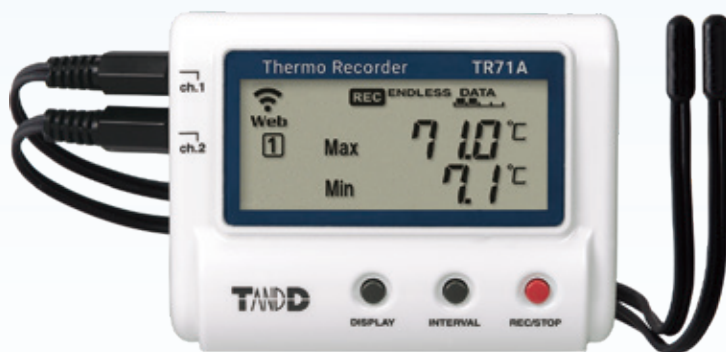
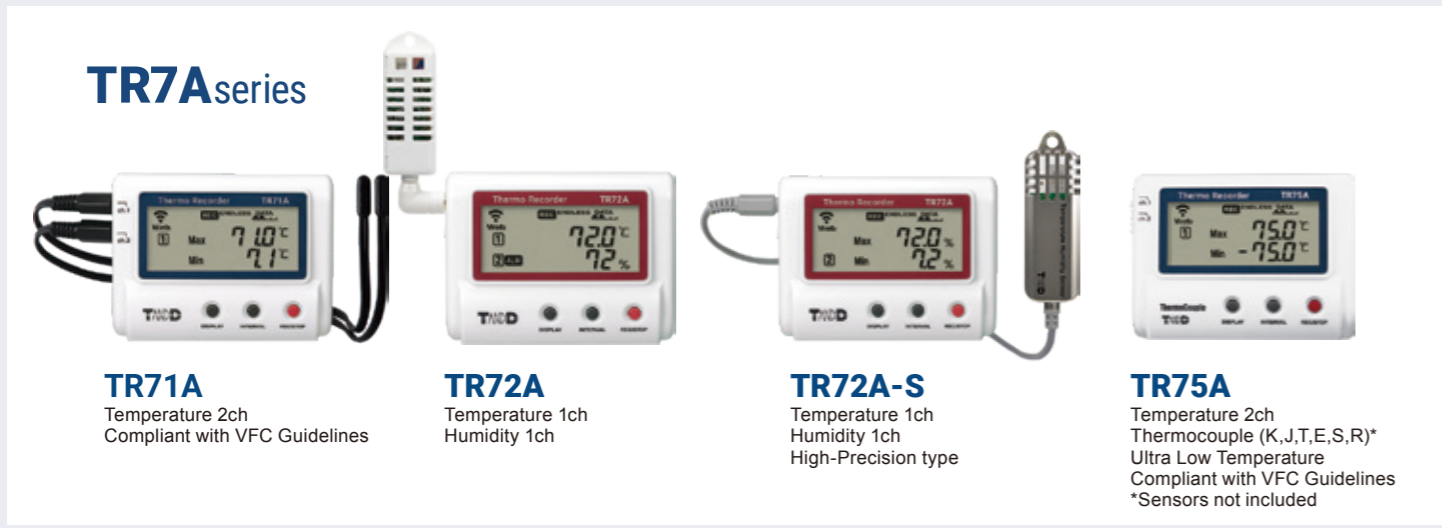




Thermo Recorder **TR7A**series





Specification	TR71A	TR72A	TR72A-S	TR75A	
Measurement Channels	Temperature 2ch	Temperature 1ch, Humidity 1ch	Temperature 1ch, Humidity 1ch	Temperature 2ch	
Sensor	Thermistor	Thermistor	Polymer Resistance	Thermistor	
Measurement Units	°C, °F	°C, °F	%RH	°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	10 to 95 %RH	-25 to 70 °C 0 to 99 %RH (*3)
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	±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
Measurement Resolution	0.1°C	0.1 °C	1 %RH	0.1 °C	0.1 %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)				
Measurement Mode (TR71A/75A only)	Normal Mode: Max/Min values and ALM display based on the readings on the LCD Vaccine Mode (*4): Max/Min values and ALM display based on the recorded values				
LCD Display Items	Measurements, ALM Display, Recording Status, Recording Mode, Battery Warning Mark, Communication Status, 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	Wireless LAN Communication IEEE 802.11b/g/n (2.4GHz only) Security: WPA/WPA2-PSK(AES/TKIP) WPS 2.0 : Push Button Configuration Protocol (*5): HTTP, HTTPS, SNMP, DHCP, DNS Bluetooth Communication Bluetooth 4.2 (Bluetooth low energy) USB Communication 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				
Battery Life (*6)	Approx. 10 days to 15 months (*7)(*8)				
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)				
Included Items	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)	
Software (*8)	AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US-15C, Manual Set (Warranty Included)				
	PC Software (Windows) TR7 for Windows T&D Graph T&D Data Server Mobile Application (iOS, Android) T&D Thermo				

