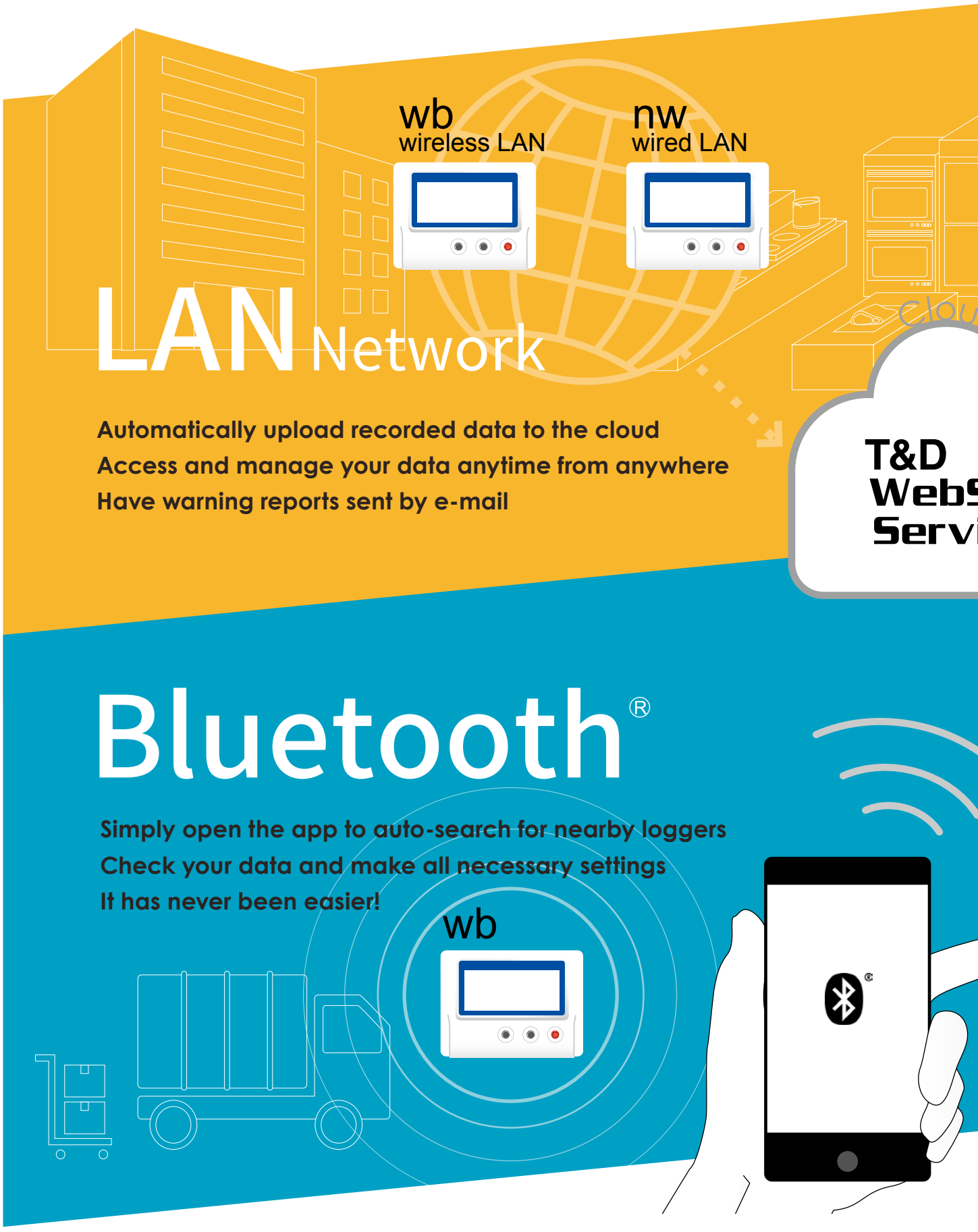
TR-7wb/nw

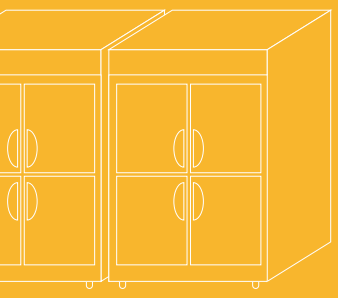
Welcome to the World of IoT!

