

Remote Unit				
Product	RTR-501/501L	RTR-502/502L	RTR-503/503L	
Measurement Channels	Temperature 1ch (Internal)	Temperature 1ch (External)	Temperature 1ch, Humidity 1ch (External)	
Sensor	Thermistor	Thermistor	Thermistor	Polymer Resistance
Measurement Units	°C, °F	°C, °F	°C, °F	%
Measurement Range	-40 to 80 °C	-60 to 155 °C	0 to 55 °C	10 to 95 %RH
Accuracy	Avg.±0.5 °C	Avg.±0.3 °C (-20 to 80 °C) Avg.±0.5 °C (-40 to -20 °C / 80 to 110 °C) Avg.±1.0 °C (-60 to -40 °C / 110 to 155 °C)	Avg.±0.3 °C	±5 %RH (at 25 °C, 50 %RH)
Measurement Resolution	0.1 °C	0.1 °C	0.1 °C	1 %RH
Responsiveness	Thermal Time Constant: Approx. 15 min. Approx. 25 min. (L Type) Response Time (90 %): Approx. 35 min. Approx. 47 min. (L Type)	Thermal Time Constant: Approx. 30 sec. (in air) Approx. 4 sec. (in agitated water) Response Time (90 %): Approx. 80 sec. (in air) Approx. 7 sec. (in agitated water)	Response Time (90 %): Approx. 7 min.	
Logging Capacity	16,000 readings	16,000 readings	8,000 data sets (One data set consists of readings for multiple 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 (*1)	Endless (Overwrite oldest data when capacity is full) or One Time (Stop recording when capacity is full)			
LCD Display Items	Measurements (alternating display for multiple channel devices), Battery Life Warning, etc.			
Communication Interfaces	Wireless Communication (Short Range Radio Communication) FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz, RF Power: 7 mW) ETSI EN 300 220 (Frequency Range: 869.7 to 870 MHz, RF Power: 5 mW) Optical Communication (proprietary protocol)			
Wireless Transmission Range	Approx. 150 meters (500 ft) if direct and unobstructed			
Power	Lithium Battery: LS14250 (*2) or CR2 (*3) x 1 L Type: Large Capacity Battery Adaptor Kit (RTR-500B1) (*4) External Power Adaptor Kit (RTR-500A1: sold separately)			
Battery Life (*5)	About 10 months L Type: About 4 years			
Dimensions	H 62 mm x W 47 mm x D 19 mm L type: H 62 mm x W 47 mm x D 46.5 mm (excluding protrusions and sensor) Antenna length: 24 mm			
Weight	Approx. 56 g L Type: approx. 109 g (including battery / excluding sensor)			
Operating Environment	-30 to 80 °C (The environmental operating range of the logger unit is -40 to 80°C, but wireless communications cannot be utilized in an environment less than -30°C.)			
Waterproof Capacity	IP67 (immersion proof)	IP64: Splash proof (rated for use in daily life) (*6)	IP64: Splash proof (rated for use in daily life) (*6) Note: Sensor is not water resistant.	
Accessories	-	Temperature Sensor (TR-5106)	Temperature/Humidity Sensor (TR-3310)	
	Tubed Lithium Battery (LS14250) or Large Capacity Battery Adaptor Kit (RTR-500B1), Strap, User's Manual (Warranty Included)			
Compatible Base Units	RTR-500, RTR-500NW/500AW, RTR-500DC, RTR-500GSM			

*1: Only "Endless" is available when using RTR-500W for Windows or RTR-500GSM for Windows.

*2: The included lithium battery (LS14250) is not sold in stores. Please purchase the optional battery set for low-temperature use (TR-11P2) for replacement.

*3: Only use the CR2 within temperature range of -20 to 60°C, avoiding exposing the CR2 to excessive vibration such as transportation.

*4: When using RTR-500B1 it is necessary to purchase Lithium Battery (LS26500). For details, contact your local authorized distributor.

*5: Battery life varies depending upon the ambient temperature in which it is used, the recording interval, the frequency of communication, and the 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.

*6: This is the waterproof capacity of the data logger with the sensor connected.

The specifications listed above are subject to change without notice.

