature and humidity measurements and recorded data via short wave radio waves. Communication can take place within up to 400 meters if unobstructed and clear.

Note: If the area is not clear and unobstructed, it is possible to use a Relay Unit to extend the distance. (Only one Relay Unit can be used between a Base Unit and a Remote Unit.)

Transmission Range



Data Collection Function

The software can be programmed for automatic downloading of data in your choice of set time or set time interval. Of course you can always download data at any time when necessary.

Temperature / Humidity Warning Monitoring Function

With the software you can set upper and lower limits for each channel (Temp. / Temp. or Temp. / Humidity) and set the monitoring function to periodically check each channel. If a limit has been exceeded a warning will be displayed on your computer screen. Settings can be made separately for each Remote Unit.

1 Unit, 3 Roles

Any unit (RTR-71 / 72) can be registered as a Remote, a Relay or a Base Unit with the software (Wireless for Windows).

Note: A unit that has been set up as a Base or a Relay Unit can not measure, display or record temperature or humidity.

In 1 Group up to 126 Units Possible / Up to 32 Groups Possible

The software provided allows you to create up to 32 communication groups assigned to 1 Base Unit and in each group you can register and communicate with up to 126 Remote Units.

2 Recording Channels / 8 Recording Intervals

RTR-71 can measure and record temperature on 2 separate channels, RTR-72 has 1 channel for measuring and recording temperature and 1 channel for humidity. You can select the recording interval from 8 choices ranging from 1 minute to 1 hour.

Temperature Recording Range: −60℃ to 155℃

Using the sensor provided, the RTR-71 can measure and record a wide range of temperature (−60℃ to 155℃). Other sensors designed to meet your special needs are also available. (See Optional Sensors)

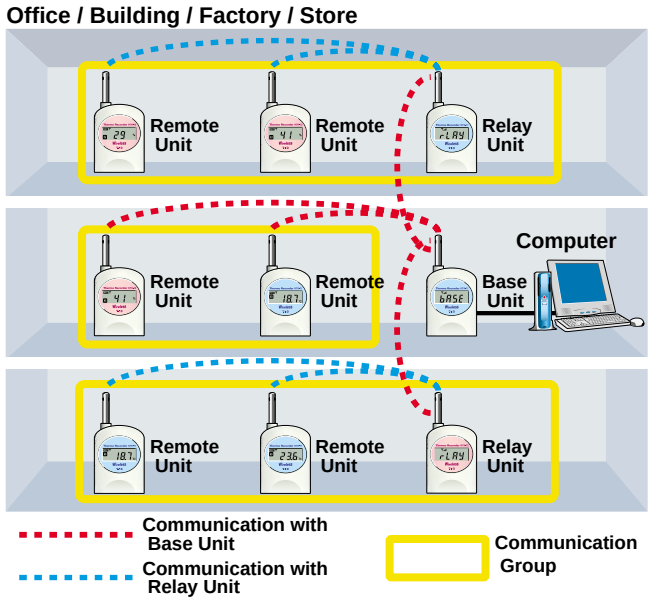
Humidity Recording Range: 10 to 95%RH

With the sensor provided, the RTR-72 can measure and record temperatures from 0℃ to 50℃ and humidity from 10 to 95%RH.

3 Month Lithium Battery Life / Data Backup Function / AC Adaptor OK

A Remote Unit can run for about 3 months continually on 1 lithium battery. When battery power becomes low, a warning is displayed and data is automatically saved. If necessary an AC Adaptor may also be used.

Communication Group Image



Software

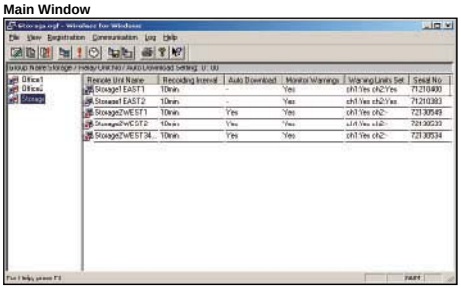
Wireless for Windows®

Our exclusive software set (RTR-70) contains all of the easy-to-use tools that allow you to handle all aspects of system management (measurement, recording, auto-downloading, communications, warning monitoring, etc...) and data processing (graphs, tables printing, text file creation, etc...).

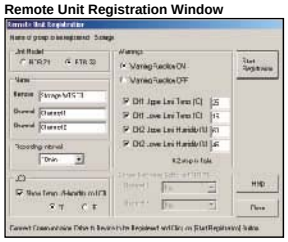
Settings and Management

All settings and changes for Unit Registration (Base, Relay and Remote), Warning Monitoring, Auto Downloading and others can be made here.

