Bluetooth® Thermo Recorder
TR4A series
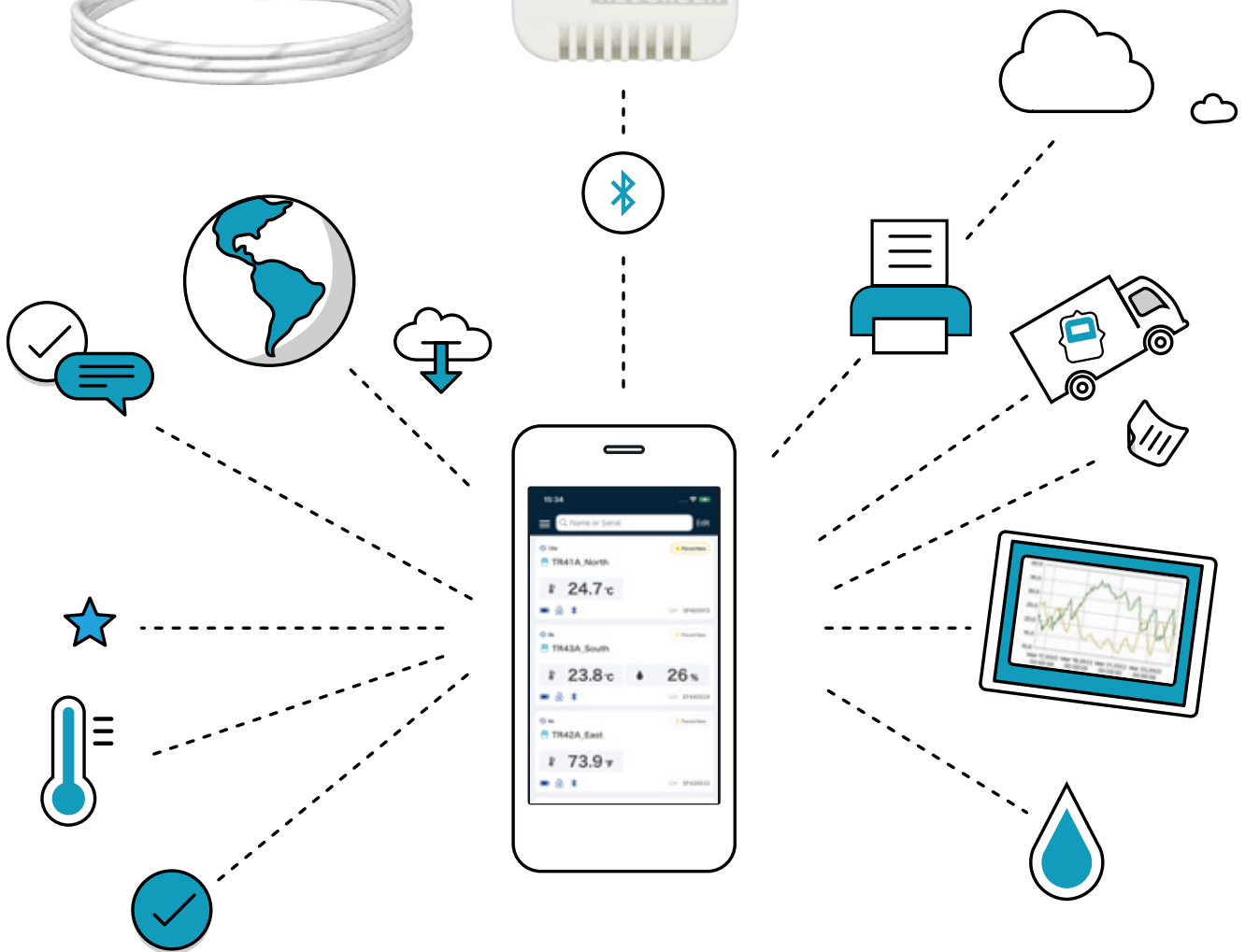
TR4A + Mobile Device = Quick Anywhere Anytime Access

Setting · **Data Collection** · **View** · **Upload** · **Report Output** · **Data Analysis**
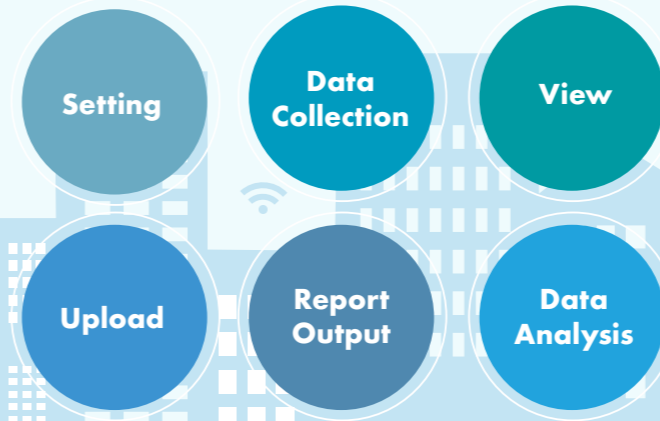
Easy Data Management via Bluetooth

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
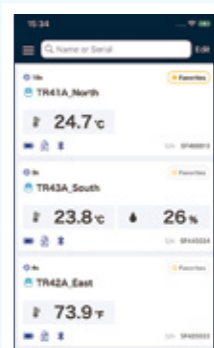
T&D WebStorage Service
for Anywhere Anytime Access

https://webstorage-service.com/

Apps and Software for Your Needs

iOS / Android
T&D Thermo

TR41A_North 24.7 ℃
TR43A_South 23.8 ℃ 26 %
TR42A_East 73.9 ℉

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

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)
					Connection Terminal (M3.5)	
Measurement Units	°C, °F	°C, °F	°C, °F	%RH	°C, °F	°C, °F
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	**Thermocouple Measurement (Sensor inaccuracies not included)** 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 **Cold Junction Compensation** ±0.5 °C *at 10 to 40 °C ±0.8 °C *at -40 to 10 °C, 40 to 80 °C Note: The temperature range shown above (*) represents the operating environment of the logger.	±(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	
	Lithium Battery LS14250, Registration Code Label, Strap, User's Manual (Warranty Included)					
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/.

The specifications listed above are subject to change without notice.