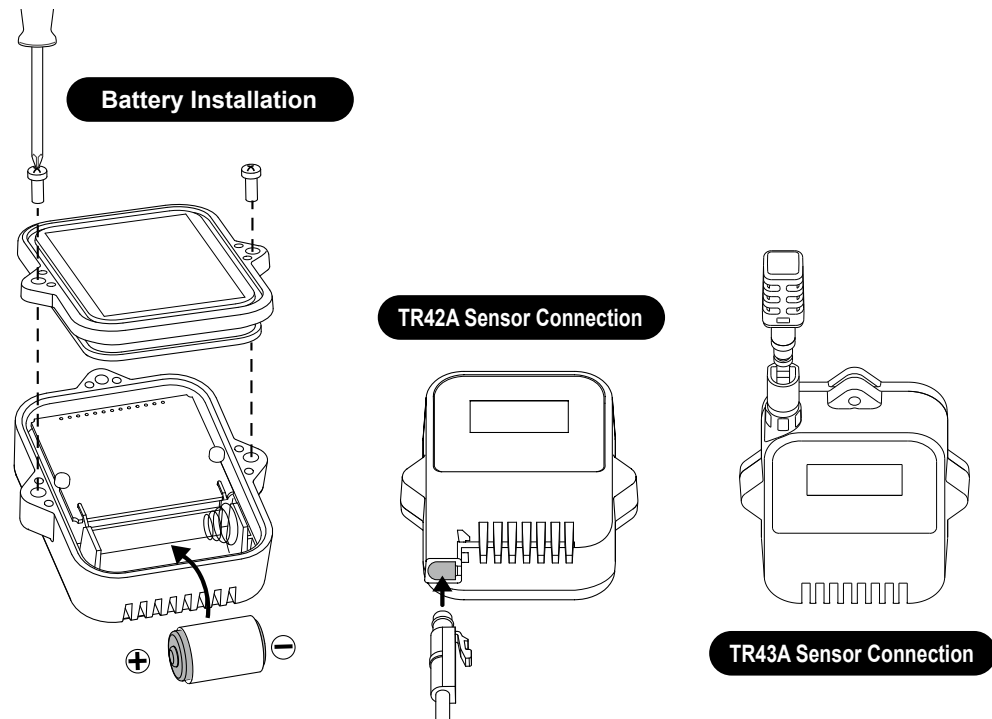


Package Contents

- Data Logger (TR41A/42A/43A) • Lithium Battery LS14250 • Registration Code Label
- Strap • User's Manual • Warranty • Temperature Sensor TR-5106 (TR42A only)

Device Setup



Application Installation

Install the dedicated app(s) on your smartphone or tablet to perform TR4 operations via Bluetooth.

- **T&D Thermo:** App for making logger settings, monitoring data in graph view and uploading to the cloud.
 - **TR4 Report:** App for creating PDF reports of specified periods of recorded data.
- ThermoREC is available on the App Store and the Google Play Store, and TR4 Report is available on the App Store.

For detailed information and troubleshooting, please access the following URL:

tandd.com/support/webhelp/tr4/eng/



Safety Precautions and Instructions

The following items should be strictly obeyed for the safe usage of this product, and for protecting yourself and other people from bodily harm and/or damage to property.

Explanation of Symbols

Warning Symbols

	DANGER These entries are actions that absolutely under no circumstance should be taken. The taking of such an action may cause serious personal physical damage or death.
	CAUTION These entries are actions that if taken may lead to physical injury or damage to persons or things.

Picture Symbols

	Denotes an important warning or caution.
	Denotes a forbidden action.
	Denotes an action that should be carried out.

