


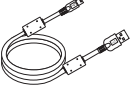



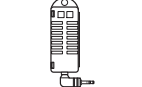

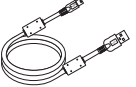


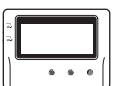


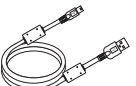


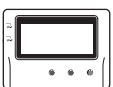

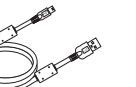




TR-7wf/nw Series Thermo Recorder

Please Read First

Package Contents

TR-71wf / 71nw	Temperature 2ch
 Data Logger  Temperature Sensor TR-0106 x 2  AA Alkaline Battery (LR6) x 2  USB Mini-B Cable (US-15C)  Manual Set (Warranty Included)  Registration Code Label	
TR-72wf / 72nw	Temperature 1ch, Humidity 1ch
 Data Logger  Temperature-Humidity Sensor THA-3001  AA Alkaline Battery (LR6) x 2  USB Mini-B Cable (US-15C)  Manual Set (Warranty Included)  Registration Code Label	
TR-72wf-H / 72nw-H	Temperature 1ch, Humidity 1ch (High-Precision Type)
 Data Logger  High Precision Temperature-Humidity Sensor HHA-3151  AA Alkaline Battery (LR6) x 2  USB Mini-B Cable (US-15C)  Manual Set (Warranty Included)  Registration Code Label	
TR-75wf / 75nw	Thermocouple (K, J, T, E, S, R) Temperature 2ch
 Data Logger  AA Alkaline Battery (LR6) x 2  USB Mini-B Cable (US-15C)  Manual Set (Warranty Included)  Registration Code Label	

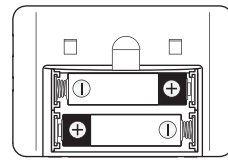
* Please prepare a thermocouple separately. T&D does not handle the sale of thermocouple sensors.

Getting Logger Ready for Installation

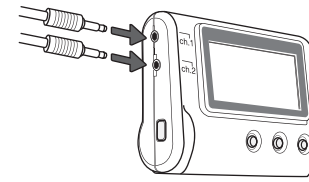
Battery Installation & Sensor Connection

Battery

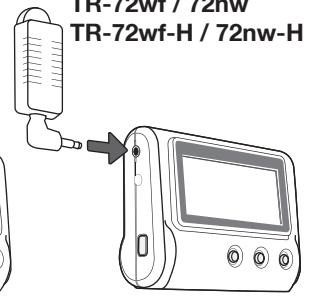
Make sure to use new batteries (including for replacement) and insert in the correct direction.



TR-71wf / 71nw



TR-72wf / 72nw TR-72wf-H / 72nw-H



About TR-71wf / 71nw Internal Sensor

Channel 1 has an internal temperature sensor. When an external sensor is not connected, the internal sensor will be used.

About TR-75wf / 75nw Input Terminal

When connecting thermocouple wires to the input terminal, make sure that the positive and negative connections are in the proper order. If the polarity is incorrect, changes in temperature will be reversed (when the real temperature increases, the measured temperature will decrease).

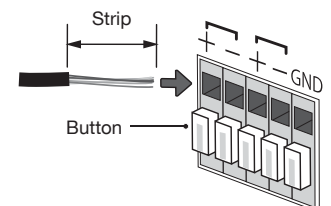
Wiring Connections

Connect and disconnect the thermocouple wire from the hole while pressing the input terminal button with a screwdriver or other such tool.

Do not try to pull out the wire without pressing the button.

Compatible Wires

Single wire: $\varnothing 0.32$ mm to $\varnothing 0.65$ mm (AWG 28-22)
 Twisted wire: 0.08 mm² to 0.32 mm² (AWG 28-22)
 Diameter: 0.12 mm or more
 Strip length: 9 to 10 mm

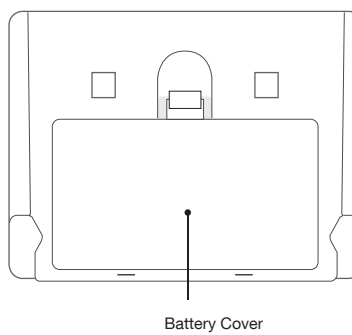
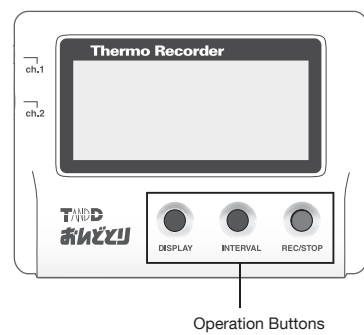
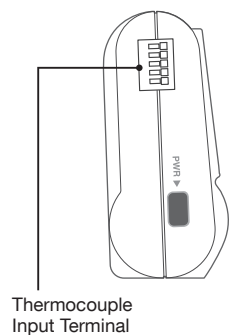
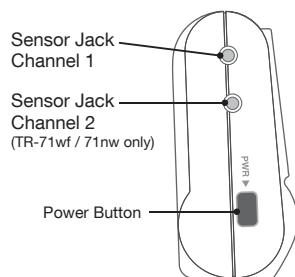