RTR-500 Series - Specifications

Remote Unit					
Product	RTR-505-TC/ 505-TCL	RTR-505-Pt/ 505-PtL	RTR-505-V / 505-VL	RTR-505-mA/ 505-mAL	RTR-505-P/ 505-PL
Measurement Channels	Temperature 1ch	Temperature 1ch	Voltage 1ch	4-20mA 1ch	Pulse 1ch
Sensor	Thermocouple: Type K, J, T, S	Pt100, Pt1000 (3-wire)	-	-	-
Measurement Units	°C, °F	°C, °F	V, mV	mA	P
Measurement Range	-199 to 1700 °C	-199 to 600 °C	0 to 22 V	0 to 20 mA (Operational up to 40 mA)	
Accuracy	Thermocouple Measurement ±0.3 °C + 0.3 % of reading (Type K, J, T) ±1°C + 0.3 % of reading (Type S) Cold Junction Compensation ±0.3 °C (10 to 40 °C) ±0.5 °C (-40 to 10 °C / 40 to 80 °C)	±0.3 °C + 0.3 % of reading (10 to 40 °C) ±0.5°C + 0.3 % of reading (-40 to 10 °C / 40 to 80 °C)	±0.5 mV + 0.3 % of reading (10 to 40 °C) ±1 mV + 0.5 % of reading (-40 to 10 °C / 40 to 80 °C)	±0.05 mA + 0.3 % of reading (10 to 40 °C) ±0.1mA + 0.3 % of reading (-40 to 10 °C / 40 to 80 °C)	Input Signal: Non-voltage Contact Input Voltage Input (0 to 27 V) Detection Voltage: Lo: 0.5 V or less Hi: 2.5 V or less Input Impedance: Approx.100 KΩpull up
	Note: The above mentioned temperature is the operating environment for Input Module only.				Chattering Filter: ON: 15 Hz or less OFF: 3.5 kHz or less Maximum Count: 61,439/Recording Interval
Measurement Resolution	Type K, J, T : 0.1 °C Type S: approx. 0.2 °C	0.1 °C	Up to 400 mV : 0.1 mV, Up to 800 mV : 0.2 mV, Up to 999 mV : 0.4 mV, Up to 3.2 V : 1 mV, Up to 6.5 V : 2 mV, Up to 9.999 V : 4 mV, Up to 22 V : 10 mV	0.01 mA	
Logging Capacity	16,000 readings				
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 (*1)	Endless (Overwrite oldest data when capacity is full) or One Time (Stop recording when capacity is full)				
LCD Display Items	Measurements, Battery Life Warning, etc.				
Communication Interfaces	Wireless Communication (Short Range Radio Communication) FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz, RF Power: 7 mW) ETSI EN 300 220 (Frequency Range: 869.7 to 870MHz, RF Power: 5 mW) Optical Communication (proprietary protocol)				
Wireless Transmission Range	Approx. 150 meters (500 ft) if direct and unobstructed				
Power	Lithium Battery: LS14250 (*2) or CR2 (*3) x 1 L Type: Large Capacity Battery Adaptor Kit (RTR-500B1) (*4) External Power Adaptor Kit (RTR-500A1: sold separately)				
Battery Life (*5)	About 10 months L Type: About 4 years				
Dimensions	H 62 mm x W 47 mm x D 19 mm L type: H 62 mm x W 47 mm x D 46.5 mm (excluding protrusions and Input Module) Antenna length: 24 mm				
Weight	Approx. 56 g L Type: approx. 109 g (including battery / excluding Input Module)				
Operating Environment	-30 to 80 °C (The environmental operating range of the logger unit is -40 to 80 °C, but wireless communications cannot be utilized in an environment less than -30 °C.)				
Waterproof Capacity (*6)	IP64: Splash proof (rated for use in daily life) Note: Input Module is not water resistant.				
Accessories	Input Module (TCM-3010)	Input Module (PTM-3010)	Input Module (VIM-3010)	Input Module (AIM-3010)	Input Module (PIC-3150)
	Tubed Lithium Battery (LS14250) or Large Capacity Battery Adaptor Kit (RTR-500B1), Strap, User's Manual (Warranty Included)				
Compatible Base Units	RTR-500, RTR-500NW/500AW, RTR-500DC, RTR-500GSM		RTR-500, RTR-500NW/500AW, RTR-500DC		

*1: Only "Endless" is available when using RTR-500W for Windows or RTR-500GSM for Windows.

*2: The included lithium battery (LS14250) is not sold in stores. Please purchase the optional battery set for low-temperature use (TR-11P2) for replacement.

