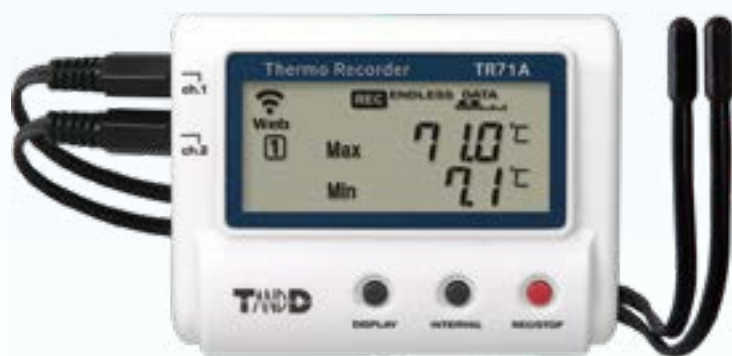




# Thermo Recorder **TR7A**series



# TR7A series



## TR71A

Temperature 2ch  
Compliant with VFC Guidelines

## TR72A

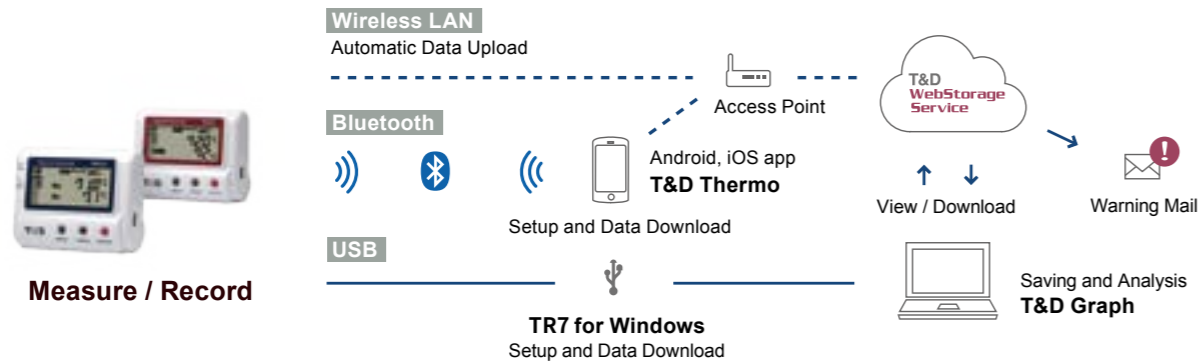
Temperature 1ch  
Humidity 1ch

## TR72A-S

Temperature 1ch  
Humidity 1ch  
High-Precision type

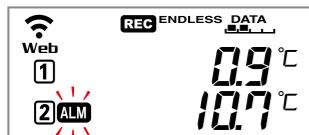
## TR75A

Temperature 2ch  
Thermocouple (K,J,T,E,S,R)\*  
Ultra Low Temperature  
Compliant with VFC Guidelines  
\*Sensors not included



# For Easy Worldwide Access and Notification

Our new TR7A includes multi-communication methods and auto-upload of data to the cloud function plus a new array of features and functions.



### Two Tier Display Plus Warning Notification

View Measurements of Two Channels  
View Upper and Lower Limit Alarms



### MAX / MIN Display

Automatic clearing at regular intervals, so you can see the max/min values for each day.



### Large Storage Capacity 30,000 readings per channel

Can store up to 3.5 years of data in the device



### Improved Storage Performance

Even if battery power is completely gone, no recorded data will be lost.



### Improved Security

Network communication with server via HTTPS  
Planned WPA2-EAP support for Wireless LAN



### For Vaccine Temperature Management

[Vaccine Mode] settings for VFC compatible models TR71A/75A TR75A for ultra-low temperature

Specification	TR71A	TR72A	TR72A-S
Measurement Channels	Temperature 2ch	Temperature 1ch, Humidity 1ch	Temperature 1ch, Humidity 1ch
Sensor	Thermistor	Thermistor	Thermistor
Measurement Units	°C, °F	°C, °F	°C, °F
Measurement Range	Internal Sensor	-	-
	External Sensor	-40 to 110°C (Supplied Sensor) -60 to 155°C (Optional Sensor: Fluoropolymer Coated Type)	0 to 55 °C
Accuracy	(Supplied Sensor) 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
Measurement Resolution	0.1°C	0.1 °C	1 %RH
Responsiveness	(Supplied Sensor) Response Time (90%): Approx. 190 sec.	Response Time (90%): Approx. 7 min.	Response Time (90%): Approx. 7 min.
Logging Capacity	30,000 data sets (One data set consists of readings for all 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, Battery Warning Mark, etc. - Measurements: Ch1 & Ch2 current values / Ch1 Max & Min values / Ch2 Max & Min values - Display Pattern: Alternating or Fixed display		
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	<b>Wireless LAN Communication</b> IEEE 802.11b/g/n (2.4GHz only) Security: WPA/WPA2-PSK(AES/TKIP) WPS 2.0 : Push Button Configuration Protocol (*3): HTTP, HTTPS, DHCP, DNS <b>Bluetooth Communication</b> Bluetooth 4.2 (Bluetooth low energy) <b>USB Communication</b> USB 2.0 (Mini-B connector)		
Power (*4)	Battery: AA Alkaline LR6 x 2, AA Ni-MH x 2 External: USB Bus 5V 200mA, AC Adaptor AD-05A2 or AD-05C2		
Battery Life (*5)	Approx. 10 days to 15 months (*6)(*7)		
Dimensions	H 58 mm x W 78 mm x D 26 mm		
Weight	Approx. 55 g		
Operating Environment	Temperature: -10 to 60°C , Humidity: 90 %RH or less (no condensation)		
Accessories	Temperature Sensor TR-0106 x 2	Temperature-Humidity Sensor THA-3001 x 1	High Precision Temperature-Humidity Sensor SHA-3151 x 1
Software	<b>PC Software (Windows) (*8)</b> TR7 for Windows T&D Graph T&D Data Server <b>Mobile Application (iOS, Android)</b> T&D Thermo (For compatible OS versions, please refer to the Software page of our website at <a href="http://tandd.com/software/">tandd.com/software/</a> )		

