USB Connectable Loggers

for Variety of Measurements

TR-7Ui Series

TR-76Ui

Co2 Recorder

REC DATA ENDLESS

20.0 ℃
760 CO2 ppm

MIN SEC

DISPLAY INTERVAL REC/STOP

Thermo Recorder TR-73U

REC DATA ENDLESS

1007.3 hPa

MIN SEC

DISPLAY INTERVAL REC/STOP

▼POWER

T&D

Illuminance UV Recorder

ch.1
ch.2

REC DATA COM ENDLESS

74.00 lx

MIN SEC

USB
COM

DISPLAY INTERVAL REC/STOP

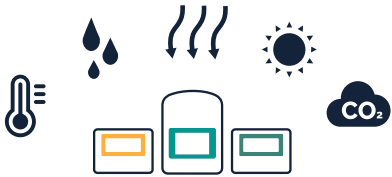▼POWER

TR-74Ui

T&D

T&D

Three Loggers to meet your Environmental Measurement Needs!

TR-7Ui Series Features

Data Loggers for a Variety of Measurements

The TR-7Ui series data loggers are designed to simultaneously measure and record a variety of measurements. In addition to temperature and humidity, barometric pressure, Illuminance and UV intensity, and CO2 concentration are available.

Easy Data Download to PC via USB

USB

The USB connection makes it easy not only to transfer recorded data directly from the data logger to your computer, but to monitor current readings on the PC screen.

Full Range of Sensors

For improved environmental adaptability, reliability, and accurate measurements the TR-74Ui-S/76Ui-S models can be used with our high-precision temp/humidity sensors.

TR-73U also has a wide range of temperature sensor options.

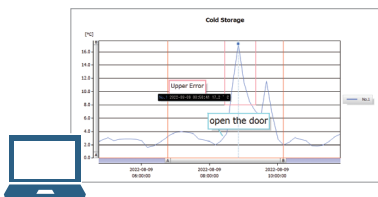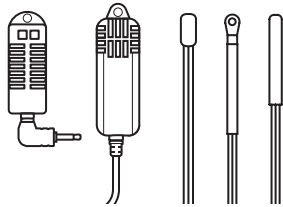### Large Logging Capacity: 8000 Data Sets

DATA

One data set consists of readings for all channels in that type of unit. If set at a recording interval of 60 minutes, it gives you one year's worth of measurements.

Free-of-Charge Software

Cold Storage

Upper Error

open the door

For setup and data analysis, all necessary software is available for free download from our website.
   Illuminance UV for Windows for TR-74Ui
   CO2 Recorder for Windows for TR-76Ui
   T&D Recroder for Windows(TR-5,7xU) for TR-73U
   Data Analysis with T&D Graph

https://tandd.com/product/series/tr7ui.html

Product Lineup

Illuminance, UV Intensity, Temperature, Humidity (1ch each)

TR-74Ui

Illuminance: 0 to 130 klx
UV Intensity: 0 to 30 mW/cm^2
Temperature: 0 to 55 °C
Humidity: 10 to 95 %RH

TR-74Ui-S : High-Precision Type
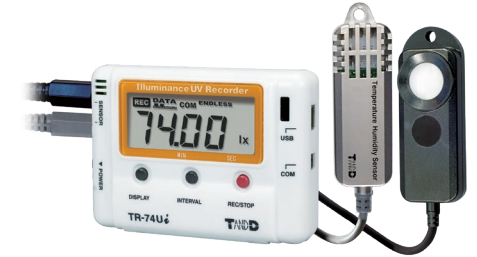
Illuminance: 0 to 130 klx
UV Intensity: 0 to 30 mW/cm^2
Temperature: -25 to 70 °C
Humidity: 0 to 99 %RH (above -20 °C)

CO2, Temperature, Humidity (1ch each)

TR-76Ui

CO2: 0 to 9999 ppm
Temperature: 0 to 55 °C
Humidity: 10 to 95 %RH

TR-76Ui-S : High-Precision Type

CO2: 0 to 9999 ppm
Temperature: -25 to 70 °C
Humidity: 0 to 99 %RH (above -20 °C)

Barometric Pressure, Temperature, Humidity (1ch each)
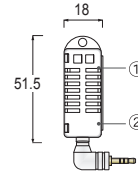
TR-73U

Barometric-Pressure: 750 to 1100 hPa
Temperature: 0 to 50 °C
Humidity: 10 to 95 %RH

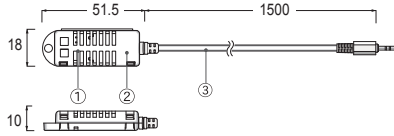## Temperature-Humidity Sensors for TR-74Ui / 74Ui-S / 76Ui / 76Ui-S

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.
Condition 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.

