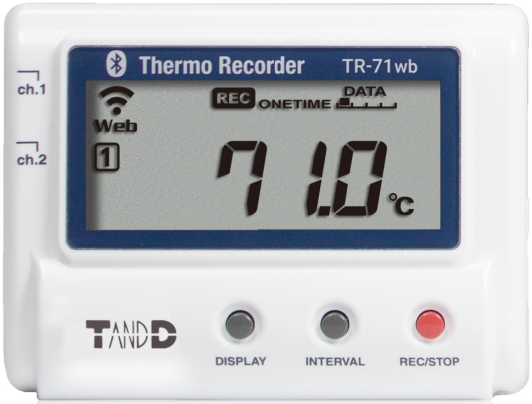
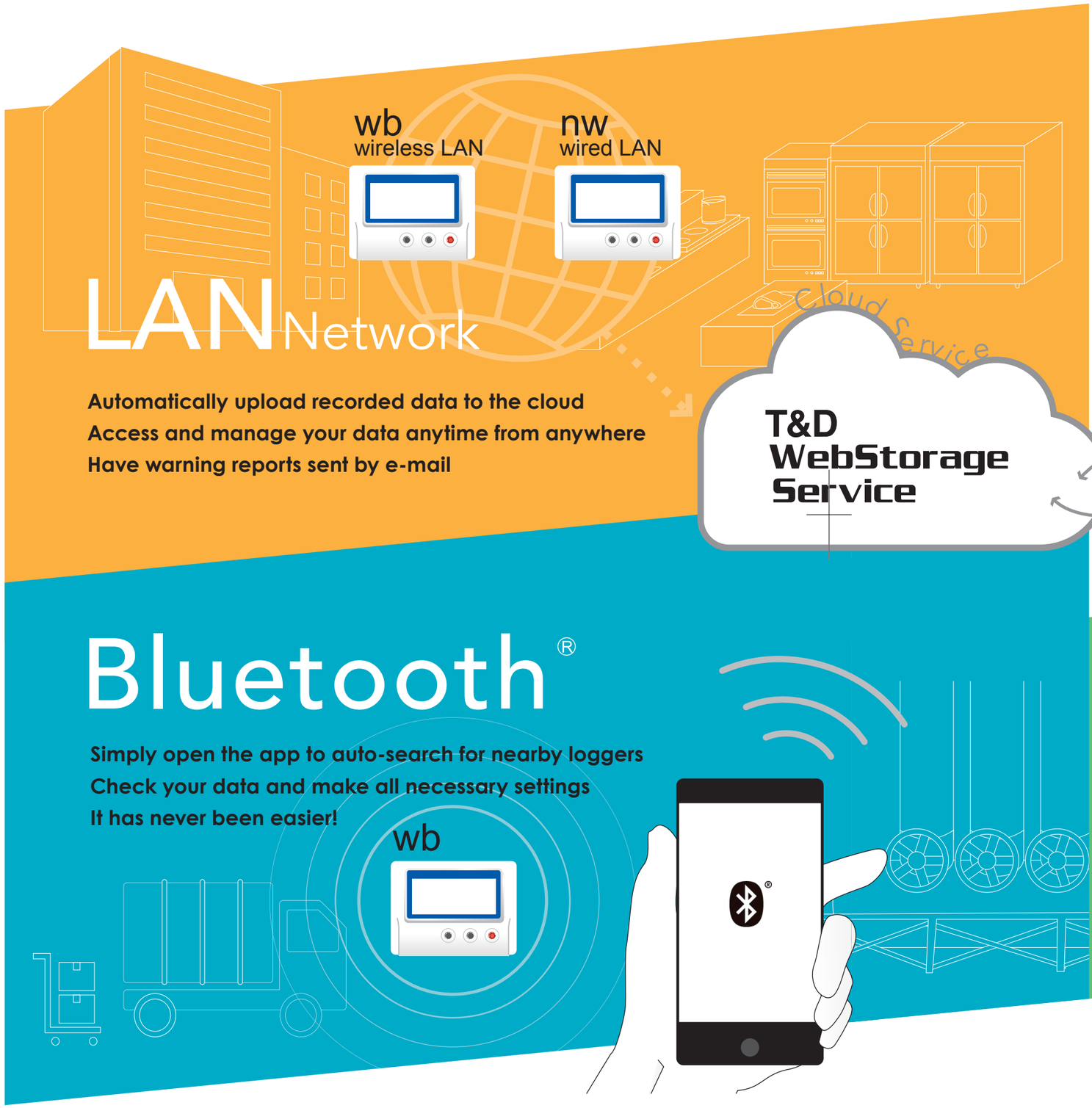
TR-7wb/nw

Welcome to the World of IoT!