Main Window



Remote Unit Registration Window



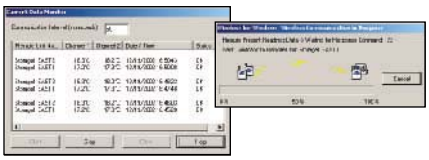
In this Window, you can make settings and changes for Remote Unit Names, Recording Interval, and Monitor Warning Conditions.

Auto Download "Start / Stop" Window

Monitor Warnings "Start / Stop" Window

Monitoring Current Temperature Humidity Display

In the Main Window you can select the Remote Unit(s) you wish to monitor and the current readings will be displayed at the set interval you have chosen.

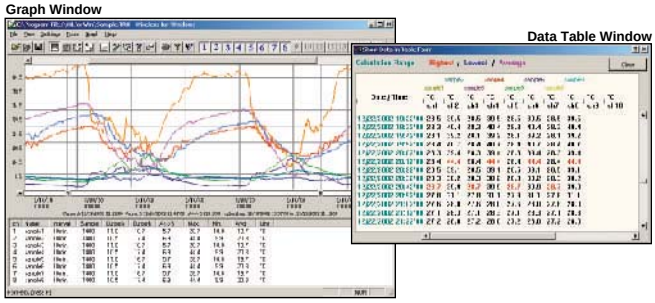


Up to 16 Channels of Data in 1 Graph

With our exclusive software you can not only process up to 16 channels of data simultaneously but with the click of the mouse can zoom in and out on data, as well as, create tables, change channel and graph colors, and turn channel displays ON and OFF.

Graph Window

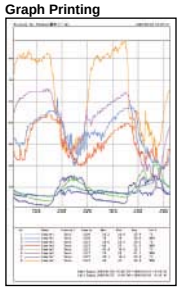
Data Table Window



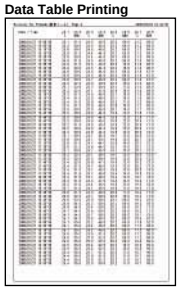
Graph and Data Table Printing

Graph Printing allows you to print onto paper the graph as you see it on the screen with no changes. Table Printing gives you the complete set of information (dates, times, data, highs, lows, averages) on paper as you see it on display.

Graph Printing



Data Table Printing



Save as Text File Function

This function allows you to save data in Text File Format (CSV Format) for export in order to process the data with spreadsheet applications such as Excel and Lotus.

Optional Sensors and Adaptor

℃ for RTR-71　　% for RTR-72

TR-5106 ℃

Teflon-Shielded Sensor
Cable Length: 0.6m
Thermal-Constant Time:
Approx. 15 Sec. (in air)
Approx. 2 Sec. (in agitated water)

TR-5101 ℃

Teflon-Shielded Sensor
Cable Length: 45mm
Thermal-Constant Time:
Approx. 15 Sec. (in air)
Approx. 2 Sec. (in agitated water)

TR-5220 ℃

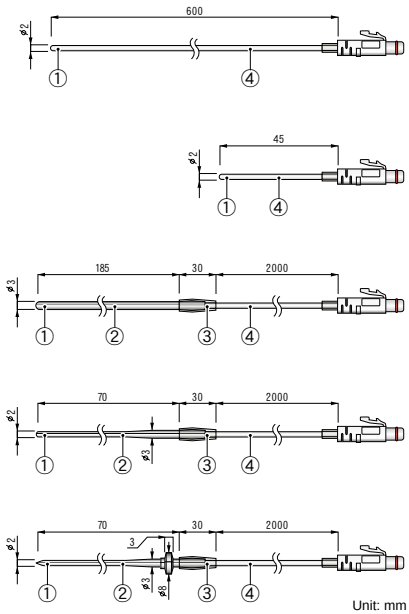
Stainless Protection Sensor
Cable Length: 2.0m
Thermal-Constant Time:
Approx. 36 Sec. (in air)
Approx. 7 Sec. (in agitated water)

TR-5320 ℃

Stainless Protection Sensor
Cable Length: 2.0m
Thermal-Constant Time:
Approx. 12 Sec. (in air)
Approx. 2 Sec. (in agitated water)

TR-5420 ℃

Stainless Protection Sensor
Cable Length: 2.0m
Thermal-Constant Time:
Approx. 12 Sec. (in air)
Approx. 2 Sec. (in agitated water)

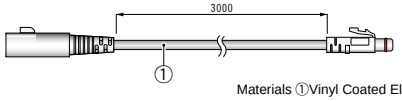


Materials: ①Thermistor ②Stainless pipe (SUS316)
③Teflon Compaction Tube ④Teflon Resin (FEP)-Shielded