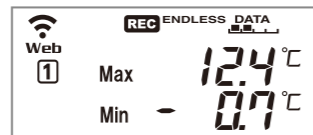
For Easy Worldwide Access and Notification

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

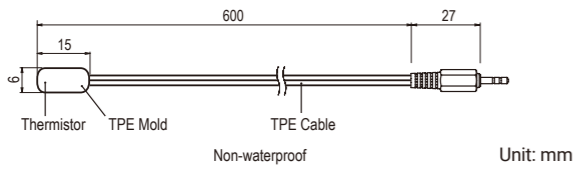
*1: We do not handle the sale of Thermocouple sensors.
Compatible wire sizes are as follows. Single Wire : Ø0.32 to Ø0.65 mm (AWG 28 - 22), Twisted Wire : 0.08 to 0.32 mm2 (AWG 28 - 22), Ø0.12 mm or more in diameter, Stripping Length : 9 to 10 mm
*2: When Auto Upload is used frequently, the measurement 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: Vaccine mode complies with the CDC (Centers for Disease Control and Prevention) requirements for vaccine management.
*5: Client function. HTTP(S) proxy supported.
*6: 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.
*7: Shows the estimated battery life with Bluetooth ON. It will be 1.2 times longer with Bluetooth OFF.
*8: Shows the estimated battery life with Auto-Upload ON.
The specifications listed above are subject to change without notice.

Temperature Sensors for TR71A

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

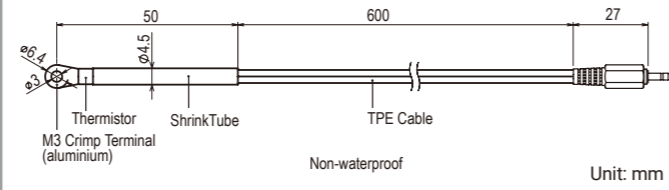
TR-0106



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

Screw-down Sensor

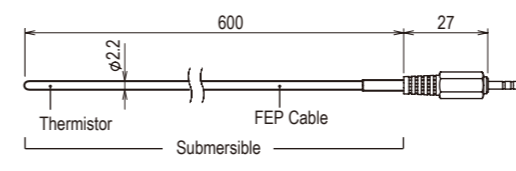
TR-0206



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

Fluoropolymer Coated Sensor

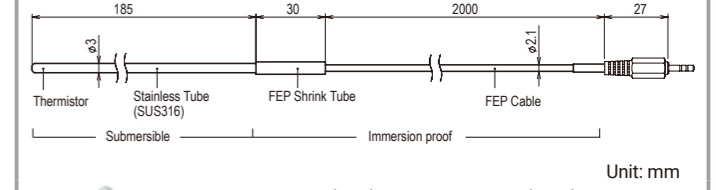
TR-1106



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

Stainless Protection Sensor

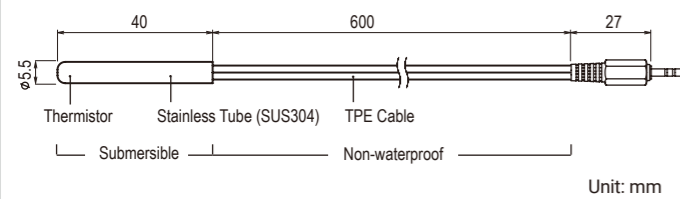
TR-1220



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

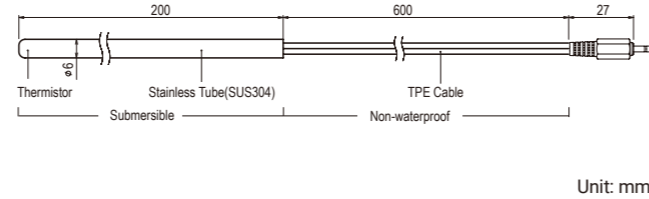
Stainless Protection Sensor

TR-0306



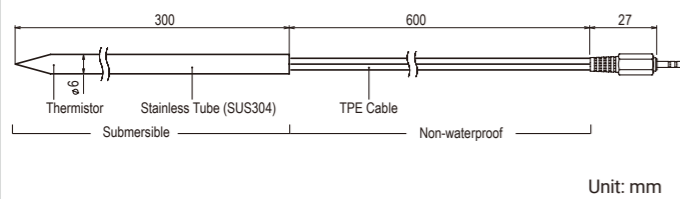
Response Time (90%): Approx. 11 sec. (in agitated water)
Waterproof Capacity: Submersible (stainless protection tube)

TR-0406



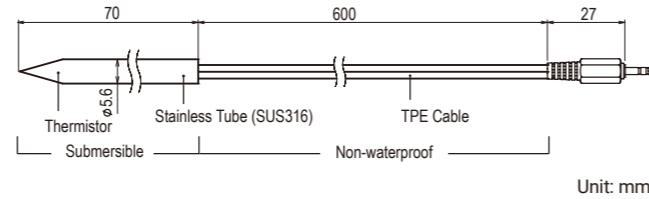
Response Time (90%): Approx. 15 sec. (in agitated water)
Waterproof Capacity: Submersible (stainless protection tube)