\*1: 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.  
 \*2: 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.  
 \*3: Client function. HTTP(S) proxy supported.  
 \*4: When using external power, the internal temperature of the logger rises.  
 \*5: Battery life is highly dependant on the Auto-upload interval; at 1 min will give 10 days of usage, and at 12 hours or more will yield the maximum lifetime. Other influential factors include 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.  
 \*6: Shows the estimated battery life with Bluetooth ON. It will be 1.2 times longer with Bluetooth OFF.  
 \*7: Shows the estimated battery life with Auto-Upload ON.  
 \*8: For installation, it is necessary to have Administrator (Computer Administrator) rights.

Specification		TR75A
Measurement Channels	Temperature 2ch	
Sensor	Thermocouple: Type K, J, T, E, S, R (*1)	
Measurement Units	°C, °F	
Measurement Range	Internal Sensor	-
	External Sensor	Type K : -199 to 1370 °C Type J : -199 to 1200 °C Type T : -199 to 400 °C Type E : -199 to 1000 °C Type S : -50 to 1760 °C Type R : -50 to 1760 °C
Accuracy	<b>Thermocouple Measurement (Sensor inaccuracies not included)</b> Type K, J, T, E : $\pm(0.5\text{ °C} + 0.3\% \text{ of reading})$ at -100°C or above Type S, R : $\pm(1.5\text{ °C} + 0.3\% \text{ of reading})$ at 100°C or above  <b>Cold Junction Compensation</b> $\pm 0.5\text{ °C}$ at 10 to 40 °C $\pm 0.8\text{ °C}$ other temperatures within the operating environment of the logger	
Measurement Resolution	Type K, J, T, E : 0.1°C    Type S, R : Approx. 0.2°C	
Responsiveness	-	
Logging Capacity	30,000 data sets (One data set consists of readings for all 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, Battery Warning Mark, etc. - Measurements: Ch1 & Ch2 current values / Ch1 Max & Min values / Ch2 Max & Min values - Display Pattern: Alternating or Fixed display	
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	<b>Wireless LAN Communication</b> IEEE 802.11b/g/n (2.4GHz only) Security: WPA/WPA2-PSK(AES/TKIP) WPS 2.0 : Push Button Configuration Protocol (*2): HTTP, HTTPS, DHCP, DNS  <b>Bluetooth Communication</b> Bluetooth 4.2 (Bluetooth low energy)  <b>USB Communication</b> USB 2.0 (Mini-B connector)	
Power (*3)	Battery: AA Alkaline LR6 x 2, AA Ni-MH x 2 External: USB Bus 5V 200mA, AC Adaptor AD-05A2 or AD-05C2	
Battery Life (*4)	Approx. 10 days to 15 months (*5)(*6)	
Dimensions	H 58 mm x W 78 mm x D 26 mm	
Weight	Approx. 55 g	
Operating Environment	Temperature: -10 to 60°C , Humidity: 90 %RH or less (no condensation)	
Accessories	(Sensor not provided)	
	AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US-15C, Manual Set (Warranty Included)	
Software	<b>PC Software (Windows) (*7)</b> TR7 for Windows T&D Graph T&D Data Server  <b>Mobile Application (iOS, Android)</b> T&D Thermo (For compatible OS versions, please refer to the Software page of our website at <a href="http://tannd.com/software/">tannd.com/software/</a> )	

\*1: Compatible wire sizes are as follows. Single Wire :  $\varnothing 0.32$  to  $\varnothing 0.65$  mm (AWG 28 - 22), Twisted Wire : 0.08 to 0.32 mm<sup>2</sup> (AWG 28 - 22),  $\varnothing 0.12$  mm or more in diameter, Stripping Length : 9 to 10 mm

\*2: Client function. HTTP(S) proxy supported.

\*3: When using external power, the internal temperature of the logger rises.

\*4: Battery life is highly dependant on the Auto-upload interval; at 1 min will give 10 days of usage, and at 12 hours or more will yield the maximum lifetime.

Other influential factors include 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.

\*5: Shows the estimated battery life with Bluetooth ON. It will be 1.2 times longer with Bluetooth OFF.

\*6: Shows the estimated battery life with Auto-Upload ON.

\*7: For installation, it is necessary to have Administrator (Computer Administrator) rights.