*3: Only use the CR2 within temperature range of -20 to 60°C, avoiding exposing the CR2 to excessive vibration such as transportation.

*4: When using RTR-500B1 it is necessary to purchase Lithium Battery (LS26500). For details, contact your local authorized distributor.

*5: Battery life varies depending upon the ambient temperature in which it is used, the recording interval, the frequency of communication, and the 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.

*6: This is the waterproof capacity of the data logger with the Input Module connected.

The specifications listed above are subject to change without notice.

Remote Unit				
Product	RTR-574		RTR-574-H	
Temperature/Humidity Sensor (External)	THA-3151		HHA-3151 (High-Precision Type)	
	Thermistor	Polymer Resistance	Platinum Resistance	Electrostatic Capacitance
Measurement Channels	Temperature 1ch	Humidity 1ch	Temperature 1ch	Humidity 1ch
Units of Measurement	°C, °F	%RH	°C, °F	%RH
Measurement Range	0 to 55 °C	10 to 95 %RH	-30 to 80 °C	0 to 99 %RH
Accuracy	±0.5 °C	±5 %RH (at 25 °C, 50 %RH)	±0.3 °C (at 10 to 40 °C) ±0.5 °C (at all other temperatures)	±2.5 %RH (at 25 °C, 10 to 85 %RH) ±4.0 %RH (at 25 °C, 0 to 10 % or 85 to 99 %RH) At temperatures other than 25 °C and ≥ 0 °C, add ±0.1 %RH per degree of difference from 25. Humidity Hysteresis: ±1.5 %RH or lower (*1)
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.	Response Time (90 %): Approx. 20 sec.
Illuminance / UV Sensor (External)	ISA-3151			
Measurement Channels	Illuminance: 1ch UV intensity: 1ch			
Units of Measurement	Illuminance: lx, klx UV intensity: mW/cm ²			
Measurement Range	Illuminance: 0 lx to 130 klx UV Intensity: 0 to 30 mW/cm ²			
Units of Cumulative Measurement	Cumulative Illuminance: lxh, klxh, Mlxh Cumulative amount of UV Light: mW/cm ² , W/cm ²			
Display Range of Cumulative Measurement	Illuminance: 0 lxh to 90 Mlxh UV intensity: 0 mW to 62 W/cm ² h			
Accuracy	Illuminance: 10 lx to 100 klx : ±5 % (at 25 °C, 50 %RH) UV Intensity: 0.1 to 30 mW/cm ² : ±5 % (at 25 °C, 50 %RH) (*2)			
Relative Spectral Response	Illuminance: Approximated to the CIE standard response function V (λ) UV Intensity: 260 to 400 nm			
Measurement Resolution	Illuminance: Minimum of 0.01 lx UV Intensity: Minimum of 0.001 mW/cm ²			
Responsiveness	Response Time (90%): 3 sec. (at recording interval of 1 sec.) 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 (*3)	Endless (Overwrite oldest data when capacity is full) or One Time (Stop recording when capacity is full)			
LCD Display Items	Measurements, 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	Wireless Communication (Short Range Radio Communication) FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz, RF Power: 7 mW) ETSI EN 300 220 (Frequency Range: 869.7 to 870 MHz, RF Power: 5 mW) USB Communication Serial Communication (RS-232C) (*4)			
Wireless Transmission Range	Approx. 150 meters (500 ft) if direct and unobstructed			
Power	AA Alkaline Battery (LR6) x 1			
Battery Life (*5)	Approx. 4 months			
Dimensions	H 55 mm x W 78 mm x D 18 mm (excluding protrusions) Antenna Length: 60 mm			
Weight	About 68 g (including battery, excluding sensor)			
Operating Environment	Temperature: -10 to 60 °C Humidity: 90 %RH or less (no condensation)			
Accessories	AA alkaline battery (LR6), USB Communication Cable (US-15C), Illuminance/UV Sensor (ISA-3151), Temperature/Humidity Sensor (THA-3151 or HHA-3151), Software (CD-ROM), User's Manual Set (Warranty Included)			
Compatible Base Units	RTR-500, RTR-500NW/500AW, RTR-500DC			

*1: When used in environments where temperature and humidity are over the values of 50°C 75%, 60°C 50%, 70°C 35%, and 80°C 25 %, sensor hysteresis may fluctuate by values greater than ±1.5 %RH. Under certain circumstances, it may take some time to return to normal measurement capability.

