



# Thermo Recorder **TR-7nw** series

Wired LAN Connection  
for  
Stable, Reliable, and Trustworthy  
Communication

TR-7nwseries



TR-71nw

Temperature 2ch  
Wired LAN, USB



TR-72nw

Temperature 1ch / Humidity 1ch  
Wired LAN, USB



TR-72nw-S

Temperature 1ch / Humidity 1ch  
High Precision Type  
Wired LAN, USB



TR-75nw

Temperature 2ch  
Thermocouple (K, J, T, E, S, R)  
Wired LAN, USB  
\*Sensors not included

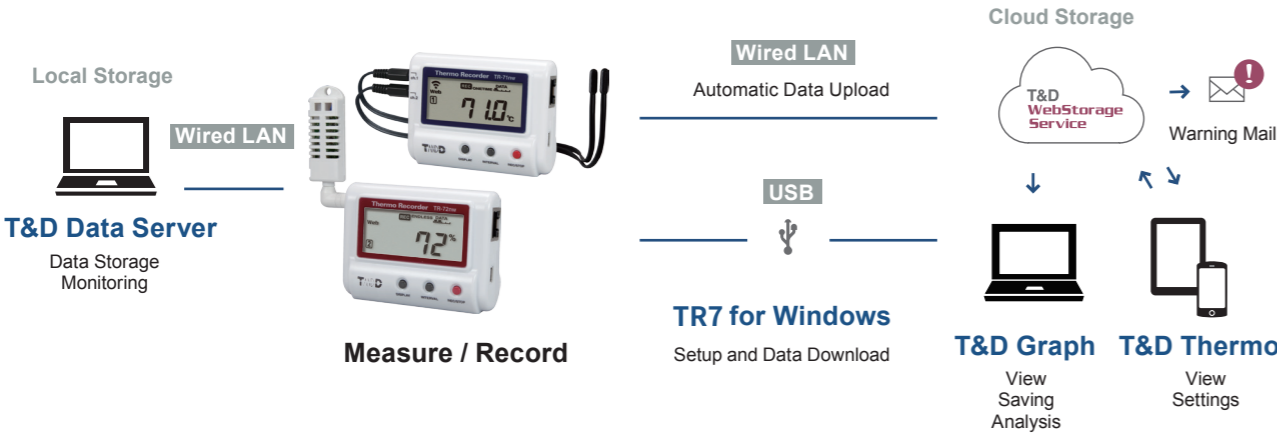
Data transmission via wired LAN ensures **stable** and **reliable** transfer to T&D's **cloud service**

( **T&D WebStorage Service** ) where your important data can then be accessed from **anywhere** at **anytime**.

**Simple** direct USB connection to PC also allows for easy downloading and viewing of data, as well as,

total control over logger settings.

Best of all T&D software and cloud storage service is **FREE** of charge!



T&D Data Server

Local server application for receiving, storing, and monitoring data on intranet.

TR7 for Windows

PC software for making/changing settings and data download via USB.

T&D Graph

High-performance graph tool that can read large numbers of data files into the same graph, merge data, and save data in various ways.

Compatible with T&D WebStorage Service / T&D Data Server.

T&D Thermo (iOS / Android)

Mobile application for viewing data in a graph and checking / changing settings via T&D WebStorage Service. Also supports alarm push notifications.