Using GND

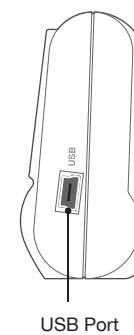
If measurements are unstable while using external power (USB or PoE), connect to the GND terminal.

TR-71wf / 71nw TR-72wf / 72nw TR-72wf-H / 72nw-H

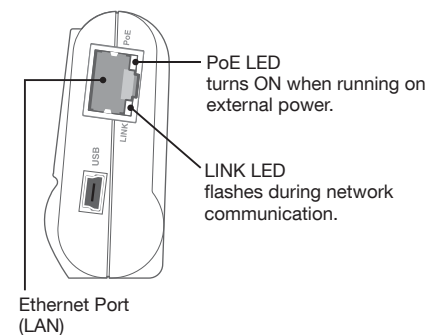
TR-75wf / 75nw



wf (Wireless LAN)



nw (Wired LAN)





- » See the Introductory Manual for how to set and check thermocouple sensor type for TR-75wf/nw.
- » The Introductory Manual also explains operations using the operation buttons.

Safety Precautions and Instructions




The following items should be strictly obeyed for the safe usage of this product, and for protecting yourself and other people from bodily harm and/or damage to property.

Explanation of Symbols









<Warning Symbols>


	DANGER	These entries are actions that absolutely under no circumstance should be taken. The taking of such an action may cause serious personal physical damage or death.
	CAUTION	These entries are actions that if taken may lead to physical injury or damage to persons or things.


<Picture Symbols>


	Denotes an important warning or caution.		Denotes a forbidden action.		Denotes an action that should not be carried out.
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DANGER To Prevent Serious Accidents

-  Do not disassemble, repair or modify the unit and/or accessories.
-  Do not use the unit in any environment that is exposed to chemicals and harmful gases. Doing so may cause corrosion and/or other danger to the unit. Also, coming in contact with hazardous substances may cause bodily harm to the user or people nearby.
-  This product is not water resistant. If water or a foreign object enters the case, immediately remove batteries and stop using it.
-  Do not handle the unit, remove batteries or cables with wet hands.
-  This product has been designed for private and/or industrial use only. It should not be used in situations where strict safety precautions are necessary such as with medical equipment, or in systems directly or indirectly connected with human life or well-being.
-  Do not drop or expose the unit to a strong impact.
-  Do not connect any communication cables connected to the unit to telephone line outlets. Continued use may cause fire or electrocution.
-  Do not cut or process the cords for the communication cables. Also, do not twist, pull on or swing any of the cords.


 To prevent damage to the unit from static electricity, remove static electricity from your body by touching metal around you (such as a door knob and window frame) before touching the unit.


 Place and store the unit and accessories out of the reach of children.


 We are not responsible for any damage, malfunction or trouble, whether direct or indirect, caused by the use of our product.


 Do not use any battery, sensor, or cable other than those specified by T&D Corporation.

 Do not put anything on top of the cable or the unit. This may cause overheating.

 Do not disconnect the USB cable during USB communication. Doing so may cause adverse effects to the unit and/or PC.

 Make sure that sensor and cable plugs are all inserted fully, so as not to cause an improper connection. Also, when unplugging the cable from the unit, do not pull the cord, but hold the connector to disconnect.

 If the unit produces heat, emits smoke or a strange smell, or makes unusual noise, immediately remove the batteries and stop using it. Also, unplug the unit from the PC.

 If the unit is not to be used for a long period of time, remove batteries. Leaving batteries inside the unit may cause battery leakage and malfunction. Install new batteries when starting or re-starting to use a unit.

CAUTION Do not place or store in the following areas:

- » Areas exposed to direct sunlight
- » Areas subject to direct flames or heaters, as well as areas in which hot air accumulates and creates extremely high temperatures
- » Areas exposed to static electricity
- » Areas exposed to strong magnetic fields
- » Areas exposed to water leakage
- » Areas subject to condensation or wet areas
- » Areas exposed to excessive vibration
- » Areas exposed to excessive smoke, dust or dirt.