THA-3001
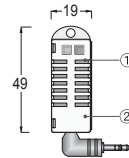

THA-3151

[Unit: mm]

Materials: ① Temp-Humidity Sensor ② Polypropylene Resin ③ PVC Cable

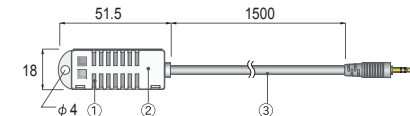## Temperature-Humidity Sensors for TR-73U

Measurement Range: Temperature 0 to 50 °C, Humidity 10 to 95 %RH
Accuracy: Temperature Avg. ±0.3 °C
　　　　　　Humidity ±5 %RH at 25 °C and 50 %RH
Response Time (90%): Approx. 7 min.
Condition 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.

TR-3100

TR-3110

[Unit: mm]

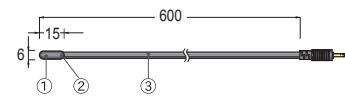Materials: ① Temp-Humidity Sensor ② Polypropylene Resin ③ Vinyl chloride-shielded wire

Note: TR-3110 does not support the use of an extension cable.

Temperature Sensors for TR-73U

Measurement Range: -40 to 110 °C
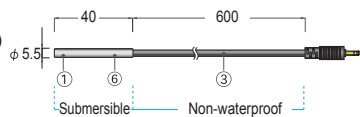Accuracy: Avg. ±0.3 °C at -20 to 80 °C, Avg. ±0.5 °C at -40 to -20 °C / 80 to 110 °C

TR-0106   TPE Resin-Shielded Sensor

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

TR-0306   Stainless Protection Sensor

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

TR-0506   Stainless Protection Sensor

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

TR-0206   Screw-down Sensor

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

TR-0406   Stainless Protection Sensor

Response Time (90 %):
　Approx. 15 sec. (in agitated water)

TR-0706   Stainless Protection Sensor

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

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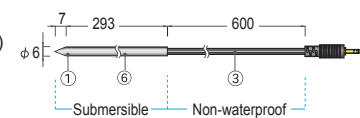
Materials: ① Thermistor ② TPE Mold ③ TPE Cable ④ M3 Crimp Terminal (aluminium) ⑤ ShrinkTube ⑥ Stainless Tube (SUS304) ⑦ Stainless Tube (SUS316)

SHA-3151   High-Precision Type

Measurement Range: Temperature –25 to 70 °C, Humidity 0 to 99 %RH *
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
Long Term Stability: ±1 %RH/yr, ±0.1 °C/yr
Response Time (90 %): Approx. 7 min.
Condition for Use: Do not expose to condensation, dampness, corrosive gases or
organic solvents.

[Unit: mm]
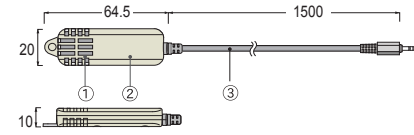
Materials: ① Temp-Humidity Sensor ② ABS Resin ③ Halogen-Free Flame Resistant
　　　　　　 Sheath Cable
* When continually used in environments with temperatures above 60 °C, accuracy of
　humidity measurements will decrease over time. Also, humidity cannot be measured at
　temperatures below -20 °C.

Illuminance-UV Sensor for TR-74Ui / 74Ui-S

ISA-3151

Measurement Range: Illuminance 0 to 130 klx, UV Intensity 0 to 30 mW/cm^2
Accuracy *1: Illuminance ±5 % (10 lx to 100 klx at 25 °C, 50 %RH)
　　　　　　　UV Intensity ±5 % (0.1 to 30 mW/cm² at 25 °C, 50 %RH)
Operating Environment *2 : Temperature -10 to 60 °C
　　　　　　　　　　　　　　 Humidity 90 %RH or less (no condensation)

[Unit: mm]
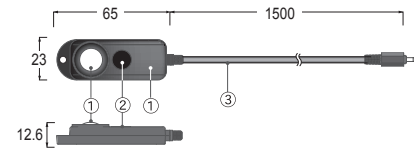
Materials: ① Polycarbonate ② Glass ③ Vinyl chloride-shielded wire

*1: Compared to the value measured by the T&D standard sensor for calibration under our
　 calibration light source.
*2: Do not expose to condensation, dampness, corrosive gases, or organic solvents.