*2: Compared to the value measured by the T&D standard sensor for calibration under our calibration light source.

*3: Only "Endless" is available when using RTR-500W 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: Battery life varies depending upon the ambient temperature in which it is used, the recording interval, the frequency of communication, and the 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.

The specifications listed above are subject to change without notice.

RTR-500 Series - Specifications

Mobile Base Station RTR-500GSM	
UNIT	
Compatible Devices	Remote Units: RTR-501 / 502 / 503 / 505-Pt / 505-TC (Including L Type) Repeater: RTR-500
Features and Functions	1. Auto-downloading of Recorded Data (E-mail or FTP), 2. Automatic Sending of Current Readings (E-mail or FTP), 3. Warning Monitoring (SMS, E-mail or Contacts) 4. SMS Remote Control - Stop and Start Functions 1, 2, 3, above - Request Immediate Download of Data to Set Address
Types of Warning Monitoring	Remote Unit Measurement Warnings, Remote Unit Wireless Communication Error Warnings, Remote Unit Battery Level Warnings, Remote Unit Sensor Abnormality Warnings, Base Unit External Power Loss Warnings (only when batteries are installed), Base Unit Battery Level Warnings / Base Unit External Contact Input Warnings
Power	AA Alkaline Battery x 4 External Power (DC8 - 34V) AC Adaptor (AD-0605 / AD-0607)
Current Consumption	At most 2 A (5 V, with GSM in operation)
Communication Interfaces	USB (with PC) Optical Communication (with Remote Unit)
LED Display	POWER: Green / ERR: Orange / ALM: Red
Battery Life	10 days * of continued use if monitoring is carried out every 10 minutes (when not using GPS).
Dimensions	H 96 mm x W 65 mm x D 39 mm (Excluding protrusions) Antenna Length : 109 mm
Weight	About. 220 g (including batteries)
Operating Environment	Temperature: 10 to 55 °C (-10 to 55 °C when external power connected) Humidity: 20 to 80 %RH (No condensation)
Other	Not waterproof, moistureproof, or dustproof. The SIM card must adhere to the following conditions: 1. Compatible with GSM. 2. Able to use SMS (Short Message Service) and GPRS (General Packet Radio Service). 3. The card has been activated.
* Battery life varies depending upon the frequency of communication, the measuring environment, and the quality of the batteries being used.	
Short Range Radio Communication	
RF Power	FCC model 7mW CE model 5mW
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz) ETSI EN 300 220 (Frequency Range: 869.7 to 870 MHz)
Transmission Range	About 150 meters (500ft) if direct and unobstructed.
Communication Time	When downloading 1 Remote Unit at full logging capacity: About 2 min. * The same amount of time will be necessary for each added Repeater.
Cellular Phone Communication	
Band	GSM850/GSM1900(PTCRB Certified) GPRS(General Packet Radio Service) GSM900/GSM1800 GPRS(General Packet Radio Service)
Data Transfer Protocol	Auto-Downloading of Recorded Data / Auto-Sending of Current Readings FTP (PASV mode also supported) SMTP (SMTP-AUTH, POP-before SMTP) * SMTP-AUTH supports LOGIN only
Warning Monitoring Function	SMS / SMTP (SMTP-AUTH, POP-before SMTP) * SMTP-AUTH supports LOGIN only
Contacts (Warning Output / Input)	
Output Terminal Open Drain Output	Voltage when OFF: DC less than 30 V Current when ON: less than 0.1 A Resistance when ON: 15 Ω
Input Terminal	Internal Pull-up: 3V 100 kΩ Maximum Input Voltage: 30 V
GPS Communication (Option)	
GPS Interface	Connector: Mini DIN 6 Pin Female Communication Standard: ANSI / EIA/TIA-232-E Geographic Coordinate System: WGS84 Power Supply: 5 V MAX 100 mA
Other	Attach geographical positioning info to Current Readings