DANGER To Prevent Serious Accidents

- Do not disassemble, repair or modify the unit.
- Do not use the unit in any environment that is exposed to chemicals and harmful gases. Doing so may cause corrosion and/or other danger to the unit. Also, coming in contact with hazardous substances may cause bodily harm to the user or people nearby.
- If water or a foreign substance enters the case, this may cause malfunction, damage, and/or unexpected accidents. If this occurs, immediately remove the battery and stop using the unit. If the unit is subjected to significant temperature change while wet, it may cause condensation inside the case.
- Do not handle the unit, remove the battery or sensor with wet hands.
- This product has been designed for private and/or industrial use only. It should not be used in situations where strict safety precautions are necessary such as with medical equipment, or in systems directly or indirectly connected with human life or well-being.
- Do not drop or expose the unit to a strong impact.
- Do not cut or process the sensor cables. Also, do not twist, pull or swing any of the cords or cables.
- To prevent damage to the unit from static electricity, remove static electricity from your body by touching metal around you (such as a door knob and window frame) before touching the unit.
- Store the unit and battery out of the reach of children.
- We are not responsible for any damage, malfunction or trouble, whether direct or indirect, caused by the use of our product.
- Do not use any power or sensors other than those specified by T&D Corporation.
- Make sure the sensor is inserted fully, so as not to cause an improper connection. Also, when unplugging the sensor from the unit, do not pull the cord, but hold the connector to disconnect.
- If the unit produces heat, emits smoke or a strange smell, or makes unusual noise, immediately remove the battery and stop using it.

- To maintain waterproof capacity, we suggest periodically changing the parts inside the case (Optional Maintenance Set TR-00P1).
- Contact with oil may cause cracks to appear in the casing of the unit. When using this unit in environments where such oils are present, please insure that it is protected from contact through use of a polyethylene bag or other means.
- Do not remove or reinsert the battery once it has been set; continue using until battery power is depleted. Always use a new battery for replacement.

CAUTION Do not place or store in the following areas:

- Areas exposed to direct sunlight
- Areas subject to direct flames or heaters, as well as areas in which hot air accumulates and creates extremely high temperatures
- Areas exposed to static electricity
- Areas exposed to strong magnetic fields
- Areas exposed to dampness
- Areas subject to condensation or wet areas
- Areas exposed to excessive vibration
- Areas exposed to excessive smoke, dust or dirt.

CAUTION Other Precautions

- Use the unit and the sensor in the specified operating environment, and do not use in any other purposes than those intended.
- If the unit is not to be used for a long period of time, remove the battery. If left in the unit, the battery may leak and lead to malfunctioning.
- Do not allow dust or foreign objects to get into the sensor jack.
- If the unit gets dirty, wipe it with a clean cloth.
- Battery terminals may provide insufficient contact due to age or vibration. This may lead to data loss.
- Please note that this User's Manual has been written based on the presupposition that details about set-up of any necessary mobile devices to enable network connection have already been taken care of by the user and that connection has been confirmed as workable. T&D Corporation shall not be responsible for any damages which a contractor, a user or a third party may suffer, whether direct or indirect, due to the inability to communicate or use communication devices.
- Please be careful not to let a third party know of your registration code. The registration code cannot be reissued or changed.

CAUTION Cautions about the Lithium Battery

- The Lithium Battery LS14250 is non-rechargeable and should not be recharged.
- Do not use any batteries other than those specified. There is a risk of explosion if the battery is replaced by an incorrect type.
- Do not put the battery in a fire, attempt to heat it, disassemble or deform it.
- Do not expose to strong impact or throw it.
- Do not expose to extremely low air pressure, as this may result in explosions or leakage of flammable liquids and gases.
- Do not place the battery on or near fires, or other high temperature locations. Doing so may cause the battery to overheat or ignite.
- Immediately disconnect the battery if, during operation, battery emits an unusual smell, feels hot, changes shape, or appears abnormal in any other way.
- Dispose of batteries in accordance with local regulations.