Sensor Extension Cables

TR-1C30 or TR-5C10

Compatible Sensors:
　Temperature Sensor: TR-0106, TR-0206, TR-0306, TR-0406, TR-0506, TR-0706
　Temp-Humidity Sensor: THA-3001, THA-3151, SHA-3151, TR-3100
　Illuminance-UV Sensor: ISA-3151
Temperature Durability: –25 to 60 °C
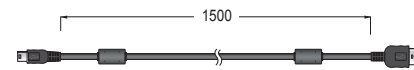Waterproof Capacity: None
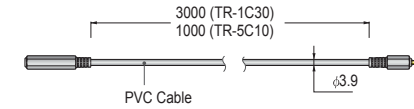
[Unit: mm]

Note: Temperature sensors can use up to 3 meters of extension cables. Temp-
　　　 Humidity sensors and Illuminance-UV sensors can use up to 9 meters of
　　　 extension cables (Only 1 extension cable for TR-3100).
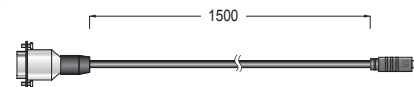
Communication Cables

US-15C   USB Communication Cable

For Communication with PC

TR-07C   Serial Communication Cable

For communication with PC
Connector Type: Specialized Connector D-sub 9 pin

[Unit: mm]

Software DVD-ROM

SO-TD1   T&D Software

Includes Windows application software for all the
current T&D products.

　T&D Recorder for Windows (TR-5, 7xU)
　CO2 Recorder for Windows
　Illuminance UV Recorder for Windows
　T&D Graph, etc.

Wall Attachments

TR-07K2   for TR-74Ui / 74Ui-S / 73U

Accessories:
　Lock Screw x 2,
　Double-Sided Adhesive Tape

Materials: Polycarbonate
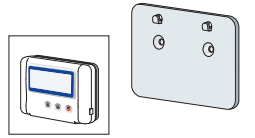
AT-76K1   for TR-76Ui / 76Ui-S

Accessories: Lock Screw x 2

Materials: Aluminum
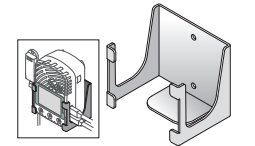
AC Adaptors for TR-76Ui / 76Ui-S

AD-06A1

Cable Length: 1.8 m
Input: AC 100 - 240 V
Output: DC 6 V 500 mA
Frequency: 50 / 60 Hz
Plug Type: A
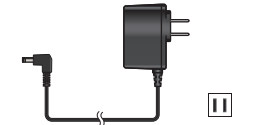
AD-06C1

Cable Length: 1.8 m
Input: AC 100 - 240 V
Output: DC 6 V 1.0 A
Frequency: 50 / 60 Hz
Plug Type: C

Alarm Connection Cable for TR-76Ui / 76Ui-S

AC0101

PAP-04V-S　　AWG #22
JST　　White, Black, Yellow, Gray

[Unit: mm]