CAUTION Other Precautions

- » Use the unit in the specified operating environment. Do not use it for any purpose other than for which it was designed.
- » Condensation may occur inside the case when a unit is moved from one environment to another where there is a great difference in temperature.
- » Do not use the unit in wet areas or places exposed to water such as bathroom.
- » When connecting the unit to your PC, make sure to follow all warnings and directions from your computer manufacturer.

- » We shall not guarantee the unit's operation if it has been connected to a PC using a USB hub or a USB extension cable.
- » Do not insert any foreign objects into any of the units' jacks.
- » If the unit gets dirty, wipe it with a clean cloth.
- » Make sure to remove dust and dirt from plugs of any cables.
- » Battery terminals may provide insufficient contact due to age or vibration. This may lead to data loss.
- » Please note that this document has been written based on the presupposition that details about contracts with an Internet provider, specific network environments and the set-up of any other necessary equipment to enable network connection has already been taken care of by the User and that connection has been confirmed as workable. T&D Corporation shall not be responsible for any damages which a contractor, a user or a third party may suffer, whether direct or indirect, due to the inability to communicate or use communication devices.

CAUTION Notices about Sensors

- » Do not connect any sensor to the unit other than those specified by T&D Corporation.
- » Make sure to use sensors within the measurement range indicated in the specifications for that sensor.
- » Do not connect the sensor to any data logger other than those specified by T&D Corporation.
- » Do not expose the sensor to a strong impact. This may adversely affect measurement accuracy and cause damage or malfunction.
- » When the sensor is not to be used for a long period of time, please store it at normal temperature and humidity.
- » Do not use the sensor on the human body.

Temperature-Humidity Sensor

- » If extremely severe temperature changes occur, it may result in large errors in humidity measurement. Once the sensor's temperature becomes stable, the measurements will return to normal.
- » The temperature-humidity sensors will with normal use experience losses in precision and sensitivity over time due to degradation. If the sensor is being used in an unsuitable environment (smoky or dusty places) it may be necessary to change the sensor sooner.
- » The included sensor is not water resistant. If the sensor gets wet, immediately remove the sensor from the unit and wipe it with a clean cloth as soon as possible. Then allow the sensor to dry in normal room temperature before using it again.
- » When using the THA-3001 or THA-3151(option) in an environment where the humidity is under 30 %RH, the measurements may sometimes fluctuate. This is not abnormal.
- » Do not expose to condensation, dampness, corrosive gases, or organic solvents (or insecticides for High Precision Temperature-Humidity Sensors)

Optional Sensors

- » We offer a wide range of Temperature and Temperature-Humidity sensors, sensor extension cables, AC adaptors, etc. For details see the Optional Products information on the Product Page.

<http://www.tandd.com/product/index.html>

Thermocouple Sensors

- » We do not handle the sale of Thermocouple sensors. Please prepare a commercially available sensor.