Seamless, Simple yet Sophisticated!

Temperature & Humidity Data Loggers



made for the CLOUD!

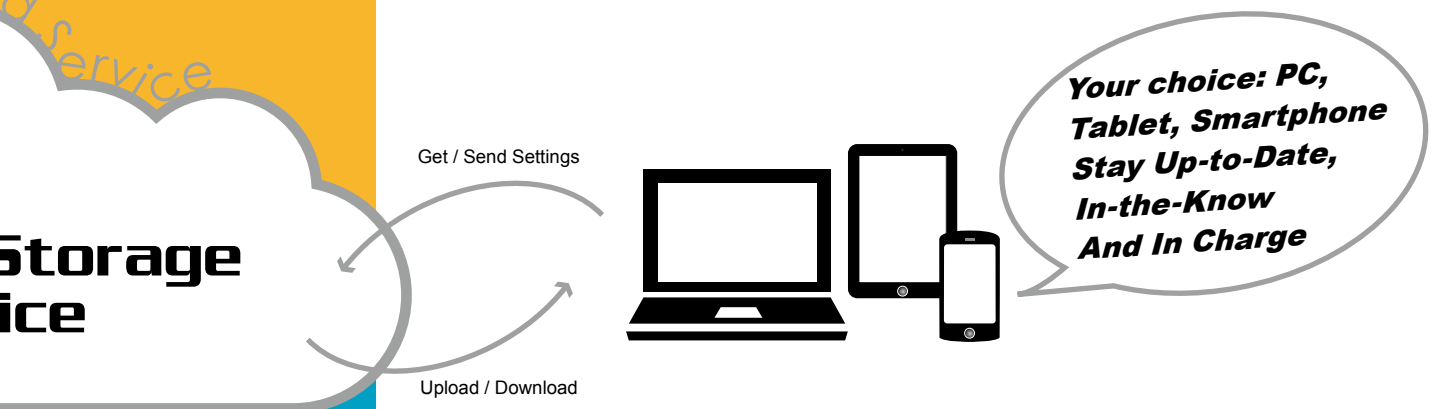


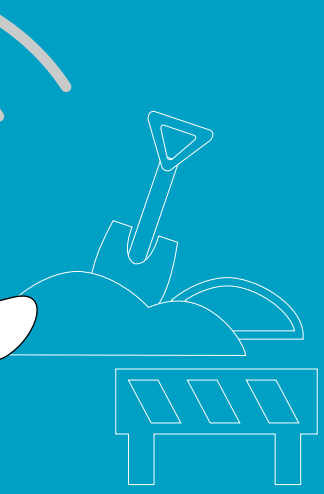
Two types to choose from: The all new Wireless LAN Bluetooth® enabled TR-7wb and the dedicated Wired LAN TR-7nw.

Sending and storing data to T&D's cloud service ensures easy access to your important temp/humidity data 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.

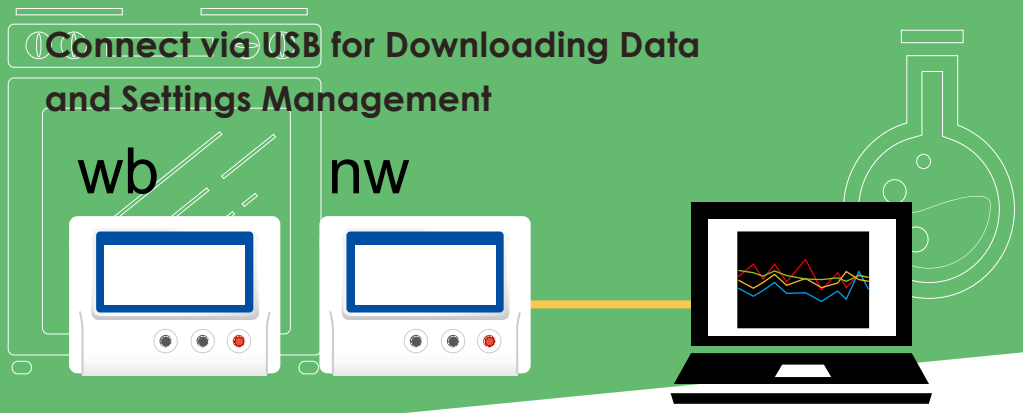
Best of all T&D software and cloud service storage is FREE of charge!