TR-73U

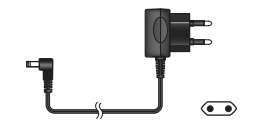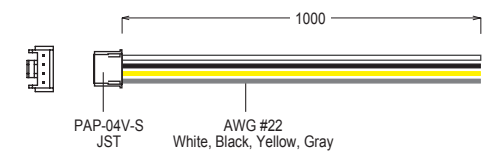|	TR-73U		
Sensor	Temp-Humidity Sensor TR-3100 *1		Barometric Pressure Sensor (Internal)
	Thermistor	Polymer Resistance	
Measurement Channels	Temperature 1ch	Humidity 1ch	Barometric Pressure 1ch
Measurement Units	°C, °F	%RH	hPa
Measurement Range	0 to 50 °C (Supplied Sensor) −40 to 110 °C (Optional Sensor)	10 to 95 %RH	750 to 1100 hPa
Accuracy	Avg. ±0.3 °C at 0 to 50 °C	±5 %RH at 25 °C, 50 %RH	±1.5 hPa
Measurement Resolution	0.1 °C	1 %RH	0.1 hPa
Responsiveness	Response Time (90 %): Approx. 7 min.		4 or 40 seconds if recording interval is 10 sec. or more.
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. 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.		
Communication Interfaces	USB Communication: USB 2.0 (Mini-B connector) Serial Communication *2		
Power	AA Alkaline Battery LR6 x 1		
Battery Life *3	Approx. 10 months		
Dimensions	H 55 mm x W 78 mm x D 18 mm		
Weight	Approx. 40 g		
Operating Environment	Temperature: -10 to 60 °C Humidity: 90 %RH or less (no condensation)		
Included Items	AA Alkaline Battery LR6, USB Mini-B Cable US-15C, Temperature-Humidity Sensor TR-3100, Manual Set (Warranty Included)		
Software *4	PC Software (Windows) T&D Recorder for Windows (TR-5, 7xU), T&D Graph		

*1: It is also possible to measure temperature with the internal sensor. However, the measurement range is restricted to the operating environment for the whole device.
*2: Customers wishing to write their own software, please contact your local distributor for the serial communications protocol specifications. (Note: Optional serial communication cable TR-07C is also required.)
*3: Battery life varies depending upon multiple factors including ambient temperature, recording interval, frequency of communication, 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.
*4: Free software download and information on OS compatibility is available on the Software page of our website (https://tandd.com/software/).
The specifications listed above are subject to change without notice.

TR-74Ui / TR-74Ui-S

	TR-74Ui		TR-74Ui-S	
Temperature-Humidity Sensor				
Sensor	THA-3151		SHA-3151 (High-Precision Type)	
	Thermistor	Polymer Resistance	Thermistor	Polymer Resistance
Measurement Channels	Temperature 1ch	Humidity 1ch	Temperature 1ch	Humidity 1ch
Measurement Units	°C, °F	%RH	°C, °F	%RH
Measurement Range	0 to 55 °C	10 to 95 %RH	−25 to 70 °C	0 to 99 %RH *1
Accuracy	±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	1 %RH	0.1 °C	0.1 %RH
Responsiveness	Response Time (90 %): Approx. 7 min.		Response Time (90 %): Approx. 7 min.	
Illuminance-UV Sensor				
Sensor	ISA-3151			
Measurement Channels	Illuminance: 1 ch UV intensity: 1 ch			
Measurement Units	Illuminance: lx, klx UV Intensity: mW/cm²			
Measurement Range	Illuminance: 0 lx to 130 klx UV Intensity: 0 to 30 mW/cm²			
Units of Cumulative Measurement	Cumulative Illuminance: lxh, klxh, Mlxh Cumulative amount of UV Light: mW/cm²h, W/cm²h			
Display Range of Cumulative Measurement	Illuminance: 0 lxh to 90 Mlxh UV Intensity: 0 mW to 62 W/cm²h			
Accuracy	Illuminance 10 lx to 100 klx: ±5 % at 25 °C, 50 %RH UV Intensity 0.1 to 30 mW/cm²: ±5 % at 25 °C, 50 %RH			
Relative Spectral Response	Illuminance: Approximated to the CIE standard response function V (λ) UV Intensity: 260 to 400 nm (UVA / UVB)			
Measurement Resolution	Illuminance: Minimum of 0.01 lx UV Intensity: Minimum of 0.001 mW/cm²			
Responsiveness	Response Time (90 %): 3 sec. at recording interval of 1 sec. or 6 sec. at other intervals			
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)			
LCD Display Items	Measurements, Recording Status, Recording Mode, Battery Life Warning, etc. Measurements: Illuminance / UV Intensity / Temperature / Humidity / Cumulative Illuminance / Cumulative amount of UV Light Display Pattern: Alternating or Fixed display Display Digits: Up to 4 digits			
Communication Interfaces	USB Communication: USB 2.0 (Mini-B connector) Serial Communication *3			
Power	AA Alkaline Battery LR6 x 1			
Battery Life *4	Approx. 6 months			
Dimensions	H 55 mm x W 78 mm x D 18 mm			
Weight	Approx. 40 g			
Operating Environment	Temperature: −10 to 60 °C Humidity: 90 %RH or less (no condensation)			
Included Items	AA Alkaline Battery LR6, USB Mini-B Cable US-15C, Illuminance-UV Sensor ISA-3151, Temperature-Humidity Sensor THA-3151 or SHA-3151, Manual Set (Warranty Included)			
Software *5	PC Software (Windows) Illuminance UV Recorder for Windows, T&D Graph			