Network Base Station RTR-500W	
UNIT	
Compatible Devices	Remote Units: RTR-501 / 502 / 503 / 505-TC / 505-Pt / 505-V / 505-mA / 505-P (Including L Type) RTR-574 Repeater: RTR-500
Features and Functions	1. Auto-downloading of Recorded Data (E-mail / FTP) 2. Automatic Sending of Current Readings (E-mail / FTP) 3. Warning Monitoring (E-mail / Contacts)
Types of Warning Monitoring	Remote Unit Measurement Warnings, Cumulative Illuminance/Amount of UV Light Warnings (RTR-574), Remote Unit Wireless Communication Error Warnings, Remote Unit Battery Level Warnings, Remote Unit Sensor Error Warnings, and Base Unit External Contact Input Warnings
Power	AC Adaptor (AD-0638 / AD-0638-C)
Current Consumption	RTR-500NW: Approx. 300 mA RTR-500AW: Approx. 400 mA
Communication Interfaces	USB (with PC) Optical Communication (with Compatible Remote Units other than RTR-574) Wired LAN (RTR-500NW) / Wireless LAN (RTR-500AW)
LED Display	POWER, ACTIVE, DIAG, and ALARM
Dimensions	H83mm x W102mm x D28mm (excluding protrusions) Antenna Length: 87.3mm
Weight	RTR-500NW: About 130 g RTR-500AW: About 120 g (including antenna for each)
Operating Environment	Temperature: -10 to 60 °C Humidity: 20 to 80 %RH (no condensation)
Other	Not waterproof, moistureproof, or dustproof

Short Range Radio Communication	
RF Power	FCC model 7mW / CE model 5mW
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz) ETSI EN 300 220 (Frequency Range: 869.7 to 870 MHz)
Communication Range	About 150 meters (500ft) if direct and unobstructed.
Communication Time	When downloading one Remote Unit at full logging capacity: About 2 min. (Remote Units excluding RTR-574) About 4 min. (RTR-574) *The same amount of time will be necessary for each added Repeater.

LAN Communication	
Wired LAN (RTR-500NW)	RJ45 Connector 100Base-TX / 10Base-T AutoMDI / MDI-X
Wireless LAN (RTR-500AW)	Internal wireless LAN antenna IEEE 802.11b/g WEP, WPA/WPA2 (PSK)
Data Transfer Protocol	
Auto-Downloading of Recorded Data / Auto-Sending of Current Readings	FTP (PASV mode also supported) SMTP (SMTP-AUTH, POP-before SMTP) *SMTP-AUTH supports LOGIN only
Warning Monitoring Function	SMTP (SMTP-AUTH, POP-before SMTP) *SMTP-AUTH supports LOGIN only

Contacts (Warning Output / Input)	
Output Terminal	Voltage when OFF: AC/DC 50V or less Current when ON: 0.1A or less Resistance when ON: 35 Ω
Input Terminal	Internal Pull-up: 3 V 100 kΩ Maximum Input Voltage: 30 V

Wireless Base Station RTR-500		
UNIT	As a Base Unit	As a Repeater
Compatible Devices	Remote Units: RTR-501 / 502 / 503 / 505-TC / 505-Pt / 505-V / 505-mA / 505-P (Including L Type), RTR-574 Repeater: RTR-500	Base Unit: RTR-500GSM RTR-500 RTR-500NW/500AW RTR-500DC
Features and Functions	When connected to a PC with "RTR-500 for Windows" running: 1. Auto-downloading of Recorded Data (E-mail or FTP), 2. Automatic Sending of Current Readings (E-mail or FTP), 3. Warning Monitoring (E-mail)	-
Types of Warning Monitoring	Remote Unit Measurement Warnings, Cumulative Illuminance/Amount of UV Light Warnings (RTR-574), Remote Unit Wireless Communication Error Warnings, Remote Unit Battery Level Warnings, Remote Unit Sensor Abnormality Warnings	-
Power	USB bus power	AA alkaline batteries x 2 AC adaptor (AD-0638 / AD-0638-C)
Operating Voltage	2.5 V to 7.0 V	
Current Consumption	Approx. 50 mA (Wireless Communication)	
Communication Interfaces	USB (with PC) Optical Communication (with Compatible Remote Units other than RTR-574)	
LED Display	Blinking: During Wireless Communication or PC Communication Lamp ON: Connected PC via USB	
Battery Life	-	About 6 months *1
Dimensions	H 96 mm x W 65 mm x D 25 mm (excluding protrusions) Antenna Length : 109 mm	
Weight	Approx. 71g (Batteries not included)	
Operating Environment	Temperature: -10 to 60 °C (-30 to 60 °C when external power connected) Humidity: 20 to 80 %RH (No condensation)	
Other	Not waterproof, moistureproof, or dustproof	

*1: When used for wireless communication five minutes a day. Battery life varies depending upon the measuring environment, the communication frequency, and the quality of the battery being used.