Seamless, Simple yet Sophisticated!



Temperature & Humidity Data Loggers made for the CLOUD!



Automatically upload recorded data to the cloud
Access and manage your data anytime from anywhere
Have warning reports sent by e-mail

Simply open the app to auto-search for nearby loggers
Check your data and make all necessary settings
It has never been easier!

Connect via USB for Downloading Data
and Settings Management

Two types to choose from: The all new Wireless LAN Bluetooth® enabled TR-7wb and the dedicated Wired LAN TR-7nw.

Sending and storing data to T&D's cloud service ensures easy access to your important temp/humidity data from anywhere at anytime.

Simple direct USB connection to PC also allows for easy downloading and viewing of data, as well as, total control over logger settings.

Best of all T&D software and cloud service storage is FREE of charge!

Temperature

TR-71wb Bluetooth®, Wireless LAN, USB

TR-71nw Wired LAN, USB

Thermocouple (K, J, T, E, S, R)

TR-75wb Bluetooth®, Wireless LAN, USB

Thermocouple (K, J, T, E, S, R)

TR-75nw Wired LAN, USB

Temperature-Humidity

TR-72wb Bluetooth®, Wireless LAN, USB

TR-72nw Wired LAN, USB

High Precision Type

TR-72wb-S Bluetooth®, Wireless LAN, USB

High Precision Type

TR-72nw-S Wired LAN, USB

		TR-71wb / 71nw	TR-72wb / 72nw		TR-72wb-S / 72nw-S		TR-75wb / 75nw
Measurement Channels		Temperature 2ch	Temperature 1ch Humidity 1ch		Temperature 1ch, Humidity 1ch High Precision Type		Temperature 2ch
Sensor		Thermistor	Thermistor	Polymer Resistance	Thermistor	Polymer Resistance	Thermocouple: Type K, J, T, E, S, R *1
Measurement Units		°C, °F	°C, °F	%RH	°C, °F	%RH	°C, °F
Measurement Range	Internal Sensor	−10 to 60°C *2	-	-	-	-	-
	External Sensor	−40 to 110°C (Supplied Sensor) −60 to 155°C (Optional Sensor)	0 to 55 °C	10 to 95 %RH	−25 to 70 °C	0 to 99 %RH *3	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 −20 to 80°C Avg. ± 0.5°C −40 to −20°C 80 to 110°C	±0.5°C	±5%RH at 25°C, 50%RH	±0.3°C at 10 to 40°C ±0.5°C all other temperatures	±2.5%RH at 15 to 35°C, 30 to 80 %RH	Thermocouple Measurement (Sensor inaccuracies not included) K, J, T, E : ±(0.5°C+0.3% of reading) S, R : ±(1.5°C+0.3% of reading) at 100°C or above Cold Junction Compensation ±0.5°C at 10 to 40°C ±0.8°C other temperatures within the operating environment of the logger
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.		–

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) or 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−7wb Wireless LAN Communication: IEEE 802.11b/g/n Security*4: WEP (64bit/128bit), WPA-PSK (TKIP), WPA2-PSK (AES) WPS 2.0: Push Button Configuration Protocol: HTTP*5, DHCP, DNS TR−7wb Bluetooth® Communication: Bluetooth 4.2 (Bluetooth low energy) TR−7nw Wired LAN Communication: 100BASE-TX/10BASE-T (RJ45 Connector) Protocol: HTTP*5, DHCP, DNS USB Communication: USB 2.0 (Mini-B connector)
Power *6	Battery: AA Alkaline x 2, AA Ni-MH x 2 External: USB Bus 5V 200mA, AC Adaptor AD−05A2 or AD−05C2, PoE IEEE 802.3af (TR−7nw only)
Battery Life *7	TR−71wb / 72wb: Approx. 10 days to 15 months *8 TR−71nw / 72nw: Approx. 10 days to 1.5 years *9 TR−75wb: Approx. 10 days to 1 year *8 TR−75nw: Approx. 10 days to 1 year *9
Dimensions	H 58 mm x W 78 mm x D 26 mm
Weight	Approx. 55g
Operating Environment	Temperature: −10 to 60°C (−10 to 45°C when using external power. (TR−7nw only)) Humidity: 90%RH or less (no condensation)
Accessories	Temperature Sensor TR−0106 x 2 / Temperature-Humidity Sensor THA−3001 / High Precision Temperature-Humidity Sensor SHA−3151 / - AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US−15C, Manual Set (Warranty Included)
Software Compatible OS *10	TR−7wb/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 T&D Thermo (For Mobile Devices) Android OS, iOS (For the compatible versions, please refer to our website.)
Display Languages *11	English