TR-0506



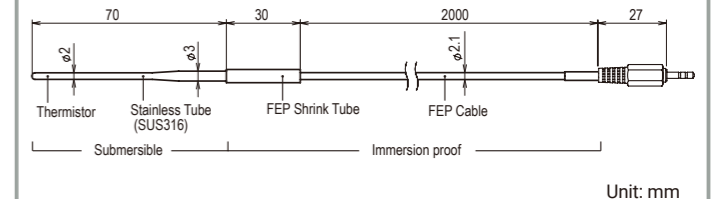
Response Time (90%): Approx. 10 sec. (in agitated water)
Waterproof Capacity: Submersible (stainless protection tube)

TR-0706



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

TR-1320



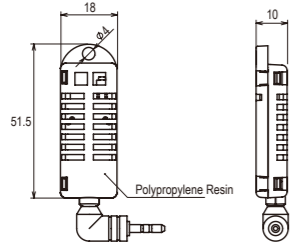
Response Time (90%): Approx. 90 sec. (in air)
Approx. 3 sec. (in agitated water)
Waterproof Capacity: Submersible (stainless protection tube),
Immersion proof (cable)

Temperature-Humidity Sensors for TR72A / 72A-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

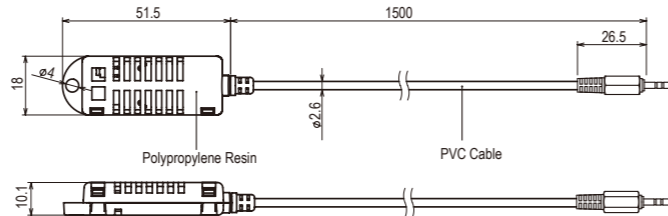
Temperature-Humidity Sensor

THA-3001



Unit: mm

THA-3151



Unit: mm



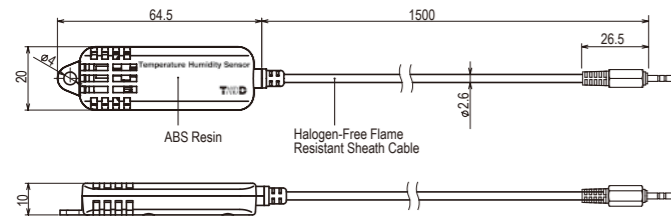
Measurement Range: Temperature 0 to 55°C
Humidity 10 to 95%RH
Accuracy: Temperature: ±0.5°C
Humidity: ±5%RH at 25°C, 50%RH
Response Time (90%): Approx. 7 min.



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



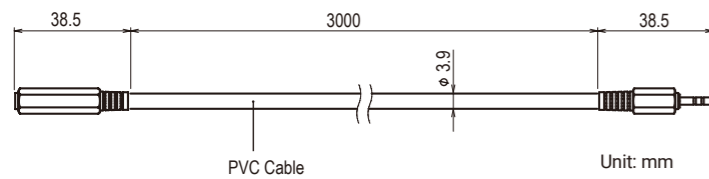
Unit: mm



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

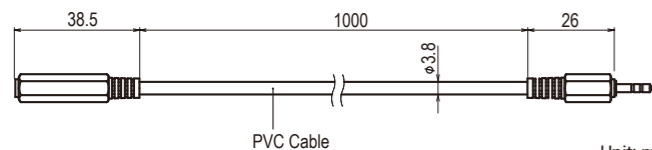
Sensor Extension Cables

TR-1C30



Unit: mm

TR-5C10



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.

AC Adaptors

AD-05A2

AC Adaptor (FCC)



USB Mini-B Type
Input: AC 100 - 240 V
Output: DC 5 V, 1 A
Frequency: 50 / 60 Hz
Cable Length: 1.5 m
Plug Type: A
Compatible Devices: Data Logger TR71A / 72A / 72A-S / 75A

AD-05C2

AC Adaptor (CE)



USB Mini-B Type
Input: AC100-240V
Output: DC5V, 1A
Frequency: 50 / 60 Hz
Cable Length: 1.5 m
Plug Type: C
Compatible Devices: Data Logger TR71A / 72A / 72A-S / 75A

Note: When using with TR7A Series the logger body will become hot. Also note that 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

S0-TD1

T&D Software



Software Included:
RTR500BW for Windows (US/EU)
RTR500BM for Windows (US/EU)
RTR500BC for Windows (US/EU)
RTR-500DC for Windows (US/EU)
RTR-600 Settings Utility (US)
TR7 for Windows
CO2 Recorder for Windows
Illuminance UV Recorder for Windows
MCR for Windows
T&D Recorder for Windows
T&D Data Server
T&D Graph

Note: Optional DVD-ROM that contains the Windows software for current T&D products. Software can be downloaded from T&D's Website, but for those who prefer, a DVD is available for purchase.

tandd.com