*1: 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.
*2: Compared to the value measured by the T&D standard sensor for calibration under our calibration light source.
*3: Customers wishing to write their own software, please contact your local distributor for the serial communications protocol specifications. (Note: Optional serial communication cable TR-07C is also required.)
*4: Battery life varies depending upon multiple factors including ambient temperature, recording interval, frequency of communication, 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: Free software download and information on OS compatibility is available on the Software page of our website (https://tandd.com/software/).
The specifications listed above are subject to change without notice.

TR-76Ui / TR-76Ui-S

	TR-76Ui		TR-76Ui-S	
Temperature-Humidity Sensor				
Sensor	THA-3001		SHA-3151 (High-Precision Type)	
	Thermistor	Polymer Resistance	Thermistor	Polymer Resistance
Measurement Channels	Temperature 1ch	Humidity 1ch	Temperature 1ch	Humidity 1ch
Measurement Units	°C, °F	%RH	°C, °F	%RH
Measurement Range *1	0 to 55 °C	10 to 95 %RH	−25 to 70 °C	0 to 99 %RH *2
Accuracy	±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	1 %RH	0.1 °C	0.1 %RH
Responsiveness	Response Time (90 %): Approx. 7 min.		Response Time (90 %): Approx. 7 min.	
CO2 Sensor (Internal)				
Sensor	NDIR			
Measurement Channels	CO2 Concentration 1ch			
Measurement Units	ppm			
Measurement Range	0 to 9,999 ppm			
Accuracy	±(50 ppm + 5 % of reading) at 5,000 ppm or less *3			
Measurement Resolution	Minimum of 1 ppm			
Responsiveness	Response Time (90 %): Approx. 1 min.			
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)			
LCD Display Items	Measurements, Recording Status, Recording Mode, Battery Level, etc. Measurements: CO2 concentration, Temperature or Humidity (fixed or alternating display)			
Communication Interfaces	USB Communication: USB 2.0 (Mini-B connector) Serial Communication *4			
External Alarm Terminal *5	Output Terminal: Open Drain Output (Voltage when OFF: DC less than 30 V / Current when ON: less than 0.1 A / Resistance when ON: about 15 Ω)			
Power	AC Adaptor (AD-06A1 or AD-06C1), AA Alkaline Battery LR6 x 4			
Battery Life	Approx. 2 days (batteries only without AC adaptor) *6			
Dimensions	H 96 mm × W 66 mm × D 46 mm (excluding protrusions and sensor)			
Weight	Approx. 120 g			
Operating Environment	Temperature: 0 to 45 °C Humidity: 90 %RH or less (no condensation)			
Included Items	AA Alkaline Battery LR6 x 4, AC Adaptor AD-06A1 or AD-06C1, USB Mini-B Cable US-15C, Temperature-Humidity Sensor THA-3001 or SHA-3151, Manual Set (Warranty Included)			
Software *7	PC Software (Windows) CO2 Recorder for Windows, T&D Graph			

*1: Make sure to use the data logger within the operating environment as listed in the specifications.
*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: Stated value is the measurement accuracy of the CO2 sensor when Auto Calibration is operating properly. A change in atmospheric pressure directly influences the reading of CO2, which can cause measurement errors; a decrease in pressure by 10 hPa results in a relative decrease in CO2 by 1.6 %. In such a case, we recommend carrying out the "Atmospheric Pressure Correction" function found in CO2 Recorder for Windows.
*4: Customers wishing to write their own software, please contact your local distributor for the serial communications protocol specifications. (Note: Optional serial communication cable TR-07C is also required.)
*5: In order to use the external alarm terminal, please purchase the optional alarm connection cable (AC0101).
*6: Battery life varies depending upon multiple factors including ambient temperature, recording interval, frequency of communication, 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.
*7: Free software download and information on OS compatibility is available on the Software page of our website (https://tandd.com/software/).
The specifications listed above are subject to change without notice.

tandd.com

T&D Corporation

VEGETABLE OIL INK