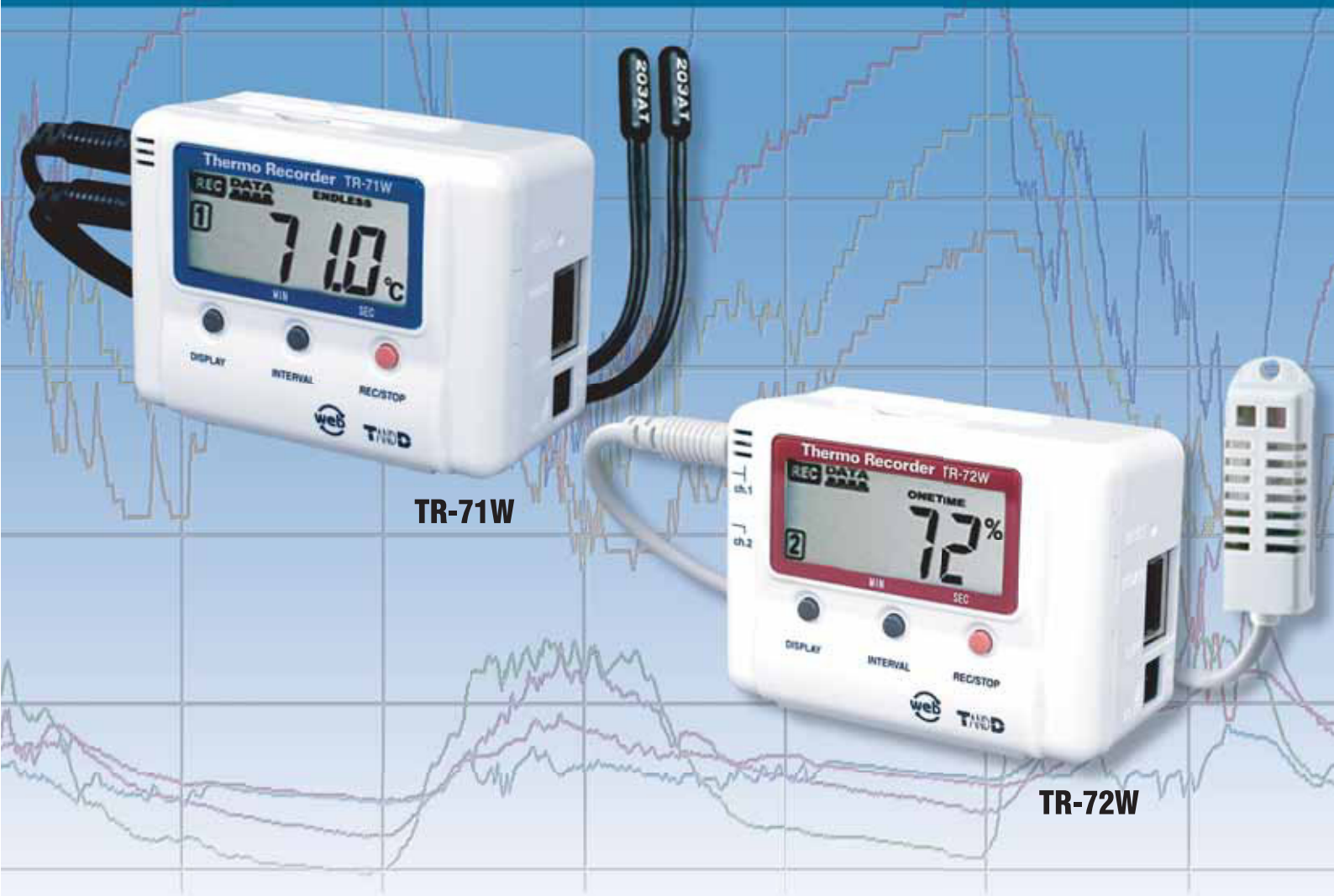
Thermo Recorder

TR-71W ・ TR-72W

Network-Dedicated Temperature / Humidity Data Logger

Thermo Recorder TR-7W is a new type of Temperature & Humidity Data Logger that incorporates an Ethernet / LAN interface. This capability allows for quick and easy collection of recorded data and monitoring of current conditions; it can even send warning E-mails. These data loggers can be connected to either a wired or wireless LAN, allowing cost effective control of temperature and humidity from remote locations.