PC via USB Connection

Connect via USB for Downloading Data and Settings Management



Temperature

TR-71wb Bluetooth®, Wireless LAN, USB

TR-71nw Wired LAN, USB

Thermocouple (K, J, T, E, S, R)

TR-75wb Bluetooth®, Wireless LAN, USB

Thermocouple (K, J, T, E, S, R)

TR-75nw Wired LAN, USB

Humidity - Temperature

TR-72wb Bluetooth®, Wireless LAN, USB

TR-72nw Wired LAN, USB

High Precision Type

TR-72wb-S Bluetooth®, Wireless LAN, USB

High Precision Type

TR-72nw-S Wired LAN, USB

		TR-71wb / 71nw	TR-72wb / 72nw		TR-72wb-S / 72nw-S		TR-75wb / 75nw
Measurement Channels		Temperature 2ch	Temperature 1ch Humidity 1ch		Temperature 1ch, Humidity 1ch High Precision Type		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)	0 to 55 °C	10 to 95 %RH	-25 to 70 °C	0 to 99 %RH *3	K −199 to 1370 °C E −199 to 1000 °C J −199 to 1200 °C S −50 to 1760 °C T −199 to 400 °C R −50 to 1760 °C
Accuracy		Avg. ± 0.3°C −20 to 80°C Avg. ± 0.5°C −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) K, J, T, E : ±(0.5°C+0.3% of reading) S, R : ±(1.5°C+0.3% of reading) at 100°C or above 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	K, J, T, E: 0.1°C S, R: approx. 0.2°C
Responsiveness		Thermal Time Constant: Approx. 75 sec. Response Time (90%): Approx. 190 sec.	Response Time (90%): Approx. 7 min.		Response Time (90%): Approx. 7 min.		–

LCD Display Items	Measurements (fixed or alternating display), Battery Warning Mark, etc.			
Logging Capacity	8,000 data sets (One data set consists of readings for all channels in that type of unit)			
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)			
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	TR−7wf Wireless LAN Communication: IEEE 802.11b/g/n Security *4: WEP (64bit/128bit), WPA-PSK(TKIP), WPA2-PSK(AES) WPS 2.0: Push Button Configuration Protocol: HTTP *5, DHCP, DNS TR−7wf Bluetooth® Communication: Bluetooth 4.2 (Bluetooth low energy) TR−7nw Wired LAN Communication: 100BASE-TX/10BASE-T (RJ45 Connector) Protocol: HTTP *5, DHCP, DNS USB Communication: USB 2.0 (Mini-B connector)			
Power *6	Battery: AA Alkaline x 2, AA Ni-MH x 2 External: USB Bus 5V 200mA, AC Adaptor AD−05A2 or AD−05C2, PoE IEEE 802.3af (TR−7nw only)			
Battery Life *7	TR−71wb / 72wb: Approx. 10 days to 15 months *8 TR−71nw / 72nw: Approx. 10 days to 1.5 years *9			TR−75wb: Approx. 10 days to 1 year *8 TR−75nw: Approx. 10 days to 1 year *9
Dimensions	H 58 mm x W 78 mm x D 26 mm			
Weight	Approx. 55g			
Operating Environment	Temperature: −10 to 60°C *10 Humidity: 90%RH or less (no condensation)			
Accessories	Temperature Sensor TR−0106 x 2	Temperature-Humidity Sensor THA−3001	High Precision Temperature-Humidity Sensor SHA−3151	–
	AA Alkaline Battery LR6 x 2, Registration Code Label, USB Mini-B Cable US−15C, Manual Set (Warranty Included)			
Software Compatible OS *11	TR−7wb/nw for Windows, T&D Graph, T&D Data Server (For PC) Microsoft Windows 8 32 / 64 bit Microsoft Windows 7 32 / 64 bit Microsoft Windows Vista 32 bit (SP1 or later) T&D Thermo (For Mobile Devices) Android OS, iOS (For the compatible versions, please refer to our website.)			
Display Languages *12	English			