Possible Measurement Range: -60 to 155℃ Sensor Temperature Durability: -70 to 180℃
Water Resistance: Splash Proof (Sensor and Cable)
Measurement Accuracy: Average ±0.3℃ (-20 to 80℃) Average ±0.5℃ (-40 to -20℃ ／ 80 to 110℃)
Average ±1.0℃ (-60 to -40℃ ／ 110 to 155℃)

TR-2C30 ℃

Sensor Extension Cable
Cable Length: 3.0m / Splash Resistant

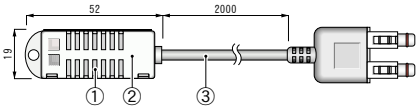


Materials ①Vinyl Coated Electrical Wire

Note: Only one extension cable can be used per temperature sensor.
If an extension cable is used, make sure to change software settings.

TR-3220 %

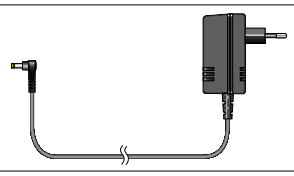
Temperature / Humidity Sensor
Humidity Measurement Range: 10 to 95%RH
Temperature Measurement Range:0 to 50°C
Sensor Durability Range: -10 to 55°C
Humidity Measurement Accuracy:±5%RH (at 25°C and 50%RH)
Service Life: 1 year under normal conditions
Operational Conditions: No dew condensation or water leakage / No contact with organic solvents, solutions or gasses emitted from spoiled foods.



Materials: ①Temperature / Humidity Sensor ② Polypropylene Resin ③Vinyl Coated Electrical Wire

