

# Wireless Data Logging System RTR-500 Series Product Specifications

## Wireless Data Loggers

UNIT	RTR-501 / RTR-501L	RTR-502 / RTR-502L	RTR-503 / RTR-503L	
Measurement Items	Temperature	Temperature	Temperature	Humidity
Number of Channels	1 Ch	1 Ch	1 Ch	1 Ch
Unit of Measurement	°C, °F	°C, °F	°C, °F	%
Measurement Range	- 40 to 80°C	- 60 to 155°C	0 to 55°C	10 to 95%RH
Sensor	Internal Temp. Sensor	External Temp. Sensor (TR-5106)	External Temp. and Humidity Sensor (TR-3310)	
Thermal Time Constant	15 minutes L type: 25 minutes	Approx. 30 Sec. (in air) Approx. 4 Sec. (in agitated water)	-	
Sensor Response Time	-	-	About 7 min. (90% response)	
Measurement 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 (at 25°C and 50%RH)	+/-5%RH (at 25°C and 50%RH)
Measurement Display Resolution	0.1°C	0.1°C	0.1°C	1%RH
Logging Capacity	16,000 readings	16,000 readings	8,000 data sets(*1)	
Water Resistance	Immersion Proof		Splash Proof (*6)	

Unit	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 Items	Temperature (Type K, J, T, S)	Temperature (Pt100, Pt1000)	Voltage	4-20mA	Pulse
Number of Channels	1 Ch	1 Ch	1 Ch	1 Ch	1 Ch
Unit of Measurement	°C, °F	°C, °F	Vdc	mA	Pulse Count / Interval
Recording Intervals	Select from 15 choices: 1, 2, 5, 10, 15, 20 and 30 sec / 1, 2, 5, 10, 15, 20, 30 and 60 min.				
Logging Capacity	16,000 readings				
Recording Modes (*2)	ENDLESS (Upon reaching logging capacity, the oldest data is overwritten and recording continues) ONETIME (Upon reaching logging capacity, recording will automatically stop)				
LCD Display Items	Current Readings, Recording Status, Battery Life Warning, Messages, Unit of Measurement				
Power	Lithium Battery (LS14250 (SAFT)) x 1 / L type: Large Capacity Battery Adaptor Kit (RTR-500B1) x 1 (*5) External Power Adaptor Kit (RTR-500A1) (sold separately)				
Battery Life (*3)	About 10 months / L type: About 4 years The stated battery life is for when it is used in an environment of 25°C and recorded data is downloaded at a rate of once a day or "Monitoring Current Readings" occurs at a rate of once every 10 minutes.				
Communication Interfaces	Short Range Radio / Optical Communication				
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz) / ETSI EN 300 220(Frequency Range: 869.7 to 870MHz)				
Wireless Transmission Range	About 150meters (500ft) if unobstructed and direct				
Communication Time	When downloading one Remote Unit at full logging capacity: Wireless communication : about 2 min. (*4) / Optical communication : about 160 sec.				
Water Resistance	Splash Proof (*6)				
Dimensions	H62mm x W47mm x D19mm / L type: D46.5mm (with Large Capacity Battery Pack) (excluding protrusions / antenna length 24mm)				
Weight	About 56g (including 1 lithium battery) / L type: about 109g (with Large Capacity Battery Pack)				
Unit Temp. Resistance	Resistance -30 to 80 °C (Unit temp resistance and measurement range is -40 to 80 °C but wireless communication cannot occur in an environment of less than -30 °C)				
Others	In order to download data via wireless communication, it is necessary to purchase a Base Unit: RTR-500GSM, RTR-500, RTR-500AW, RTR-500NW, or RTR-500DC				

UNIT	RTR-574			
Measurement Items	Illuminance	UV Intensity	Temperature	Humidity
Number of Channels	1 Ch	1 Ch	1 Ch	1 Ch
Unit of Measurement	lx, Klx	mW/cm <sup>2</sup>	°C, °F	%
Measurement Range	0 to 130,000lx	0 to 30mW/cm <sup>2</sup>	0 to 55°C	10 to 95%RH
Measurement Resolution	Minimum: 0.01 lx	Minimum: 0.001 mW/cm <sup>2</sup>	0.1°C	1%RH
Measuring Accuracy	10 to 100,000 lx: +/-5% (At 25°C, 50%RH)	0.1 to 30 mW/cm <sup>2</sup> : +/-5% (At 25°C, 50%RH) (*7)	Avg. +/-0.3°C	+/-5% (At 25°C, 50%RH)
Display Range of Cumulative Measurement	0 to 90,000,000 lx.h	0 to 62W/cm <sup>2</sup> .h	-	-
Unit of Cumulative Measurement	Cumulative Illuminance lx.h, Klx.h, Mlx.h	Cumulative Amount of UV Light mW/cm <sup>2</sup> .h, W/cm <sup>2</sup> .h	-	-
LCD Refresh Interval	1 second (At a recording Interval of 1 second) / 2 seconds (At a recording interval of 2 seconds or more)			
Recording Intervals	Select from 15 choices: 1, 2, 5, 10, 15, 20 and 30 sec. / 1, 2, 5, 10, 15, 20, 30 and 60 min.			
Logging Capacity (*1)	8,000 data sets			
Recording Modes (*2)	ENDLESS (Overwrite oldest data when capacity is full) / ONETIME (Stop recording when capacity is full)			
LCD Displayed Items(*8)	Recording Status, Amount of Recorded Data, Communication Status, Recording Mode, Battery Life Warning, Unit of Measurement Current Readings (Illuminance / UV Intensity / Temperature / Humidity), Cumulative Measurements (Cumulative Illuminance and Cumulative Amount of UV Light),			
Communication Interfaces	Short Range Radio, USB, RS-232C (Serial) Communication (*9)			
Communication Time	When downloading one Remote Unit at full storage capacity: Wireless Communication = about 4 min. (*4) / USB Communication = about 45 sec.			
Radio Standard Specifications	FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928MHz) / ETSI EN 300 220(Frequency Range: 869.7 to 870MHz)			
Wireless Transmission Range	About 150 meters (500 ft) if unobstructed and direct			
Power	AA Alkaline Battery (LR6) x 1			
Battery Life (*3)	About 4 months			
Dimensions	H55mm x W78 mm x D18 mm (excluding protrusions) / Antenna Length: 60mm			
Weight	About 66g (including AA Alkaline Battery / excluding sensors)			
Operating Environment	Temperature : -10 to 60 °C / Humidity : 90%RH or less (no condensation)			
Others	In order to download data via wireless communication, it is necessary to purchase a Base Unit: RTR-500, RTR-500AW, RTR-500NW, or RTR-500DC Not waterproof, moistureproof, or dustproof.			

(\* For notes 1 ~ 9 see previous page)