Specification		TR-71nw	TR-72nw		TR-72nw-S		TR-75nw
Measurement Channels		Temperature 2ch	Temperature 1ch, Humidity 1ch		Temperature 1ch, Humidity 1ch		Temperature 2ch
Sensor		Thermistor	Thermistor	Polymer Resistance	Thermistor	Polymer Resistance	Thermocouple: Type K, J, T, E, S, R (*1)
Measurement Units		°C, °F	°C, °F	%RH	°C, °F	%RH	°C, °F
Measurement Range	Internal Sensor	-10 to 60°C (*2)	-	-	-	-	-
	External Sensor	-40 to 110°C (Supplied Sensor) -60 to 155°C (Optional Sensor: Fluoropolymer Coated Type)	0 to 55 °C	10 to 95 %RH	-25 to 70 °C	0 to 99 %RH (*3)	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		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	±0.3°C at 10 to 40 °C ±0.5°C all other temperatures	±2.5 %RH at 15 to 35 °C, 30 to 80 %RH	Thermocouple Measurement (Sensor inaccuracies not included) Type K, J, T, E : ± (0.5 + 0.003 × t) °C at -100°C or above Type S, R : ± (1.5 + 0.003 × t) °C at 100°C or above t = absolute value of measurement in °C  Cold Junction Compensation ±0.5°C at 10 to 40 °C ±0.8°C other temperatures within the operating environment of the logger
Measurement Resolution		0.1°C	0.1 °C	1 %RH	0.1 °C	0.1 %RH	Type K, J, T, E: 0.1°C Type S, R: Approx. 0.2°C
Responsiveness		Response Time (90%): Approx. 190 sec.	Response Time (90%): Approx. 7 min.		Response Time (90%): Approx. 7 min.		-
Logging Capacity		8,000 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 (fixed or alternating display),Recording Status, Recording Mode, Battery Warning Mark, etc.					
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>Wired LAN Communication</b> 100BASE-TX/10BASE-T (RJ45 Connector) Protocol : HTTP(*4), DHCP, DNS  <b>USB Communication</b> USB 2.0 (Mini-B connector)					
Power		Battery: AA Alkaline LR6 x 2, AA Ni-MH x 2 External: USB Bus 5V 200mA, AC Adaptor AD-05A2 or AD-05C2 (*5), PoE IEEE 802.3af (*6)					
Battery Life (*7)		Approx. 10 days to 1.5 years (depends on Auto-upload interval)					Approx. 10 days to 1 year (depends on Auto-upload interval)
Dimensions		H 58 mm x W 78 mm x D 26 mm					
Weight		Approx. 55 g					
Operating Environment		Temperature: -10 to 60°C (*8) , 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		(Sensor not provided)
		AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US-15C, Manual Set (Warranty Included)					
Software (*9)		<b>PC Software (Windows)</b> TR7 for Windows, T&D Graph, T&D Data Server <b>Mobile Application (iOS, Android)</b> T&D Thermo					

\*1: We do not handle the sale of Thermocouple sensors. Compatible wire sizes are as follows. Single Wire : Ø0.32 to Ø0.65 mm (AWG 28 - 22), Twisted Wire : 0.08 to 0.32 mm2 (AWG 28 - 22), Ø0.12 mm or more in diameter, Stripping Length : 9 to 10 mm

\*2: 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.

\*3: 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

\*4: HTTP client. Proxy supported.

\*5: The optional AC adaptor "AD-05A2" (Type A Plug) can be used in the USA and Canada, and "AD-05C2" (Type C Plug) in Europe. For usage in other countries, please contact your local distributor.

\*6: When using PoE, use of STP (shielded) cables may cause PoE failure or device malfunction. We strongly recommend using UTP cables.

\*7: Battery life in the table above is for two AA Alkaline type batteries, and varies depending upon multiple factors including frequency of communication, 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.

\*8: -10 to 45°C when using external power.

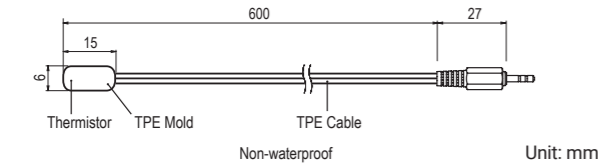
\*9: Free software download and information on OS compatibility is available on the Software page of our website at <https://tanadd.com/software/>. The specifications listed above are subject to change without notice.