TR-71W

TR-72W

TR-71W 2 Ch. Temperature (External Sensor) -40~110℃ (Optional Sensor : -60~155℃)

TR-72W Temperature & Humidity (External Sensor) Temperature : 0~50℃ Humidity : 10~95%RH

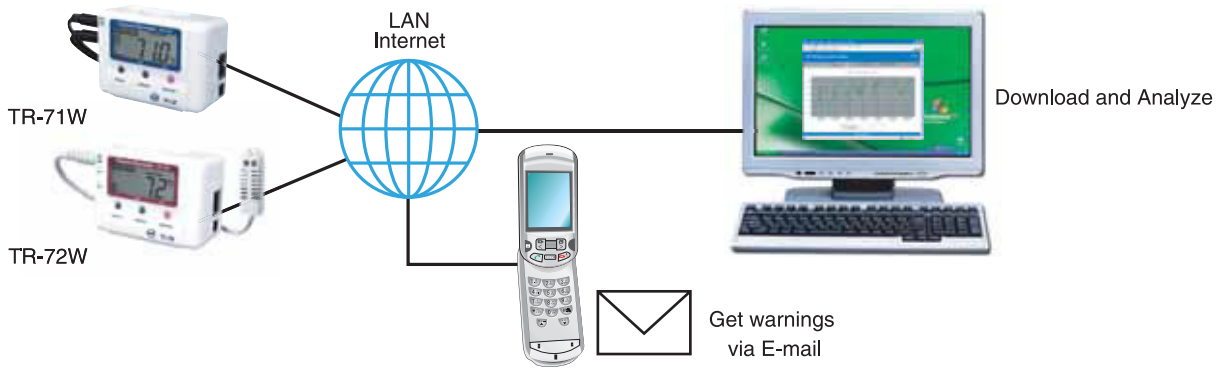
■This data logger is designed for network communication.
It does not include any RS-232 or USB communication interface.
To make use of this product you must connect it to a network.

T&D CORPORATION

Thermo Recorder

TR-71W/TR-72W

Complete access to recorded data or current readings via LAN, the Internet or E-Mail.



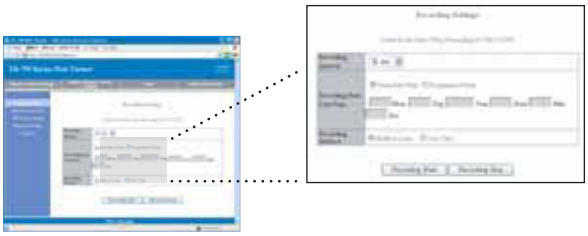
【TR-7W Web Viewer】

About the TR-7W Series Web Viewer

With the TR-7W Series Web Viewer you can not only use a browser to manage recording start and the downloading of recorded data, but can carry out various operations as listed below.

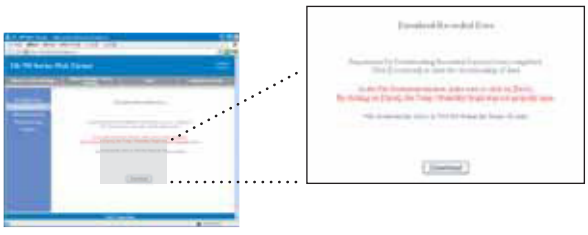
Recording Settings

By setting the recording interval, the recording start time and the recording mode, recording will begin at the set date and time.



Downloading Recorded Data

It is possible to download recorded data from the TR-7W via a browser and create files.



Send Warning Messages by E-Mail

Send E-Mail warnings to up to 5 addresses when set temperature or humidity limits are exceeded.

View Readings on a Cell Phone

Current temperature and humidity readings can be viewed with a cell phone web browser.

Monitor Current Readings

The current readings measured every 30 seconds in the TR-7W can be displayed. It is also possible to view via a cell phone browser.

Graph

Measurements taken by the TR-7W loggers can be shown in graph form which updates every minutes and can show up to 1 week's worth of data.

Main Unit Settings

Clock and Calendar Settings, Button Settings, LCD Settings, Channel Name Settings, Warning Mail Transmission Test, Forced Cancellation of Communication, Restarting the System.

Wireless LAN Option Brings Flexibility&Freedom

By simply inserting a CF type 802.11b Wireless LAN Adapter Card in the option slot the TR-7W can be easily integrated into a wireless LAN, eliminating the need for troublesome cables and wiring.

Easy-to-use “TR-7W for Windows” Software Included

TR-7W for Windows

【TR-7W Settings Utility】

Here, settings for TR7W can be carried out for Detailed Network Settings, Warning Report Settings, Gather Current Readings Settings and Adjustment Settings.

