# TR-7wb/nw

### Welcome to the World of IoT!

Seamless, Simple yet Sophisticated!







### **Temperature & Humidity Data Loggers**

nw

wired LAN



wb

wireless LAN

Have warning reports sent by e-mail

Bluetooth®

Simply open the app to auto-search for nearby loggers Check your data and make all necessary settings It has never been easier!

wb

T&D

Web9

Serv

## made for the CLOUD!





TR-72wb Bluetooth®, Wireless LAN, USB



High Precision Type



TR-72nw V

Wired 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 <sup>*1</sup>			
Measureme	nt 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 <sup>*3</sup>	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 : $\pm (0.5^{\circ}C+0.3\% \text{ of reading})$ S, R : $\pm (1.5^{\circ}C+0.3\% \text{ of reading})$ at 100°C or above Cold Junction Compensation $\pm 0.5^{\circ}C$ at 10 to 40°C $\pm 0.8^{\circ}C$ 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%):Response Time (90%):Approx. 7 min.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 <sup>14</sup> : WEP (64bit/128bit), WPA-PSK(TKIP), WPA2-PSK(AES)         WPS 2.0: Push Button Configuration         Protocol: HTTP <sup>15</sup> , DHCP, DNS         TR-7wf Bluetooth® Communication:         Bluetooth 4.2 (Bluetooth low energy)         TR-7nw Wired LAN Communication:         USB Communication:         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. 1 TR-71nw / 72nw: Approx. 1	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 E	nvironment	Temperature: -10 to 60°C <sup>*10</sup> Humidity: 90%RH or less (no condensation)								
Accessories		Temperature Sensor TR-0106 x 2 AA Alka	Temperature- THA	Humidity Sensor 3001 x 2. Registration (	High Precision Tempe SH, Code Label, USB Mini-	erature-Humidity Sensor A-3151 B Cable US-15C. Manual	– Set (Warrantv Included)			
Software Co *11	e Compatible OS Microsoft 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 <sup>*12</sup> English										
						<b>0.</b>				

\*1: Compatible wire sizes are as follows. Single Wire : \$\$\phi\$ 0.32 to \$\$\phi\$ 0.65 mm (AWG 28-22), Twisted Wire : 0.08 to 0.32 mm² (AWG 28-22), \$\$\phi\$ 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

When rate oppoar is been requering, the machine than ambient; we recommend using an external temperature sensor in this case.
 When continually used in environments with temperatures above 60°C, accuracy of humidity measurements will decrease over time. Also, humidity cannot be measured at

3. When continuity used in environments with temperatures above or 0, accuracy or number of measurements with decrease over time. Also, number or measurements with 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 dependent 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. \*/: 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: Wo recommend, unique as the display language as the display language. Operation is different languages is not guaranteed.

\*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.

#### Temperature Sensors for TR-71wb/ 71nw

Measurement Range: -40 to 110°C, Sensor Temperature Durability: -50 to 115 °C,

Accuracy: Avg.  $\pm 0.3^\circ C$  at –20 to 80°C, Avg.  $\pm 0.5^\circ C$  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



#### TR-0206



#### TR-0406



600

3

[Unit: mm]

[Unit: mm]

#### TR-0706



#### 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 <sup>-1</sup> ) Accuracy: Temperature: ±0.5°C Humidity: ±5%RH at 25°C and 50%RH Besponse Time ( 00% ): Approx, 7 min	
nesponse nine ( 30 % ). Approx. 7 min.	[Unit: mm]

#### THA-3151



#### SHA-3151 : High Precision Type



\*1: Do not expose to condensation, dampness, corrosive gases or organic solvents. 6 \*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

		1500		
able	-			7
		\$	—	

#### Sensor Extension Cable

#### TR-1C30



#### 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

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