*1: Compatible wire sizes are as follows. Single Wire : ϕ 0.32 to ϕ 0.65 mm (AWG 28-22), Twisted Wire : 0.08 to 0.32 mm^2 (AWG 28-22), ϕ 0.12 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: If you wish to use the WPS feature, set the security type of the wireless LAN access point to "WPA2-PSK(AES)" or "None".
*6: When using external power, the internal temperature of the logger rises.
*7: 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.
*8: Shows the estimated battery life with Bluetooth and Auto-Upload ON. It will be 1.2 times longer with Bluetooth OFF.
*9: Shows the estimated battery life with Auto-Upload ON.
*10: −10 to 45°C when using external power. (TR-7nw only)
*11: For installation, it is necessary to have Administrator (Computer Administrator) rights.
*12: We recommend using an operating system in the same language as the display language. Operation in different languages is not guaranteed.
The specifications listed above are subject to change without notice.

Options

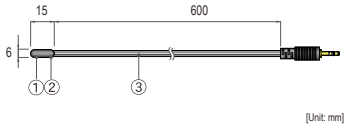
Temperature Sensors for TR-71wb/ 71nw

Measurement Range: –40 to 110°C, Sensor Temperature Durability: –50 to 115 °C,
Accuracy: Avg. ±0.3°C at –20 to 80°C, Avg. ±0.5°C at –40 to –20°C / 80 to 110°C

Materials: ① Thermistor ② TPE Mold ③ TPE Cable ④ M3 Crimp Terminal (aluminium) ⑤ ShrinkTube ⑥ Stainless Tube (SUS304) ⑦ Stainless Tube (SUS316)

TR-0106

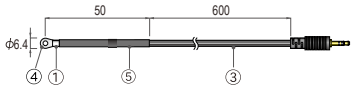
TPE Resin-Shielded Sensor
Response Time (90%):
Approx. 190 sec. (in air)
Waterproof Capacity: None



[Unit: mm]

TR-0206

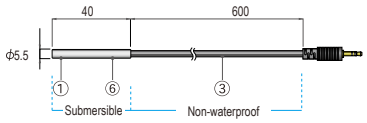
Screw-down Sensor
Response Time (90%):
Approx. 210 sec. (in air)
Waterproof Capacity: None



[Unit: mm]

TR-0306

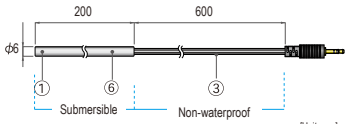
Stainless Protection Sensor
Response Time (90%):
Approx. 11 sec. (in agitated water)
Waterproof Capacity: None



[Unit: mm]

TR-0406

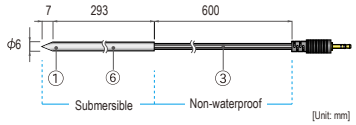
Stainless Protection Sensor
Response Time (90%):
Approx. 15 sec. (n agitated water)



[Unit: mm]

TR-0506

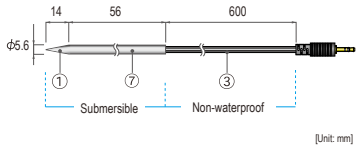
Stainless Protection Sensor
Response Time (90%):
Approx. 10 sec. (in agitated water)



[Unit: mm]

TR-0706

Stainless Protection Sensor
Response Time (90%):
Approx. 11 sec. (in agitated water)



[Unit: mm]

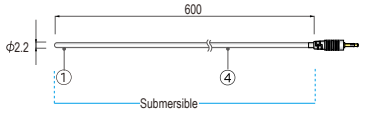
Temperature Sensors for TR-71wb/71nw (Fluoropolymer Coated Type)

Measurement Range: –60 to 155°C
Sensor Temperature Durability: –70 to 180°C,
Accuracy: Avg. ±0.5°C at–40 to 80°C, Avg. ±1.0°C at –60 to –40°C / 80 to 100°C,
Avg. ±2.0°C at 100 to 155°C

Materials: ① Thermistor ② Stainless Tube (SUS316) ③ FEP Shrink Tube ④ FEP Cable

TR-1106

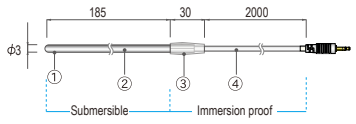
Fluoropolymer Coated Sensor
Response Time (90%):
Approx. 80 sec. (in air)
Approx. 7 sec. (in agitated water)



[Unit: mm]