AD-0604

AC Adaptor
Input:230V 50Hz
Output:6V 50mA 0.3VA
Cable Length:1.80m



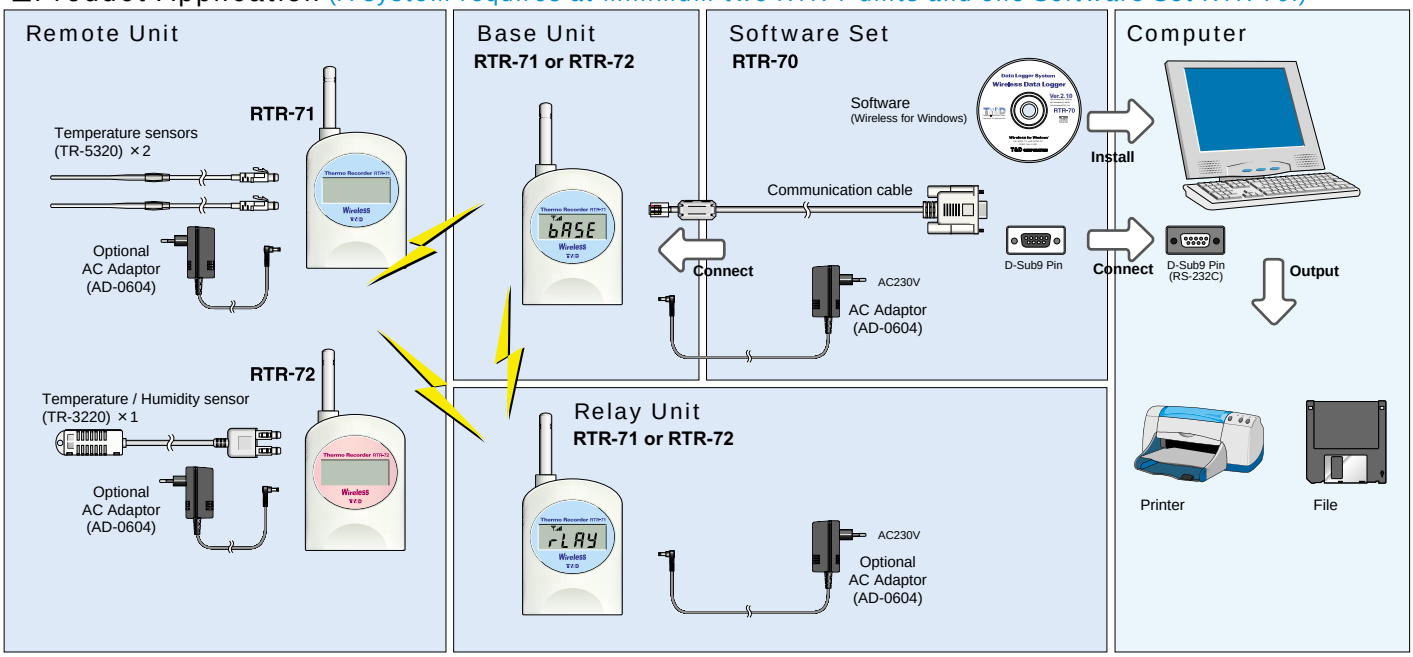
■Thermo Recorder Specifications

Type	RTR-71	RTR-72	
Measurement Channels	2 Temperature Channels	1 Temp / 1 Humidity Channel	
Measurement Item	Temperature	Temperature	Humidity
Measurement Range	−60℃ to 155℃	0℃ to 50℃	10 to 95%RH
Measurement Accuracy	Average±0.3℃(−20℃ to 80℃) Average±0.5℃(−40℃ to −20℃) / (80℃ to 110℃) Average±1.0℃(−60℃ to −40℃) / (110℃ to 155℃)	Average±0.3℃	±5%RH (At 25℃ 50%RH)
Measurement and Display Resolution	0.1℃		1%RH
Sensor	Thermistor		Polymer Sensor
Recording Intervals	1・2・5・10・15・20・30・60 minutes / Total of 8 choices		
Recording Capacity	1440 Readings × 2 Channels		
Recording Method	Endless Method (Overwrite from the oldest data when recording capacity is full)		
Display Items	Current Temperature・Recording Settings・Battery Life Warning・ Exceed Measurement Range Warning・Reading Capacity・Unit of Temperature・ Current Temperature Display ON/OFF (Set with Software)		
Power	Lithium battery (CR123A)×1 or AC Adaptor (AD-0604)		
Battery Life	Approximately 3 months (Battery life differs depending on measurement environment and battery performance.)		
Data Back-up	Low Battery Power		
Interface	Serial Communication (RS-232C Between Base Unit and Computer)		
Transmission Range	Approximately 400m (May vary with conditions) / 800m with Relay Unit		
Communication Speed	Download at 2400bps (100 Sec. per unit when data is full without Relay Unit)		
Dimensions	H92mm × W66mm × D35mm (excluding antenna)		
Weight	Approximately 120 grams (including battery)		
Unit Temp. Resistance	Temperature : 0 to 50℃ / Humidity : Less than 90%RH (Without dew condensation)		
Sensor Included	TR-5320 × 2 : (Sensor with Stainless Protection)	TR-3220 × 1 : (Temperature and Humidity Sensor)	
Accessories	Lithium Battery (CR123A) × 1 / User's Manual (Warranty)		

■Software Set RTR-70 Specifications

Software	Wireless for Windows
Compatible Devices	RTR-71 ・ RTR-72
Number of Channels	16 Channels Simultaneous Display and Processing (RTR-71, RTR-72 Total of up to 8 units of mixed data possible)
Communication Functions	Base / Remote / Relay Unit Settings・Interval Settings・ Warning Settings・Downloading (Mannual / Auto)・Display Settings・ Current Readings・Monitor Settings
Graph Display	Temperature and Humidity Graphs for each Channel・ (Zoom in, out and scroll with mouse or keyboard)・ Change Channel Colors・Turn ON and OFF Channel Display
Data Display	Channel Name・Recording Interval ・Number of Readings・ Highest, Lowest and Average Readings・Unit of Measurement・ A , B Cursor Dates・Times and Data Readings・ Calculated Difference between Cursor A and B
File Output	RTR Specific Data File / Text File (CSV, etc) (Possible to output data for specific range or time period)
Printing	Graphs / Tables
Others	Data Table Display・Calculation Range Settings・Data Maintenence・ Delete Data by Channel・Re-order data by Channel
Compatible OS	Microsoft Windows 98 / Me Microsoft WindowsNT 4.0 Microsoft Windows 2000 / Xp
PC/CPU	IBM Compatible with higher than Pentium 90MHz Serial Port (RS-232C D-Sub 9Pin)
Memory	More than 16MB
Hard Disk	More than 4MB of free space (Data will need more space)
Monitor	VGA (640×480)・more than 256 colors possible
Accessories	Communication Cable × 1 (RS-232C : D-Sub 9Pin / Cable Length: 3.0m) AC Adaptor × 1 / Battery Changer Plug × 1 Software × 1 / User's Manual (Warranty)

■Product Application (A system requires at minimum two RTR-7 units and one Software Set RTR-70.)



CE ① Complies with technical specifications required EN 301 489-3 (with battery and AC Adaptor), EN 300 220-3 and EN 60950:2000 Allowed for use in: A. B. D. DK. F. I. P. S. SW. UK. N. NL. CH. FIN. AUS. NZ.

Caution regarding safety To ensure safe operation, carefully read instructions before using this unit.

Web Site T&D Online **Product information, FAQ and software update downloads.** http://www.tandd.jp/

T&D CORPORATION
5652-169 Sasaga, Matsumoto City
Nagano, 399-0033 Japan
Facsimile:(+81)263-26-4281
E-mail: overseas@tandd.co.jp

■Distributor

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