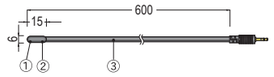
*1: Compatible wire sizes are as follows. Single Wire : φ0.32 to φ0.65 mm (AWG 28-22), Twisted Wire : 0.08 to 0.32 mm² (AWG 28-22), φ0.12 mm or more in diameter, Stripping Length : 9 to 10 mm.
*2: When Auto Upload is used frequently, the measurement of the internal sensor may rise by around 0.3°C. When 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.
*3: When continually used in environments with temperatures above 60°C, accuracy of humidity measurements will decrease over time. Also, humidity cannot be measured at temperatures below −20°C.
*4: If you wish to use the WPS feature, set the security type of the wireless LAN access point to "WPA2-PSK(AES)" or "None".
*5: HTTP client. Proxy supported.
*6: When using external power, the internal temperature of the logger rises.
*7: Battery life is highly dependant on the Auto-upload interval; at 1 min will give 10 days of usage, and at 12 hours or more will yield the maximum lifetime. Other influential factors include 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.
*8: Shows the estimated battery life with Bluetooth and Auto-Upload ON. It will be 1.2 times longer with Bluetooth OFF.
*9: Shows the estimated battery life with Auto-Upload ON.
*10: For installation, it is necessary to have Administrator (Computer Administrator) rights.
*11: 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.

Temperature Sensors for TR-71wb / 71nw

Measurement Range: −40 to 110°C, Temperature Durability: −50 to 115°C
Accuracy: Avg. ±0.3°C at −20 to 80°C, Avg. ±0.5°C at −40 to −20°C / 80 to 110°C
Materials: ① Thermistor ② TPE Mold ③ TPE Cable ④ M3 Crimp Terminal (aluminium) ⑤ ShrinkTube ⑥ Stainless Tube (SUS304) ⑦ Stainless Tube (SUS316)

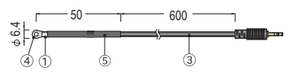
TR-0106 TPE Resin-Shielded Sensor

Response Time (90%):
Approx. 190 sec. (in air)
Waterproof Capacity: None



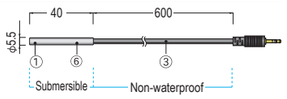
TR-0206 Screw-down Sensor

Response Time (90%):
Approx. 210 sec. (in air)
Waterproof Capacity: None



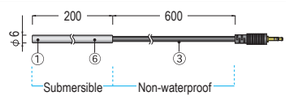
TR-0306 Stainless Protection Sensor

Response Time (90%):
Approx. 11 sec. (in agitated water)
Waterproof Capacity: None



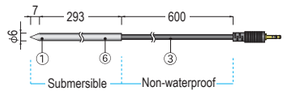
TR-0406 Stainless Protection Sensor

Response Time (90%):
Approx. 15 sec. (in agitated water)



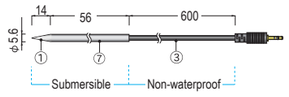
TR-0506 Stainless Protection Sensor

Response Time (90%):
Approx. 10 sec. (in agitated water)



TR-0706 Stainless Protection Sensor

Response Time (90%):
Approx. 11 sec. (in agitated water)



[Unit: mm]

Temperature Sensors for TR-71wb / 71nw (Fluoropolymer Coated Type)

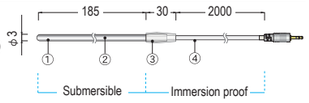
Measurement Range: −60 to 155°C
Temperature Durability: −70 to 180°C
Accuracy: Avg. ±0.5°C at −40 to 80°C,
Avg. ±1.0°C at −60 to −40°C / 80 to 100°C,
Avg. ±2.0°C at 100 to 155°C
Materials: ① Thermistor ② Stainless Tube (SUS316) ③ FEP Shrink Tube ④ FEP Cable

TR-1106 Fluoropolymer Coated Sensor

Response Time (90%):
Approx. 80 sec. (in air)
Approx. 7 sec. (in agitated water)