TR-7wf/nw Series - Specifications

		TR-71wf / TR-71nw	TR-72wf / TR-72nw		TR-72wf-H / TR-72nw-H		TR-75wf / TR-75nw
Measurement Channels		Temperature 2ch (Internal 1ch / External 2ch)	Temperature 1ch, Humidity 1ch (External)		Temperature 1ch, Humidity 1ch (External)		Temperature 2ch
Sensor		Thermistor	Thermistor	Polymer Resistance	Platinum Resistance	Electrostatic Capacitance	Thermocouple: Type K, J, T, E, S, R
Measurement Units		°C, °F	°C, °F	%RH	°C, °F	%RH	°C, °F
Measurement Range	Internal Sensor	-10 to 60 °C (*1)	-	-	-	-	-
	External Sensor	-40 to 110°C (Supplied Sensor) -60 to 155°C (Optional Sensor)	0 to 55 °C	10 to 95 %RH	-30 to 80 °C	0 to 99 %RH	K -199 to 1370 °C E -199 to 1000 °C J -199 to 1200 °C S -50 to 1760 °C T -199 to 400 °C R -50 to 1760 °C
Accuracy		Avg. ±0.3°C at -20 to 80 °C Avg. ±0.5°C at -40 to -20 °C 80 to 110 °C	±0.5°C	±5 %RH at 25°C, 50%RH	±0.3°C at 0 to 50 °C ±0.5°C all other temperatures	±2.5 %RH at 25 °C, 10 to 85 %RH ±4.0 %RH at 25°C, 0 to 10%RH or 85 to 99%RH For temperatures other than 25 °C and between 0°C and 80°C, add ±0.1%RH per degree difference from 25. Humidity Hysteresis: ±1.5 %RH or lower (*2)	Thermocouple Measurement : Type K, J, T, E ±0.5°C ±0.3 % of reading at -100°C or above Type S, R ±1.5°C ±0.3 % of reading at 100°C or above Cold Junction Compensation: ±0.5°C in operating environment of 10 to 40 °C ±0.8°C in other operating environment
Measurement Resolution		0.1 °C	0.1°C	1 %RH	0.1°C	0.1 %RH	K, J, T, E: 0.1°C S, R: Approx. 0.2°C
Responsiveness		Thermal Time Constant: Approx. 75 sec. Response Time (90%): Approx. 190 sec.	Response Time (90%): Approx. 7 min.		Response Time (90%): Approx. 7 min.	Response Time (90%): Approx. 20 sec.	-
LCD Display Items		Measurements (fixed or alternating display), Battery Warning Mark, etc.					
Logging Capacity		8,000 data sets (One data set consists of readings for all channels in that type of unit.)					
Recording Interval		Select from 15 choices: 1, 2, 5, 10, 15, 20, 30 sec. or 1, 2, 5, 10, 15, 20, 30, 60 min.					
Recording Mode		Endless (Overwrite oldest data when capacity is full) / One Time (Stop recording when capacity is full)					
Auto-upload Interval		Select from 15 choices: OFF (No auto-upload), 1, 2, 5, 10, 15, 20, 30 min. or 1, 2, 3, 4, 6, 12, 24 hrs.					
Communication Interfaces		TR-7wf: Wireless LAN Communication: Standard: IEEE 802.11b (TR-71wf/72wf) / IEEE 802.11b/g/n (TR-75wf) Security (*3): WEP (64 bit/128 bit), WPA-PSK (TKIP), WPA2-PSK (AES) WPS 2.0: Push Button Configuration, Protocol: HTTP (*4), DHCP, DNS TR-7nw: Wired LAN Communication: 100BASE-TX/10BASE-T (RJ45 Connector) Protocol: HTTP (*4), DHCP, DNS USB Communication: USB 2.0 (Mini-B connector)					
Power (*5)		Battery: AA Alkaline x 2 (AA Ni-MH batteries may also be used), External: USB Bus (5V 200mA), AC Adaptor (AD-05A2 or AD-05C2), PoE IEEE 802.3af (TR-7nw only)					
Battery Life (*6)		With LAN communication: Approx. 10 days to 1.5 years Ex: Approx. 10 days when Auto-upload Interval is 1 min, 1 yr when 1 hr, 1.5 yrs when 12 hrs or more Without LAN communication: Approx. 1.5 years					With LAN communication: Approx. 10 days to 1 year Ex: Approx. 10 days when Auto-upload Interval is 1 min, 7 mos when 1 hr, 1yr when 12 hrs or more Without LAN communication: Approx. 1 year
Dimensions		H 58 mm x W 78 mm x D 26 mm					
Weight		Approx. 55 g					
Operating Environment		Temperature -10 to 60°C (*7), Humidity 90 %RH or less (no condensation)					
Software Compatible OS (*8)		TR-7wf/nw for Windows / T&D Graph / T&D Data Server (For PC) Microsoft Windows 10 32 / 64 bit Microsoft Windows 8 32 / 64 bit Microsoft Windows 7 32 / 64 bit Microsoft Windows Vista 32 bit SP1 or later (T&D Data Server not compatible) T&D Thermo (For Smart phone, Tablet) Android OS, iOS (For the compatible versions, please refer to our website.)					
Display Languages (*9)		English					

*1: When Auto Upload is used frequently, the measurement of the internal sensor may rise by around 0.3°C.

When using external power, the data logger itself generates heat and the internal sensor will report a temperature much higher than ambient; we recommend using an external temperature sensor in this case.

*2: When used in environments where temperature and humidity are over the values of 50°C 75%, 60°C 50%, 70°C 35%, and 80°C 25%, sensor hysteresis may fluctuate by values greater than ±1.5%RH. Under certain circumstances, it may take some time to return to normal measurement capability.

*3: The WPS feature is not available when WEP (64bit/128bit) or WPA-PSK (TKIP) is selected in Access Point Settings. If you wish to use the WPS feature, please select WPA2-PSK (AES) or disable wireless security.