Short Range Radio Communication	
RF Power	FCC model 7mW CE model 5mW
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz) ETSI EN 300 220 (Frequency Range: 869.7 to 870MHz)
Transmission Range	About 150meters (500ft) if direct and unobstructed.
Communication Time	When downloading one Remote Unit at full logging capacity: About 2 min. (Remote Units excluding RTR-574) About 4 min. (RTR-574) *The same amount of time will be necessary for each added Repeater.

Network Communication	
Data Transfer Protocol	
When connected to a PC as a Base Unit with "RTR-500 for Windows" running:	
Auto-Downloading of Recorded Data / Auto-Sending of Current Readings	FTP (PASV mode also supported) SMTP (SMTP-AUTH, POP-before SMTP) * SMTP-AUTH supports PLAIN, LOGIN and MD5
Warning Monitoring Function	SMTP (SMTP-AUTH, POP-before SMTP) * SMTP-AUTH supports PLAIN, LOGIN and MD5

Wireless Data Collector RTR-500DC	
UNIT	
Compatible Devices	Remote Units: RTR-501 / 502 / 503 / 505-TC / 505-Pt / 505-V / 505-mA / 505-P (Including L Type) , RTR-574 Repeater: RTR-500
Logging Capacity	When downloading units at full logging capacity: 15 units of RTR-501 / 502 / 505 15 units of RTR-503 7 units of RTR-574 When downloading units at non-full storage capacity, it can store and manage up to 250 downloading sessions. * Varies depending upon the device type, number of channels, type of recorded data.
Internal Clock Accuracy	At ± 30 seconds/month and 25 °C
LCD Display	FSTN 1.9 inch, 128 x 64 dot, semi-transmissive, monochrome, amber colored LED backlight
Functions: Wireless Communication	Downloading and Saving Recorded Data, Monitoring Current Readings and Remote Unit Status (Warning Monitoring), Starting and Stopping Remote Unit Recording, Checking Signal Strength for Communication with Remote Unit
Functions: Non-Wireless Communication	Downloading and Saving Recorded Data Starting and Stopping Remote Unit Recording
Functions: RTR-500DC Operations	Changing Unit of Temperature, LCD Backlight, LCD Contrast, Checking Memory, Button Sound, Checking Battery Power, Auto Power Off Function (if the Unit is not used for three minutes)
Display Functions	Graph (Highest / Lowest Measurement, Upper / Lower Limit Settings) Data Details (Downloading Date/Time, Recording Start Date/Time, Recording Stop Date/Time, Last Recording Date/Time)
Types of Warning Monitoring	Upper Limit / Lower Limit Exceeded Upper Limit / Lower Limit Exceeded for Cumulative Illuminance and Cumulative Amount of UV Light (RTR-574)
Power	AAA Alkaline Battery x 2 * AAA Ni-MH batteries, AC adaptor (option AD-0638 / AD-0638-C), or USB bus power may also be used.
Battery Life	Expected battery life for 2 AAA alkaline batteries: Monitoring: 96 hours of continued use For communication without Repeater(s) at 60 seconds interval Checking Signal Strength: 32 hours of continued use Downloading Data: 730 consecutive sessions Via wireless communication (When downloading RTR-501 at full logging capacity / without Repeater(s) / LCD backlight Off) * Battery life varies depending upon the type of battery, the measuring environment, the frequency of communication, and the ambient temperature in which it is used.
Data Backup	About 1 month (Saved data will be erased if all battery power is lost.)
Communication Interfaces:	With PC: USB Communication: 38,400 bps With Remote Unit: Wireless Communication Optical Communication: 2,400 bps (Remote Units excluding RTR-574) Cable Communication: 19,200 bps (RTR-574)
Communication Time (excluding Wireless Communication)	About 1 month (Saved data will be erased if all battery power is lost.) When downloading one Remote Unit at full logging capacity: - From RTR-500DC to PC USB Communication: 12 sec. (1Ch) / 24 seconds (4Ch) - From Remote Unit to RTR-500DC Optical Communication: about 170 seconds (Remote Units excluding RTR-574) Cable Communication: about 45 seconds (RTR-574)
Dimensions	H 125 mm x W 58 mm x D 26.3 mm (excluding protrusions) Antenna Length: 109 mm
Weight	About 127g (including 2 AAA batteries)
Operating Environment	Temperature: 0 to 50 °C Humidity: 90%RH or less (no condensation)
Others	Not waterproof, moisture proof, or dust proof

Short Range Radio Communication	
RF Power	FCC model 7 mW / CE model 5 mW
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz) ETSI EN 300 220(Frequency Range: 869.7 to 870MHz)
Communication Range	About 150 meters (500ft) if direct and unobstructed.
Communication Time	When downloading one Remote Unit at full storage capacity: About 120 sec. (Remote Units excluding RTR-574) About 240 sec. (RTR-574) * The same amount of time will be necessary for each added Repeater.