<Settings Utility Display>

【Temp / Humidity Graph】

Here, recorded data from TR-7W that has been downloaded and saved to a file can be viewed.

View and Print Temp / Humidity Graphs

View the data downloaded from the TR-7W in a list and print.

View 8 channels of data in 1 display.

Up to 8 channels of recorded data can be viewed in the same graph at one time.

Calculate and view the highest,lowest and average readings for a desired range.

In the Graph, for each channel it is possible to designate a desired range from which the highest, lowest and average readings will be calculated and displayed.

Graph Printing

It is possible to print in full-color the graph as you see it on display.

Data List Display / Printing

You can view the data displayed in the graph window as a list and then choose to print.

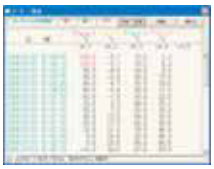
Printing the Data List

It is possible to print the entire list as displayed or to select pages for printing.

Creating Text File

It is possible to convert the data for a specified range (time period) to common text file format (CSV type format), so that it can be exported to spreadsheet software such as Excel or Lotus.

<Graph Window>



<Data List Display>

Print Recorded Data as a Graph or Table

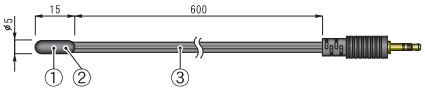
The Temperature / Humidity Graph software even includes a print preview function.
View the graph or table via a pop-up window before printing.
Zoom in or out as desired using the toolbar.

■Options

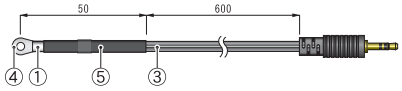
Temperature Sensors

●For TR-7W

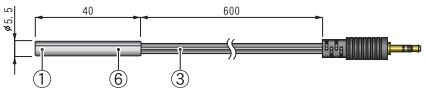
TR-0106
TPE-resin-shielded Sensor
Cable Length:0.6m
Thermal-Constant Time:
In the Air : Approx. 75 Sec



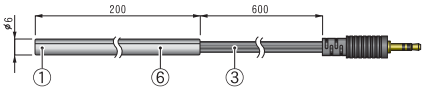
TR-0206
Stainless Protection Sensor
Cable Length:0.6m
Thermal-Constant Time:
In the Air : Approx. 75 Sec



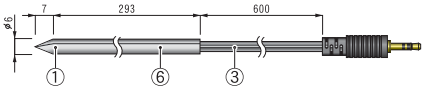
TR-0306
Stainless Protection Sensor
Cable Length:0.6m
Thermal-Constant Time:
In agitated Water : Approx. 18 Sec



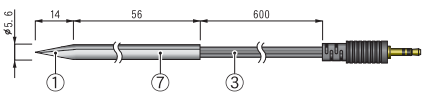
TR-0406
Stainless Protection Sensor
Cable Length:0.6m
Thermal-Constant Time:
In agitated Water : Approx. 20 Sec



TR-0506
Stainless Protection Sensor
Cable Length:0.6m
Thermal-Constant Time:
In agitated Water : Approx. 20 Sec



TR-0706
Stainless Protection Sensor
Cable Length:0.6m
Thermal-Constant Time:
In agitated Water : Approx. 18 Sec



unit : mm

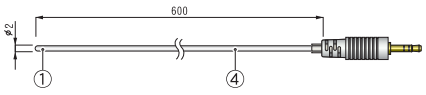
Materials ①Thermistor ②TPE resin-shielded sensor ③TPE resin-shielded wire
④M3Screw Hole ⑤Compaction Tube ⑥Stainless Pipe (SUS304)
⑦Stainless Pipe (SUS316)

Temperature Measurement Range : -40 to 110℃ Sensor Temperature Durability:-50 to 115℃
Measurement Accuracy : Average±0.3℃(-20 to 80℃) Average±0.5℃(-40 to -20／80 to 110℃)

※Only stainless section is water resistant.