*4: HTTP client. Proxy supported. (for firmware version 1.05 or above for TR-71wf/72wf).

*5: When using external power, the internal temperature of the logger rises.

*6: Battery life varies depending upon multiple factors including frequency of communication, LAN environment, ambient temperature, recording interval, and battery performance. All estimates are based on operations carried out with a new battery and are in no way a guarantee of actual battery life.

*7: -10 to 45°C when using external power (TR-7nw only).

*8: For installation, it is necessary to have Administrator (Computer Administrator) rights.

*9: We recommend using an operating system in the same language as the display language. Operation in different languages is not guaranteed.

The specifications listed above are subject to change without notice.

Important Notices and Disclaimers

In order to properly use this product, please carefully read all documents that accompany the product before using. T&D Corporation accepts no responsibility for any malfunction of and/or trouble with this product or with your computer that is caused by the improper handling of this product and will deem such trouble or malfunction as falling outside the conditions for free repair outlined in the attached warranty.

» All rights of the attached documents belong to T&D Corporation. It is prohibited to use, duplicate and/or arrange a part or whole of the attached documents without the permission of T&D Corporation.

» Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.

» Windows Vista is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

» Google, Android, and Google Play are trademarks or registered trademarks of Google Inc.

» Apple and App Store are trademarks or registered trademarks of Apple, Inc. in the U.S. and other countries.

» All registered trademarks, company names, product names and logos mentioned herein or for products being used are the property of T&D Corporation or of their respective owners.

» Specifications, design and other contents outlined in the attached documents are subject to change without notice.

» Please follow the safety precautions outlined in the attached documents carefully. We cannot guarantee nor are we responsible for safety if this product is used in any manner other than was intended.

» On-screen messages in the attached documents may vary slightly from the actual messages.

» Please notify the shop where you purchased this product or T&D Corporation of any mistakes, errors or unclear explanations in the attached documents.

» T&D Corporation accepts no responsibility for any damage or loss of income caused by the use of our product.

» Accompanying documents cannot be reissued, so please keep them in a safe place.

» Please read the warranty and provisions for free repair carefully.

Compliance Information (for TR-7nw)

FCC Statement

This device complies with Part 15 of the Federal Communications Commission (FCC) rules. Operation is subject to the 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference 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.

To comply with the limits for the Class B digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits.

All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For product information or questions contact us at:

T&D Corporation

For product inquiries, please contact your local distributor. Visit T&D Website for the distributors list.

If you can not find a distributor in your area, please contact our main office in Japan or one of our branch offices in Europe or America.

<http://www.tandd.com/purchasing/index.html>

2017.05 16504930030 (8th Edition)

TR-7wf / nw Series Warranty

Product under Warranty (Excluding Accessories)	<input type="checkbox"/> TR-71wf	<input type="checkbox"/> TR-72wf	<input type="checkbox"/> TR-72wf-H	<input type="checkbox"/> TR-75wf
	<input type="checkbox"/> TR-71nw	<input type="checkbox"/> TR-72nw	<input type="checkbox"/> TR-72nw-H	<input type="checkbox"/> TR-75nw
Warranty Period	1 year from date of purchase			
Date of Purchase				
Customer's name				
Address				
Phone No.				
Distributor's name				
Address				
Phone No.				
Object of Repair	Main Unit (excluding sensors and any other options.)			
Method of Repair	Send in for Repair			

Provisions for Free Repair

1. If the unit does not work properly despite the fact that the customer used it properly and in line with the manual, the Unit shall be repaired free of charge through the distributor which sold the unit.
2. If the customer requests free repair because of trouble within the warranty period, bring or send the unit along with the warranty to the distributor.
3. If you have moved after purchasing, or there are difficulties contacting the distributor from which you purchased the unit, please contact T&D directly for service.
4. Free repair is not available in the following cases even though it is within the warranty period:
 1. Trouble or damage was caused by careless operation, natural disaster, fire, public pollution, or use of a power source other than specified.
 2. If repair, adjustment, disassembly or modification of the unit has been carried out by a person other than a T&D authorized engineer.
 3. Trouble or damage was caused by transportation, movement or dropping of the unit after purchase.
 4. Failure to submit the warranty or failure to fill in all items required in the warranty.
 5. The warranty cannot be reissued.

This warranty only promises customers free repair within the period and conditions clarified in this warranty. Therefore, the customer's legal rights will not be limited by this warranty. For further information on repair and other service questions after the termination of the warranty period, contact your distributor.

T&D CORPORATION