TR-1220

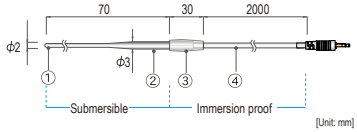
Stainless Protection Sensor
Response Time (90%):
Approx. 150 sec. (in air)
Approx. 7 sec. (in agitated water)



[Unit: mm]

TR-1320

Stainless Protection Sensor
Response Time (90%):
Approx. 90 sec. (in air)
Approx. 3 sec. (in agitated water)



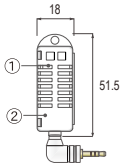
[Unit: mm]

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

Materials: ① Temp/Humidity Sensor ② Polypropylene Resin ③ ABS Resin ④ PVC Cable
⑤ Halogen-Free Flame Resistant Sheath Cable

THA-3001

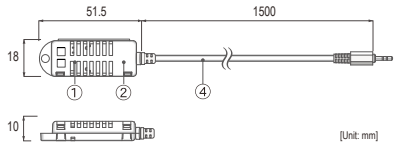
Measurement Range :
Temperature: 0 to 55°C
Humidity: 10 to 95%RH
(no condensation*1)
Accuracy:
Temperature: ±0.5°C
Humidity: ±5%RH at 25°C and 50%RH
Response Time (90%): Approx. 7 min.



[Unit: mm]

THA-3151

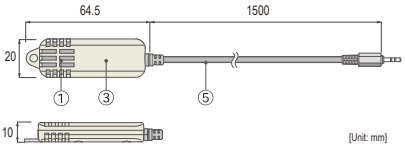
Measurement Range :
Temperature: 0 to 55°C
Humidity: 10 to 95 %RH
(no condensation*1)
Accuracy:
Temperature: ±0.5°C
Humidity:
±5%RH at 25°C and 50%RH
Response Time (90%): Approx. 7 min.



[Unit: mm]

SHA-3151 : High Precision Type

Measurement Range :
Temperature: –25 to 70°C,
Humidity: 0 to 99%RH *1
Accuracy:
Temperature:
±0.3°C at 10 to 40°C,
±0.5°C at all other temperatures
Humidity :
±2.5%RH at 15 to 35°C / 30 to 80%RH
Long Term Stability : ±1%RH / yr, ±0.1°C/yr *2
Responsiveness : Response Time (90%): Approx. 7 min.



[Unit: mm]

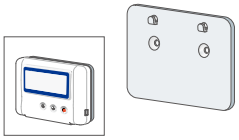
*1: Do not expose to condensation, dampness, corrosive gases or organic solvents.
*2: When continually used in environments with temperatures above 60°C, accuracy of humidity measurements will decrease over time. Also, humidity cannot be measured at temperatures below -20°C.

Wall Attachment

TR-07K2

Accessories:
Lock Screw x 2,
Double-sided adhesive tape

Materials: Polycarbonate



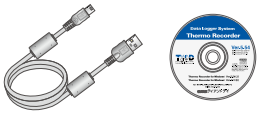
Note:

- Cracking may occur if polycarbonate is exposed to strong impact at temperatures of −30°C or lower.

Software Set for TR-7wb / 7nw

SO-15C1

Contents:
Software CD-ROM,
USB Communication cable (US-15C)



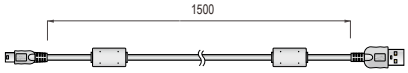
Note:

- The TR-7wb/nw series software can be downloaded via the internet, but for those who prefer, a CD and USB cable set is available for purchase.

Communication Cable

US-15C

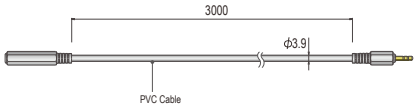
USB Communication Cable



Sensor Extension Cable

TR-1C30

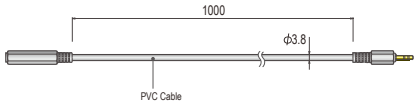
Temperature Durability:
−25 to 60°C
Waterproof Capacity:
None



[Unit: mm]

TR-5C10

Temperature Durability:
−25 to 60°C
Waterproof Capacity:
None



[Unit: mm]

Note:

- Temperature sensors can use up to 3 meters of extension cables.
- Temp-Humidity sensors can use up to 9meters of extension cables.

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

T&D Corporation

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