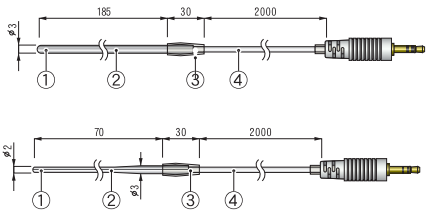
●For TR-71W

TR-1106
Teflon-shielded Sensor
Cable Length:0.6m
Thermal-Constant Time:
In the Air : Approx. 15 Sec
In agitated water: Approx. 2 Sec



TR-1220
Stainless Protection Sensor
Cable Length:2m
Thermal-Constant Time:
In the Air : Approx. 36 Sec
In agitated water : Approx. 7 Sec

TR-1320
Stainless Protection Sensor
Cable Length:2m
Thermal-Constant Time:
In the Air : Approx. 12 Sec
In agitated water : Approx. 2 Sec

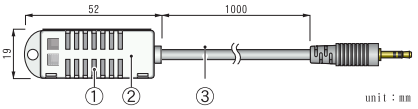


Materials ①Thermistor ②Stainless Pipe(SUS316) ③Teflon Compaction Tube ④Teflon Resin(FEP)Shielded
unit : mm

Possible Measurement Range: -60 to 155℃ Sensor Temperature Durability: -70 to 180℃
Measurement aaccuracy:Average±0.5 ℃(-40 to 80℃) Average±1.0℃(-60 to -40 / 80 to 100℃)
Average±2.0℃(100 to 155℃)
Water Resistant Ability:Splash Resistant

Humidity and Temperature Sensor (For TR-72W)

TR-3110
Humidity and Temperature Sensor
Cable Length:1m



unit : mm

Humidity Measurement Range:10 to 95%RH Temperature Measurement Range: 0 to 50℃
Sensor Durability Range:-10 to 55℃ Humidity Measurement aaccuracy:±5%RH(at 25℃ and 50%RH)
Service Life:1year under normal conditions
Operational Conditions:No Dew Condensation or Water Leakage / No contact with organic solvents, solutions or gasses emitted from spoiled foods.

AC Adaptor (For TR-7W)

AD-0605
Input : 100~120V
Output : 5V2A
Cable Length : 1.85m

AD-0606
Input : 100~240V
Output : 5V2A
Cable Length : 1.85m

Product Specifications

Unit	TR-71W	TR-72W	
Measurement Channel	2 Channel	2 Channel	
Measurement Item	Temperature only	Temperature	Humidity
External Sensor	-40 to 110℃	0 to 50℃	10 to 95%RH
Optional Sensor	-60 to 155℃※1	-40 to 110℃	—
Measurement Accuracy	Average ±0.3℃(−20 to 80℃) Average ±0.5℃(−40 to −20℃ / 80 to 110℃)※2		±5%RH (At 25℃ 50%RH)
Measurement Resolution	0.1℃		1%RH
Attached Sensors	TR-0106 : TPE Resin-Shielded sensors x 2		TR-3110 Temp / Humidity Sensor x 1
Recording Interval	1・2・5・10・15・20・30 Seconds / 1・2・5・10・15・20・30・60 Minutes / Total of 15 choices		
Recording Capacity	8,000 Readings x 2 Channels		
Recording Method	Endless (Overwrite from the oldest data when recording capacity is full) One-time Method (Stop recording when recording capacity is full)		
LCD Display	Measurements (Ch1 only, Ch2 only, alternating display) , Recording Status, Battery Life Warning , Over-Measurement Range , Amount of Recorded Data , Unit of Measurement		
Power Source	Special AC Adaptor (DC5V)		
Data Back - up ※3	Saved for about 3 months with 1 lithium battery (CR-2032) ※5		
Interface	Wired LAN:10 / 100 Base - TX RJ45 connector Wireless LAN:IEEE802.11b CF type Wireless LAN Card ※6		
Dimensions ※4	H55mm x W78mm x D39mm		
Weight	About 101g (Including one battery)		
Working Environment for Main Unit	Temperature : 0 to 50℃ Humidity : 20 to 80%RH (without condensation) ※7		
Accessories Included in Package	AC Adaptor , Lithium Battery , LAN cable (2m) , Software CD , User' s Manual , Warranty		
Browser Functions	View Temperature and Humidity Data in Graph Form , Start Recording, Download Data , Monitor Current Readings , Check Back-up Battery		
Warning Mail Function	E-mail:Register up to 5 addresses to receive mail		
Power Consumption	About 290mA (when using wired LAN)		
Security	Access Controlled IP Address , ID Password Authentication		
Compatible OS	Windows 2000 / XP		

※1 1Compatible with all T&D tested and approved models.
※2 Errors in accuracy increase with increase in electrical noise.
※3 Battery Life varies according to type of battery, measuring environment , communication frequency , and ambient temperature. This estimate of battery life was based on normal use under normal conditions using a new battery. This is in no way a guarantee of battery life.
※4 Without protrusion.
※5 The backup battery is for data backup and emergency use only. The battery is not used under normal conditions. If using only the battery, network communication cannot occur.
※6 Please do not use any CF type Wireless LAN cards that have not been proven to be compatible and are not in the list below. Please ask your local representative about which Wireless LAN cards can be used. For an updated list of Wireless LAN cards that have been tested and proven compatible please see our Homepage.
※7 This is the working environment specs when using only the data logger. When using with a LAN card or cell phone these specs may vary.