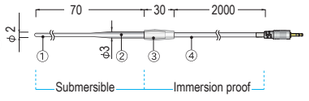
TR-1220 Stainless Protection Sensor

Response Time (90%):
Approx. 150 sec. (in air)
Approx. 7 sec. (in agitated water)



TR-1320 Stainless Protection Sensor

Response Time (90%):
Approx. 90 sec. (in air)
Approx. 3 sec. (in agitated water)



[Unit: mm]

Temperature-Humidity Sensors for TR-72wb / 72nw

Materials: ① Temp-Humidity Sensor ② Polypropylene Resin ③ ABS Resin ④ PVC Cable ⑤ Halogen-Free Flame Resistant Sheath Cable

THA-3001

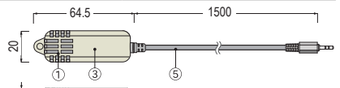
Measurement Range:
Temperature: 0 to 55°C
Humidity: 10 to 95%RH (no condensation*1)
Accuracy:
Temperature: ±0.5°C
Humidity: ±5%RH at 25°C and 50%RH
Response Time (90%): Approx. 7min.

THA-3151

Measurement Range:
Temperature: 0 to 55°C
Humidity: 10 to 95%RH (no condensation*1)
Accuracy:
Temperature: ±0.5°C
Humidity: ±5%RH at 25°C and 50%RH
Response Time (90%): Approx. 7min.

SHA-3151 High Precision Type

Measurement Range:
Temperature: −25 to 70°C,
Humidity: 0 to 99%RH *1
Accuracy:
Temperature:
±0.3°C at 10 to 40°C,
±0.5°C all other temperatures
Humidity: ±2.5%RH at 15 to 35°C / 30 to 80%RH
Long Term Stability: ±1%RH/yr, ±0.1°C/yr *2
Responsiveness: Response Time (90%): Approx. 7min.



[Unit: mm]

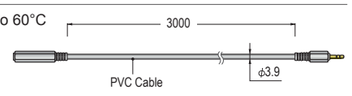
*1: Do not expose to condensation, dampness, corrosive gases or organic solvents.
*2: When continually used in environments with temperatures above 60°C, accuracy of humidity measurements will decrease over time. Also, humidity cannot be measured at temperatures below −20°C.

Sensor Extension Cable

Compatible Sensors:
Temperature Sensor: TR-1106, TR-1220, TR-1320, TR-0106, TR-0206, TR-0306, TR-0406, TR-0506, TR-0706
Temp-Humidity Sensor: THA-3001, THA-3151, SHA-3151
Note:
- Temperature sensors can use up to 3 meters of extension cables.
- Temp-Humidity sensors can use up to 9meters of extension cables.

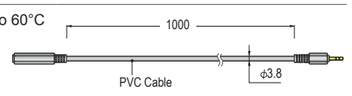
TR-1C30

Temperature Durability: −25 to 60°C
Waterproof Capacity: None



TR-5C10

Temperature Durability: −25 to 60°C
Waterproof Capacity: None

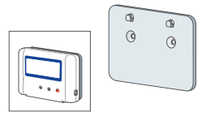


[Unit: mm]

Wall Attachment

TR-07K2

Accessories:
Lock Screw x 2,
Double-sided adhesive tape
Materials: Polycarbonate



Note: Cracking may occur if polycarbonate is exposed to strong impact at temperatures of −30°C or lower.

Software Set

SO-15C1

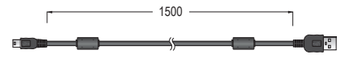
Contents:
Software CD-ROM,
USB Communication cable (US−15C)

Note: The TR-7wb/nw series software can be downloaded via the internet, but for those who prefer, a CD and USB cable set is available for purchase.

Communication Cable

US-15C

USB Communication Cable



Free of Charge!

T&D offers free software, applications, and online services to help you take full advantage of all the features of TR-7wb/nw Series Data Loggers.

T&D WebStorage Service

T&D's cloud storage service for automatically uploading and storing data, monitoring alerts, and viewing stored data from anywhere with internet access

T&D Thermo

Mobile application for making device settings, viewing data and checking warnings on smartphone or tablet

Compatible OS
iOS 10.0 or later / Android 4.4 or later

TR-7wb/nw for Windows

PC software for making/changing settings and data download via USB

T&D Data Server

Local server application for receiving and storing data from the TR-7wb/nw

T&D Graph

High-performance graph tool that can read large numbers of data files into the same graph, merge data, and save data in various ways

Compatible with T&D WebStorage Service

www.tandd.com

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