

Specifications			
	TR41	TR42	TR45
Measurement Channels	Temperature 1ch	Temperature 1ch	Temperature 1ch
Sensor	Thermistor (Internal)	Thermistor (External)	Thermocouple Type K, J, T, S, R Pt100, Pt1000 3-wire, 4-wire *1 Connection Terminal (M3.5)
Measurement Unit	°C, °F	°C, °F	°C, °F
Measurement Range	-40 to 80 °C	-60 to 155 °C	K -199 to 1370 °C J -199 to 1200 °C T -199 to 400 °C S -50 to 1760 °C 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	Thermocouple Measurement Type K, J, T ±0.3 °C ±0.3 % of reading Type S, R ±1 °C ±0.3 % of reading Cold Junction Compensation ±0.3 °C at 10 to 40 °C *2 ±0.5 °C at -40 to 10 °C, 40 to 80 °C *2 ±0.3 °C ±0.3% of reading at 10 to 40 °C *2 ±0.5 °C ±0.3% of reading at -40 to 10 °C, 40 to 80 °C *2
Measurement Resolution	0.1 °C	0.1 °C	Type K, J, T : 0.1 °C Type S, R: approx. 0.2 °C 0.1 °C
Responsiveness	Thermal Time Constant: Approx. 15 min. Response Time (90%): Approx. 35 min.	Thermal Time Constant: Approx. 30 sec. (in air) Approx. 4 sec. (in agitated water) Response Time (90%): Approx. 80 sec. (in air) Approx. 7 sec. (in agitated water)	-
Logging Capacity	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, Recording Status, Battery Life Warning, etc.		
Communication Interfaces	Bluetooth 4.1 (Bluetooth low energy)		
Power	Lithium Battery (LS14250)		
Battery Life *3	Approx. 1 month *4 to 1.5 years *5		Approx. 1 month *4 to 1 year *5
Dimensions	H 62 mm x W 47 mm x D 19 mm		H 62 mm x W 47 mm x D 26.5 mm
Weight	Approx. 45 g		Approx. 50 g
Operating Environment	Temperature: -40 to 80 °C (-25 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 *6 (rated for use in daily life)	None
Accessories	-	Temperature Sensor TR-5106	Cable Clamp
Data Collection Devices	Lithium Battery (LS14250), Registration Code Label, Strap, User's Manual (Warranty Included) Smartphone, Tablet		
Software	ThermoREC (iOS 9.0 or later, Android 4.4 or later) ThermoStorage(iOS 9.0 or later, Android 4.4 or later)		

*1: In the case of a 4-wire sensor, one wire will be left unused.
*2: The temperature range shown here represents the operating environment of the logger, not measurement range.
*3: 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.
*4: Estimated minimum battery life when recording data at an interval of 1 second and constant graph display in the app.
*5: Estimated maximum battery life when recording data at an interval of more than 10 seconds and graph display in the app of less than 3 minutes a day.
*6: This is the waterproof capacity of the data logger with the sensor connected.
The specifications listed above are subject to change without notice.

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TR4 Bluetooth® ThermoRecorder



TR4 + Mobile Device = Quick Anywhere Anytime Access

Auto Search via Bluetooth

Apps for Real-time Monitoring, Graphs and Auto-Upload

Share to Free Cloud Service "T&D WebStorage Service"



Bluetooth Data Loggers

Internal Sensor for Better Water Protection

TR41

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



External Sensor for Quick Response

TR42

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



Both TC/PT Sensor Compatible Unit

TR45 Thermocouple Pt100/Pt1000

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



Rear Terminal Block



Dedicated Mobile Apps:

ThermoREC & ThermoStorage

These two dedicated mobile apps make communication and data management a snap. (iOS 9.0 or later, Android 4.4 or later)

ThermoREC

Allows for making TR4 settings and monitoring temperature changes on graphs.

The data displayed in graph view is automatically uploaded to T&D WebStorage Service.



ThermoStorage

Allows for seamlessly uploading recorded data from a collection of TR4 loggers to T&D WebStorage Service.