Software Operating Environment

For installation, it is necessary to have Administrator (Computer Administrator) rights.

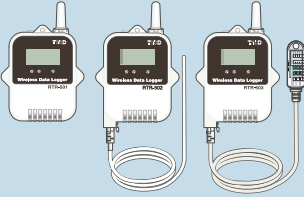
Software Names and Compatible Devices	RTR-500GSM for Windows (RTR-500GSM) RTR-500W for Windows (RTR-500NW, RTR-500AW) RTR-500 for Windows (RTR-500) RTR-500DC for Windows (RTR-500DC)
PC / CPU	A Stable Windows Operating Environment
Memory	A Stable Windows Operating Environment
Hard Disk	100 MB of free hard disk space recommended (plus additional space for data)
Monitor	SVGA (800 x 600) more than 256 colors

Compatible OS (US)	Microsoft Windows 7 32/64bit English Microsoft Windows Vista 32bit English Microsoft Windows XP 32bit (SP2 or above) English
Compatible OS (EU)	Microsoft Windows 7 32/64bit English, Spanish, French, German, Italian Microsoft Windows Vista 32bit English, Spanish, French, German, Italian Microsoft Windows XP 32bit (SP2 or above) English, Spanish, French, German, Italian

System Setup

Remote Unit

RTR-501 / 502 / 503
(Sensor Included)



RTR-505
(Input Module or
Input Cable Included)



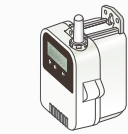
Power



Lithium Battery
inserted into a tube
(LS14250 (SAFT)
Included



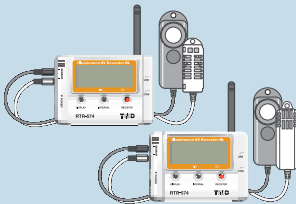
RTR-500A1
External Power
Adaptor Kit
Sold Separately



RTR-500B1 *
Large Capacity
Battery Adaptor Kit
Sold Separately

* When using RTR-500B1 it is necessary
to purchase Lithium Battery (LS26500).

RTR-574
(Sensor Included)



Power

AA Alkaline Battery x1
Included

Base Unit RTR-500GSM



Power

AA Alkaline
Battery x 4
Included

or
AC Adaptor
Sold Separately
AD-0605 or AD-05C1

or
External Power Cable
BC-0201
Included

Software

USB Cable (US-15C)

Install

Purchase Extra Items Separately for RTR-500GSM

We do not handle or sell these items.

SIM Card
**Required item
for operation**



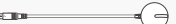
External Output / Input
Compatible Connector



External Power
Supply

Voltage : DC 8-34V
Current : MAX 2A

GPS Receiver



Base Unit / Repeater RTR-500



Power

Use as a Repeater
AA Alkaline
Battery x2
Not Included

AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C

Software

USB Cable (US-15C)

Install
Connect

Base Unit RTR-500NW RTR-500AW



Power

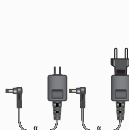


Software

USB Cable (US-15C)

LAN Cable for 500AW (LN-20W)

AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C



Install
Connect

Connect

Base Unit RTR-500DC



Power

AAA Alkaline
Battery x2
Nickel Hydride
Battery x2
Not Included

AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C

Software

USB Cable (US-15C)

Install
Connect



Initial Settings
Function Settings

* It is not possible to
simultaneously connect
more than one Base Unit to
a PC.



Some devices such as a hub, wireless
LAN access point, server, and so on are
sold separately and may be necessary
to connect to a local network. T&D does
not manufacture or sell these items.



Initial Settings
Function Settings

T&D Website

For product information, software update and FAQ ;

<http://www.tandd.com/>



Caution regarding safety

For safe operation carefully read instructions before using the product.

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