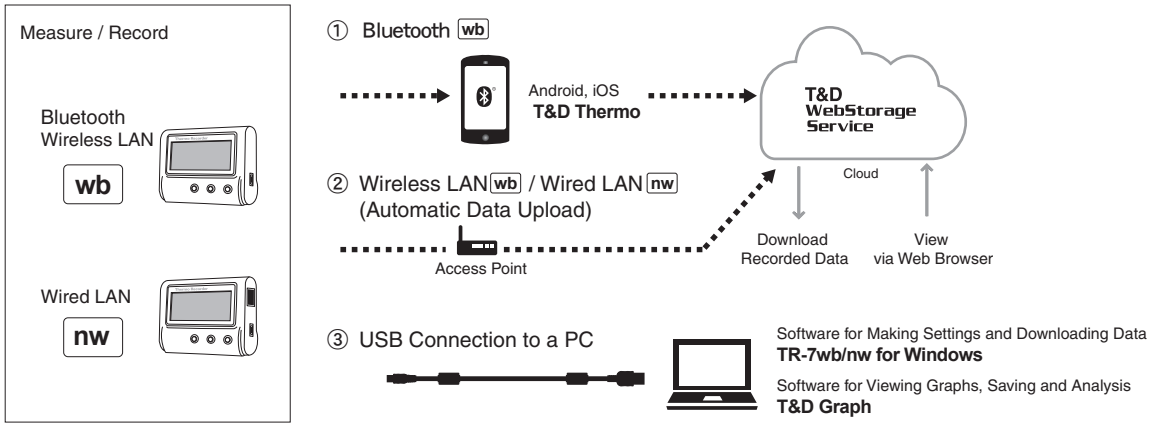
July 2019

Data Logger for Cloud Storage

TR-7wb/nw Series Features and Specs

Measurement Items	Data Collection	Data Access	Warning Notification
Temperature Humidity	Bluetooth®, LAN / USB Connection	T&D WebStorage Service, Intranet, Local PC	E-mail

TR-7wb/nw, with multiple types of communication interface (Bluetooth®, Wireless/Wired LAN and USB) have been designed to meet your temperature and humidity data management environment and needs.



* T&D WebStorage Service is a free cloud-based storage service provided by T&D Corporation. A LAN based environment with Internet connection is necessary to use this service.

* The Bluetooth® trademark and logo are registered trademarks owned by Bluetooth SIG, Inc. T&D Corporation uses these marks under license.

① Upload via Bluetooth wb

Use our "T&D Thermo" app (Android or iOS) with Bluetooth to make settings, view recorded data in Graphs and share data to the cloud.

② Auto-Upload to Cloud via LAN

Recorded data can be automatically uploaded to our T&D WebStorage Service via wireless wb or wired LAN nw. This allows for the accessing of recorded data from any smartphone or PC with an Internet connection.

* A LAN environment with an Internet connection is required.

③ Simple and Safe USB Communication

By simply connecting a logger to PC via USB, it is possible to download recorded data and view in Graphs or Lists.

* The required free-of-charge software is available for download.

Model	Measurement Items	Measurement Range	Notes
TR-71wb / nw	Temperature 2ch	–60 to 155 °C	The measurement range depends on the sensor type. Wide selection of optional sensors available
TR-72wb / nw	Temperature / Humidity 1ch Each	0 to 55 °C / 10 to 95%RH	
TR-72wb-S / nw-S	Temperature / Humidity 1ch Each	–25 to 70 °C / 0 to 99%RH	The supplied sensor for the S model provides higher accuracy to ±2.5%RH
TR-75wb / nw	Temperature 2ch (Thermocouple)	–199 to 1760 °C	For use with Thermocouple Sensor Types: K, J, T, E, S, R

Sending Warning Report Mails

Warning e-mails can be sent upon T&D WebStorage Service receiving warning information from the data logger.

1.5 years of Operation on Two Batteries

Battery operation is possible for up to 1.5 years with just two AA alkaline batteries.

Large Logging Capacity: 8000 Readings per Channel

It is possible to record up to 8000 data readings in each of the two channels. If set at a recording interval of 60 minutes, it gives the user one year's worth of measurements.

Easy Operation via Front Buttons

It is possible to start and stop recording, change recording interval, and make auto-upload setting from the buttons on the face of the logger.

TR-7wb/nw Series Specifications

	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)	-	-	-	-	-
Measurement Range: 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 J -199 to 1200 °C T -199 to 400 °C E -199 to 1000 °C S -50 to 1760 °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 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) 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 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	Type K, J, T, E: 0.1 °C Type 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/TR-72wb: Approx. 10 days (when Auto-upload interval is 1 min) Approx. 1 year (when Auto-upload interval is 1 hr) Approx. 15 months (when Auto-upload interval is 12 hr or more) *1.2 times longer with Bluetooth OFF *Approx. 1.5 yrs with Bluetooth & Auto-Upload OFF TR-71nw/TR-72nw: Approx. 10 days (when Auto-upload interval is 1 min) Approx. 1 year (when Auto-upload interval is 1 hr) Approx. 1.5 years (when Auto-upload interval is 12 hr or more) *Approx. 1.5 yrs with Auto-Upload OFF
	TR-75wb: Approx. 10 days (when Auto-upload interval is 1 min) Approx. 10 months (when Auto-upload interval is 1 hr) Approx. 1 year (when Auto-upload interval is 12 hr or more) *1.2 times longer with Bluetooth OFF *Approx. 15 months with Bluetooth & Auto-Upload OFF TR-75nw: Approx. 10 days (when Auto-upload interval is 1 min) Approx. 7 months (when Auto-upload interval is 1 hr) Approx. 1 year (when Auto-upload interval is 12 hr or more) *Approx. 1 yr with Auto-Upload OFF
Dimensions	H 58 ㎜ x W 78 ㎜ x D 26 ㎜
Weight	Approx. 55 g
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 x2 / Temperature-Humidity Sensor THA-3001 x1 / High Precision Temperature-Humidity Sensor SHA-3151 x1 / -
	AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US-15C, Manual Set (Warranty Included)

*1: Compatible wire sizes are as follows.
Single Wire : ϕ 0.32 to ϕ 0.65 ㎜ (AWG 28 - 22), Twisted Wire : 0.08 to 0.32 ㎟ (AWG 28 - 22), ϕ 0.12 ㎜ or more in diameter, Stripping Length : 9 to 10 ㎜
*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 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.
The specifications listed above are subject to change without notice.