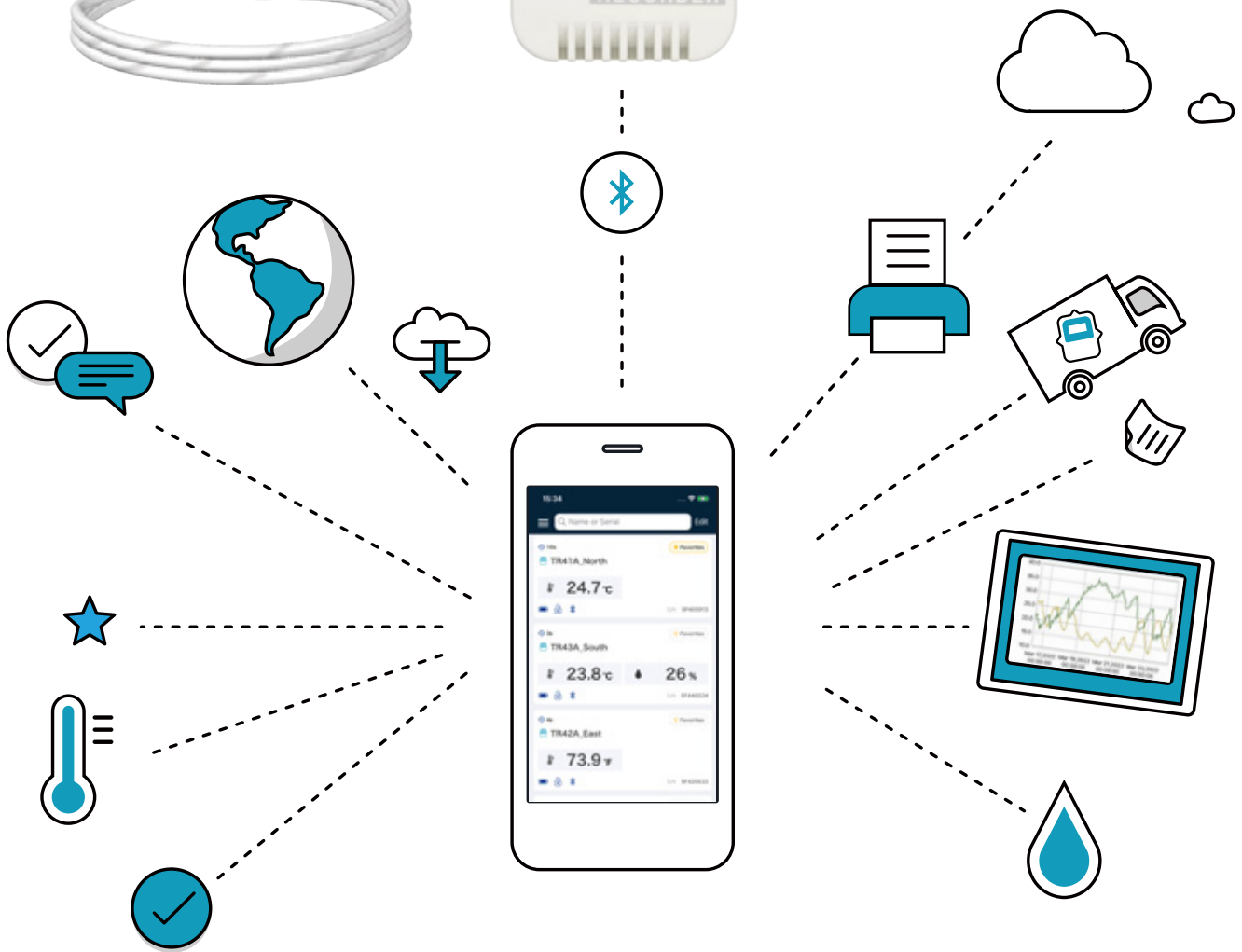


Easy Access to Your Data via Smartphone

# Bluetooth® Thermo Recorder

# TR4A series



# TR4A + Mobile Device = Quick Anywhere Anytime Access



Setting

Data Collection

View

Upload

Report Output

Data Analysis

## Easy Data Management via Bluetooth

### Easy Temperature/Humidity Measurement

The battery-powered TR4A series can be used for measurement at any site. Select a model according to your needs such as measurement items, range, and responsiveness.

### Easy Data Download with Smartphone

The T&D Thermo App automatically detects your logger via Bluetooth. Once connection is established, recorded data can be downloaded directly with graphic view and configuration using your mobile device.

### Store Data in the Cloud

Recorded data retrieved by the mobile device can be uploaded to the cloud storage (T&D Webstorage Service) for anytime, anywhere access from a smartphone, tablet, or PC.

### Data Report Generation

Using the mobile app T&D Thermo or TR4 Report, you can create a data report in PDF format, which can then be printed, shared, or emailed.

### Compact, Robust Design for Tough Environments

Their palm-sized compact design with robust body expands the possibilities of installation locations. Built-in sensor type for extra durability and water protection (IP67) also available.

## T&D's Free-of-Charge Cloud Service

### T&D WebStorage Service for Anywhere Anytime Access



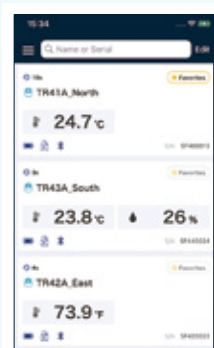
<https://webstorage-service.com/>

## Apps and Software for Your Needs

### iOS / Android T&D Thermo



Allows for smartphones/tablets to configure logger settings, collect and save data, display graphs, create reports, and upload to the cloud-based T&D WebStorage Service.