Software Specifications

Software	TR-7W Utility
Compatible Devices	TR-71W / TR-72W
Communication Functions	Network Initialization Settings , Detailed Network Settings , Warning Report Settings , Measurement Reading Adjustment and Gather Current Reading Settings

Software	Temperature • Humidity Graph
Compatible Devices	TR-71W / TR-72W
Number of Channels	8 Channel Simulaneous Display and Processing , Possible to process mixed data from up to 4units.
Temp / Humidity Graph Graph Display	Temperature and Humidity Graphs for each Channnel / 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 / AB Cursor Dates , Times and Data Readings / Calculated Difference between Cursor A and B
File Output	T&D Common Data File / Text File (CSV,etc) (Selected Range or File for Entire Period)
Printing	Graphs / Tables
Others	Data List Display / Calculation Range Settings / Data Maintenance / Edit Recording Conditions Delete Data by Channel / Re-order Data by Channel

OS	Microsoft Windows 2000/XP (English) ※1
PC/CPU	A Stable Windows Operating Environment LAN, TCP/IP Communication Possible
Memory Capacity	Enough memory to stably operate Windows
Disc Space	More than 10MB free space(More free space is necessary for data)
Monitor	VGA(SVGA higher than 800×600 recommended) • more than 256 colors
LAN	100BASE-TX or 10BASE-T Twisted pair cable confirming to Category 5(STP/UTP)
Web	Internet Explorer 6.0 or higher

※1 : To install the [Settings Utility], it may be necessary to have Administrator Rights for the computer into which it will be installed.

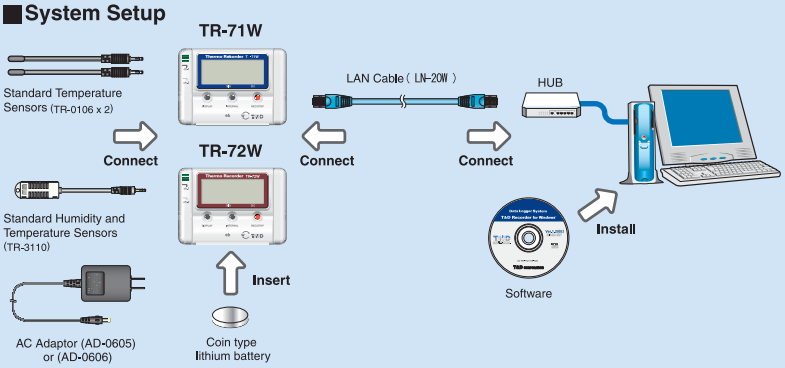
■In order to use this product via the internet or cell phone you must first make necessary arrangements with a provider for a line and get a global IP address. In addition, to use the mail function it is necessary to have an SMTP server.

*FCC Compliance Statement for American Users

This device complies with Part 15 of the FCC Rules.
Operation is subject to following two conditions: (1) this device may not cause harmful interference. and (2) this device must accept any interference received, including interference that may cause undesired operation.
NOTE: this equipment has been tested and found to comply with the limits for a Class A Digital Device,pursuant to Part 15 of the FCC Rules.These limits are designed to provede reasonable protection against harmful intterference in a residential installation.This equipment generates,uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.If this equipment does cause harmful interference to radio or television reception , which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
–Reorient or relocate the receiving antenna.
–Increase the separation between the equipment and receiver.
–Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
–Consult the dealer or an experienced radio / TV technician for help.

Warning : This equipment has been verified to comply with the limits for a Class A personal digital device, pursuant to Subpart B of Part 15 of FCC Rules. Only peripherals (computer input / output devices, terminals, printers, etc) certified or verified to complywith the Class A or B limits may be attached to this equipment. Operation with non-certified or non vertified personal computer and / or peripherals is likely to result in interference to radio and TV reception.The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause nterference levels which exceed the limits established by the FCC for this equipment.You are cautioned that changes or modifications not expressly approved by party responsible for compliance could void your authority to operate the equipment.

■System Setup



Web Site
Product information, FAQ and software update downloads.
http://www.tandd.jp/

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

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