TR4 Series Specifications

	TR41A	TR42A	TR43A	
Measurement Channels	Temperature 1ch	Temperature 1ch	Temperature 1ch, Humidity 1ch	
Sensor	Thermistor (Internal)	Thermistor	Thermistor	Polymer Resistance
Measurement Units	°C, °F	°C, °F	°C, °F	%RH
Measurement Range	-40 to 80 °C	-60 to 155 °C	0 to 55 °C	0 to 95 %RH
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	Avg. ± 0.3 °C	±5 %RH at 25 °C, 50 %RH
Measurement Resolution	0.1 °C	0.1 °C	0.1 °C	1 %RH
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)	Response Time (90%): Approx. 11 min.	
Logging Capacity	16,000 readings		8,000 data sets (One data set consists of readings for multiple channels.)	
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 4.2 (Bluetooth low energy)			
Power	Lithium Battery LS14250 x 1			
Battery Life (*1)	Approx. 1 year (*2) to 1.5 years (*3)			
Dimensions	H 62 mm x W 47 mm x D 19 mm (excluding protrusions and sensor)			
Weight	Approx. 54 g	Approx. 55 g		
Operating Environment	-40 to 80 °C -30 to 80 °C during wireless communication			
Waterproof Capacity	IP67: Immersion proof	IP64: Splash proof (rated for use in daily life) (*4)		
Accessories	-		Temperature Sensor TR-5106	Temp-Humidity Sensor THB3001
	Lithium Battery LS14250, Registration Code Label, Strap, User's Manual (Warranty Included)			
Data Collection Devices	Smartphone, Tablet			

- *1: 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.
 *2: Estimated minimum battery life when recording data at an interval of 1 second and connecting to the mobile device once a day (for about 1 minute).
 *3: Estimated maximum battery life when recording data at an interval of more than 10 seconds and connecting to the mobile device once a day (for about 1 minute).
 *4: This is the waterproof capacity of the data logger with the sensor connected. Note that the temperature-humidity sensor is not water resistant.
 The specifications listed above are subject to change without notice.

Compliance Information

For FCC Model

Responsible Party:
CAS Dataloggers
Chesterland, Ohio

<https://www.dataloggerinc.com/>

FCC and ISED Statement

This device complies with part 15 of FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme à la partie 15 des règles de la FCC et aux normes des CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC Class B Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To comply with the limits for the Class B digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits.

All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

FCC Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ISED Class B Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC/ISED Radiation Exposure Statement

This equipment complies with FCC/ ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles les radioélectriques (RF) de la FCC lignes directrices d'exposition et d'exposition aux fréquences radioélectriques (RF) CNR-102 de l' ISDE Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Location of FCC ID and ISED Certification Number

The FCC ID and ISED ID can be found inside the battery compartment of your device.

For CE Model

CE Statement

The TR4 Series products are in compliance with the Radio Equipment Directive 2014/53/EU.

The following standards have been applied:

<Safety and Health>	EN 62368-1
<EMC>	EN 62311
<Radio Spectrum>	EN 301 489-1
	EN 300 328 (receiver category 2)

The full text of the EU declaration of conformity is available at the following internet address: <https://tandd.com/manual/>

Important Notice

Wireless products cannot be used in countries other than where those products have been approved for use, according to that country's wireless regulations.

T&D Corporation shall in no manner whatsoever take responsibility for the usage of these products, nor be liable in any manner for legal consequences stemming from the usage of these wireless products in unapproved areas.

사용자 안내문

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 前述合法通信，指依電信管理法規定作業之無線電通信。
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本製品は、電波法に基づく特定小電力無線機器として、技術基準適合証明（利用に関してはお客様の免許申請等が不要）を受けています。必ず次の点を守ってお使いください。
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Bluetooth® low energy の電波に関して

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1. 本製品を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局並びにアマチュア無線局が運用されていないことを確認して下さい。
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3. その他、本製品から移動体識別用の特定小電力無線局あるいはアマチュア無線局に対して有害な電波干渉の事例が発生した場合など何かお困りのことが起きたときは、弊社までお問い合わせ下さい。
 オンラインサポート tandd.co.jp/support/

電波の種類と干渉距離



- 2.4 使用周波数帯域：2.4GHz 帯
- FH 変調方式：FH-SS 方式
- 3 想定干渉距離：30m 以下
- 全帯域を使用し、かつ移動体識別装置の帯域を回避不可

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