### iOS / Android TR4 Report



Specialized mobile app for generating PDF reports of recorded data for printing, emailing, saving and sharing.



### Windows T&D Graph



Allows access to data stored in the T&D WebStorage Service for data analysis on a Windows PC. Multiple data files can be loaded, graphed, combined and saved.



## Line Up Bluetooth® Thermo Recorder



### TR41A

**Internal Sensor for Better Water Protection**

Temperature 1ch (Internal Sensor)  
-40 to 80 °C  
IP67 Immersion Proof



### TR42A

**External Sensor for Quick Response**

Temperature 1ch (External Sensor)  
-60 to 155 °C  
IP64 Splash proof (rated for use in daily life)  
Optional Sensors Available



### TR43A

**Temperature / Humidity Measurement**

Temperature 1ch 0 to 55 °C  
Humidity 1ch 10 to 95 %RH  
IP64 : Splash proof (rated for use in daily life)  
\* Note that the temperature-humidity sensor is not water resistant.



### TR45

Thermocouple Pt100/Pt1000

**Both TC/PT Sensor Compatible Unit**

Temperature 1ch (Thermocouple/PT Sensor)  
-199 to 1760 °C (depending on sensor type)  
Sensors Not Included

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Specification	TR41A	TR42A	TR43A		TR45	
Measurement Channels	Temperature 1ch	Temperature 1ch	Temperature 1ch, Humidity 1ch		Temperature 1ch	
Sensor	Thermistor (Internal)	Thermistor	Thermistor	Polymer Resistance	Thermocouple: Type K, J, T, S, R (Not provided)	Pt100, Pt1000 (3-wire, 4-wire*1) (Available as option)
Measurement Units	°C, °F	°C, °F	°C, °F	%RH	Connection Terminal (M3.5)	
Measurement Range	-40 to 80 °C	-60 to 155 °C	0 to 55 °C	10 to 95 %RH	Type K : -199 to 1370 °C Type J : -199 to 1200 °C Type T : -199 to 400 °C Type S : -50 to 1760 °C Type R : -50 to 1760 °C	-199 to 600 °C
Accuracy	Avg. ±0.5 °C	Avg. ±0.3 °C at -20 to 80 °C Avg. ±0.5 °C at -40 to -20 °C, 80 to 110 °C Avg. ±1.0 °C at -60 to -40 °C, 110 to 155 °C	±0.5 °C	±5 %RH at 25 °C, 50 %RH	<b>Thermocouple Measurement (Sensor inaccuracies not included)</b> Type K, J, T : ±(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 <b>Cold Junction Compensation</b> ±0.5 °C *at 10 to 40 °C ±0.8 °C *at -40 to 10 °C, 40 to 80 °C	±(0.3 °C + 0.3 % of reading) *at 10 to 40 °C ±(0.5 °C + 0.3 % of reading) *at -40 to 10 °C, 40 to 80 °C
Measurement Resolution	0.1 °C	0.1 °C	0.1 °C	1 %RH	Type K, J, T, E: 0.1°C Type S, R : Approx. 0.2°C	0.1 °C
Responsiveness	Response Time (90%) : Approx. 35 min.	Response Time (90%) : Approx. 80 sec.(in air) Approx. 7 sec. (in agitated water)	Response Time (90%) : Approx. 7 min.		-	-
Logging Capacity	16,000 readings	16,000 readings	8,000 data sets (One data set consists of readings for multiple channels.)		16,000 readings	
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)					
LCD Display Items	Measurements (alternating display for multiple channel devices), Recording Status, Battery Life Warning, etc.					
Communication Interfaces	Bluetooth 4.2 (Bluetooth Low Energy)				Bluetooth 4.1 (Bluetooth Low Energy)	
Communication Time	Data Download Time (full logger) : Approx. 15 seconds				Data Download Time (full logger) : Approx. 1.5 minutes	
Power	Lithium Battery (LS14250) x 1					
Battery Life (*2)	Approx. 1.5 years (*3)				Approx. 1 year (*3)	
Dimensions	H 62 mm x W 47 mm x D 19 mm(excluding protrusions and sensor)				H 62 mm x W 47 mm x D 26.5 mm (excluding protrusions and sensor)	
Weight	Approx. 45 g				Approx. 50 g	
Operating Environment	-40 to 80 °C -30 to 80 °C during wireless communication				Temperature : -40 to 80 °C (-25 to 80 °C during wireless communication) Humidity : 90 %RH or less (no condensation)	
Waterproof Capacity	IP67: Immersion proof	IP64: Splash proof (rated for use in daily life) (*4)			None	
Accessories	-	Temperature Sensor TR-5106	Temp-Humidity Sensor THB3001		Cable Clamp	
Software (*5)	Mobile Applications (iOS, Android) T&D Thermo, TR4 Report				Mobile Applications (iOS, Android) T&D Thermo, ThermoREC, ThermoStorage, TR4 Report	

\*1: In the case of a 4-wire sensor, one wire will be left unused.

\*2: Battery life varies depending upon multiple factors including ambient temperature, recording interval, usage of applications, 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.

\*3: Estimated battery life when recording data at an interval of more than 10 seconds and displaying a graph in the app once a day.

\*4: This is the waterproof capacity of the data logger with the sensor connected. Note that the temperature-humidity sensor is not water resistant.

\*5: Free app download and information on OS compatibility is available on the Software page of our website at [tandd.com/software/](http://tandd.com/software/).

The specifications listed above are subject to change without notice.