Temperature Sensors for TR-71nw

Measurement Range: -40 to 110°C  
Accuracy: Avg. ±0.3°C at -20 to 80°C, Avg. ±0.5°C at -40 to -20°C / 80 to 110°C  
Note: Can be extended by 3 meters with the Extension Cable TR-1C30 / TR-5C10

TPE Resin-Shielded Sensor

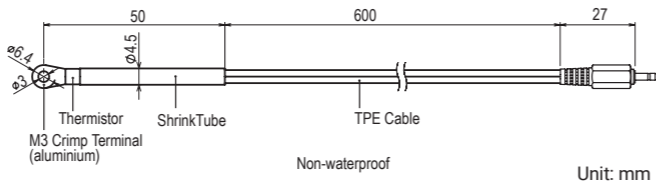
TR-0106



Response Time (90%): Approx. 190 sec. (in air)  
Waterproof Capacity: None

Screw-down Sensor

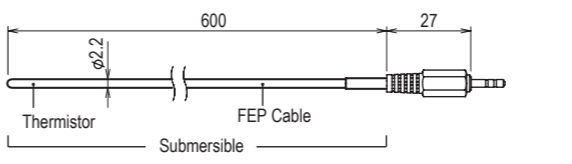
TR-0206



Response Time (90%): Approx. 210 sec. (in air)  
Waterproof Capacity: None

Fluoropolymer Coated Sensor

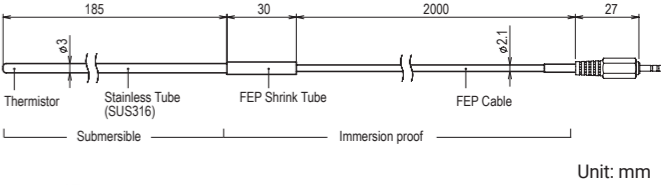
TR-1106



Response Time (90%): Approx. 80 sec. (in air)  
Approx. 7 sec. (in agitated water)  
Waterproof Capacity: Submersible

Stainless Protection Sensor

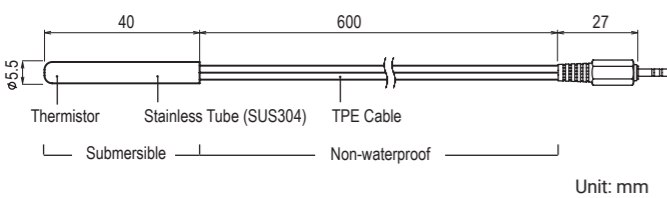
TR-1220



Response Time (90%): Approx. 150 sec. (in air)  
Approx. 7 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube),  
Immersion proof (cable)

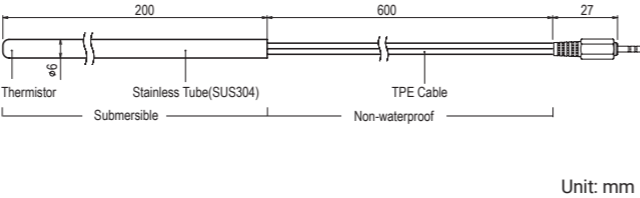
Stainless Protection Sensor

TR-0306



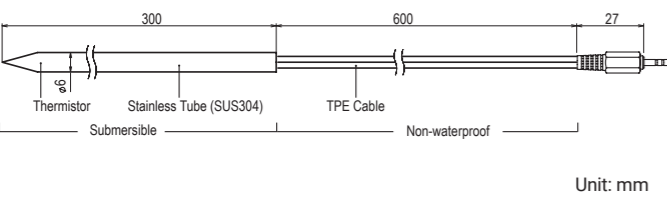
Response Time (90%): Approx. 11 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube)

TR-0406



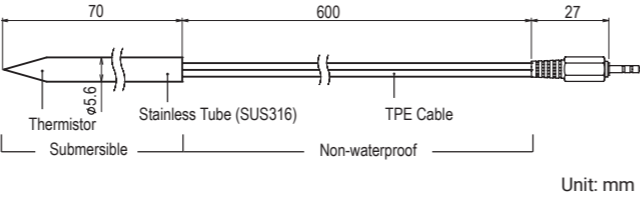
Response Time (90%): Approx. 15 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube)

TR-0506



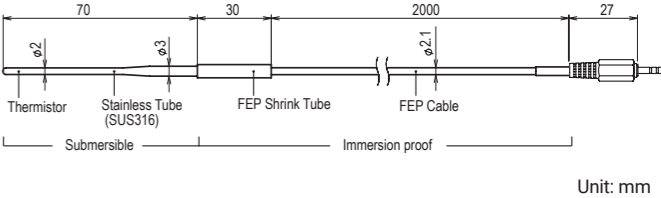
Response Time (90%): Approx. 10 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube)

TR-0706



Response Time (90%): Approx. 11 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube)

TR-1320



Response Time (90%): Approx. 90 sec. (in air)  
Approx. 3 sec. (in agitated water)  
Waterproof Capacity: Submersible (stainless protection tube),  
Immersion proof (cable)

Temperature-Humidity Sensors for TR-72nw / 72nw-S

Conditions for Use:  
Do not expose to condensation, dampness, corrosive gases or organic solvents.Continued use may cause a decrease in the sensor’s accuracy and sensitivity even under normal operational conditions.  
Note: Can be extended by 9 meters with the Extension Cable TR-1C30 / TR-5C10

### Temperature-Humidity Sensor

#### THA-3001

Unit: mm

Measurement Range: Temperature 0 to 55°C  
Humidity 10 to 95%RH  
Accuracy: Temperature: ±0.5°C  
Humidity: ±5%RH at 25°C, 50%RH  
Response Time (90%): Approx. 7 min.

#### THA-3151

Unit: mm

Measurement Range: Temperature 0 to 55°C  
Humidity 10 to 95%RH  
Accuracy: Temperature ±0.5°C  
Humidity ±5%RH at 25°C, 50%RH  
Response Time (90%): Approx. 7 min.

### High Precision Temp-Humidity Sensors

#### SHA-3151

Unit: mm

Measurement Range: Temperature -25 to 70°C  
Humidity 0 to 99%RH  
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.  
Accuracy:  
Temperature ±0.3°C at 10 to 40°C  
±0.5°C all other temperatures  
Humidity ±2.5%RH at 15 to 35°C, 30 to 80%RH  
Response Time (90%): Approx. 7 min.  
Long Term Stability: ±1%RH/yr, ±0.1°C/yr

### Sensor Extension Cables

#### TR-1C30

Unit: mm

Temperature Durability: -25 to 60°C  
Waterproof Capacity: None  
Compatible Sensors:  
Temperature Sensor/ TR-1106, TR-1220, TR-1320, TR-0106, TR-0206, TR-0306, TR-0406, TR-0506, TR-0706  
Temp-Humidity Sensor/ THA-3001, THA-3151, SHA-3151  
Conditions for Use:  
Temperature sensors can use up to 3 meters of extension cables.Temp-Humidity sensors can use up to 9 meters of extension cables.

#### TR-5C10

Unit: mm

### AC Adaptors

#### AD-05A2

(Type A Plug)

USB Mini-B Type

Input: AC 100 - 240 V  
Output: DC 5 V, 1 A  
Frequency: 50 / 60 Hz  
Cable Length: 1.5 m

#### AD-05C2

(Type C Plug)

USB Mini-B Type

Input: AC100-240V  
Output: DC5V, 1A  
Frequency: 50 / 60 Hz  
Cable Length: 1.5 m

Note: When using with TR-7nw Series the logger body will become hot. Also note that in case of the TR-71nw, the data logger itself will generate heat and the internal sensor will measure a temperature higher than actual; we recommend using an external temperature sensor.

### Wall Attachment

#### TR-07K2

Included Items:  
Lock Screws for fastening to wall,  
Double-Sided Adhesive Tape

### Communication Cable

#### US-15C

For Communication with PC

USB Mini-B Type  
Cable Length: 1.5m

### Software for Purchase

#### SO-TD1

T&D Software

Optional DVD-ROM that contains the Windows software for current T&D products.

TR7 for Windows  
T&D Data Server  
T&D Graph etc.

# tandd.com

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 **T&D Corporation**

817-1 Shimadachi, Matsumoto, Nagano 390-0852, Japan

Please send your inquiries to:

E-mail : [sales@tandd.com](mailto:sales@tandd.com)

URL: <https://tandd.com/>

