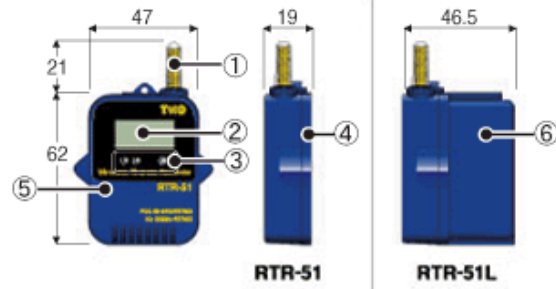


CEI models ( for EU )	RTR-51A/51AL	RTR-52A/52AL	RTR-52Pt/52PtL	RTR-53A/53AL
FCC models ( for US )	RTR-51/51L	RTR-52/52L	RTR-52Pt/52PtL	RTR-53/53L
Measurement Channel	1 Ch (Temperature)	1 Ch (Temperature)	1 Ch (Temperature)	2 Ch (1 Temp and 1 Humidity Channel)
Internal Temp. Sensor	-40 to 80°C	-	-	-
External Temp. Sensor	-	-60 to 155°C	-199.9 to 600°C(*1)	0 to 55°C
Thermal-Constant Time	15 minutes L Type: 25 min.	Approx. 15 sec. (in air) Approx. 2 sec. (in agitated water)	-	-
Sensor Response Time	-	-	-	About 7 min. (90% response)
External Humidity Sensor	-	-	-	10 to 95%RH
Measurement Display Resolution	0.1°C	0.1°C	0.1°C	0.1°C/1%RH
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)	±0.3°C(-199.9 to 80°C) ±0.5°C(80 to 450°C) ±1.0°C(450 to 600°C) (at 0 to 50°C/Sensor accuracy is not included.)	Avg±0.3°C ±5%RH (at 25°C and 50%RH)
Recording Intervals	1,2,5,10,15,20,30 sec. / 1,2,5,10,15,20,30,60 min. Total of 15 choices (excluding event data)			
Logging Capacity	16,000 readings			8,000 data sets (*2)
Recording Mode	Endless (Overwrite oldest data when capacity is full) / One-time (Stop recording when capacity is full)			
LCD Display Items	Current Readings / Recording Settings / Battery Life Warning / Over Measurement Range Warning / Amount of Recorded Data			
Power	Lithium Battery (LS14250(SAFT)) for L Series: Large Capacity Battery Adaptor Kit (RTR-05B1)(*3) External Power Adaptor Kit (RTR-05A1) (sold separately)			
Battery Life	Approx. 6 months L Series: Approx 2 years and 6 months			
Radio Standard Specifications	ETSI EN 300-220 [ Frequency Range: 433.050 to 434.79MHz ], FCC Part15 Section249 / IC RSS-210 [ Frequency Range: 902 to 928MHz ]			
Transmission Range	Approx. 100 meters (May vary with conditions)			
Dimensions	H62mm x W 47mm x D19mm(D46.5mm:L Series) (excluding protrusions / antenna length 20mm)			
Communication Interfaces	Wireless Communication / Optical Communication			
Communication Speed	When downloading data (Wireless) about 2,000 readings per minute [Collection of a full unit of data= about 420 sec. (optical communication= about 160 sec.)]			
Water Resistance (*5)	IP67 (immersion proof)	IP64 (rated for use in daily life)		
Standard Sensor / Input Cable	-	TR-5106 (length: Approx.0.6m)x 1	RTR-05P1 (length: Approx.1m)x 1	TR-3310 (length: Approx.1m)x 1
Unit Temp. 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 either an RTR-57U, RTR-5W, and/or RTR-50 unit. -For optical communication, TR-50C can also be used for all types of units.			

RVR-52A/52AL			
Measurement Channel	1 Ch (Voltage)	1 Ch (Pulse)	1 Ch (Event)
Input Voltage Range	0 to 6.5V	0 to 30V	0 to 30V
Measurement Display Resolution	1mV	-	1sec.
Measurement Accuracy	±0.5%+5dgt (at 0 to 40)	-	-
Detection Voltage	-	Lo: below 0.6V / Hi: above 2V	
Response Time		30Hz / Approx. 15 sec. or more (over 2.5V)	1 sec.
Response Polarity	-	Pu: select Lo-Hi or Hi-Lo	Ev: Both Lo -Hi and Hi-Lo
Highest No. of Counts	-	Pu: 32,000Counts	-
Input Impedance	Approx. 1M	Pu, Ev: Pull-up Resistor Approx. 100k	
Logging Capacity	16,000 readings	16,000 readings	8,000 readings
Recording Intervals	1,2,5,10,15,20,30 sec. / 1,2,5,10,15,20,30,60 min. Total of 15 choices (excluding event data)		
Recording Mode	Endless (Overwrite oldest data when capacity is full) / One-time (Stop recording when capacity is full)		
LCD Display Items	Current Readings / Recording Settings / Battery Life Warning / Over Measurement Range Warning / Amount of Recorded Data		
Power	Lithium Battery (LS14250(SAFT)) for L Series: Large Capacity Battery Adaptor Kit (RTR-05B1)(*3) External Power Adaptor Kit (RTR-05A1) (sold separately)		
Battery Life(*4)	Approx. 6 months / L Series: Approx 2 years and 6 months		
Radio Standard Specifications	ETSI EN 300-220 [ Frequency Range: 433.050 to 434.79MHz ], FCC Part15 Section249 / IC RSS-210 [ Frequency Range: 902 to 928MHz ]		
Transmission Range	Approx. 100m (May vary with conditions)		
Dimensions	H62mm x W 47mm x D19mm(D46.5mm:L Series) (excluding protrusions / antenna length 20mm)		
Communication Interfaces	Wireless Communication / Optical Communication		
Communication Speed	When downloading data (Wireless) about 2,000 readings per min. [Collection of a full unit of data= about 420 sec. (optical communication= about 160 sec.)]		
Water Resistance(*5)	IP64 (rated for use in daily life)		
Standard Sensor / Input Cable	RPR-7101 (Length: about 1.5m) x 1		
Unit Temp. 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	The RVR-52A includes an internal pre-heat function which sends signals to turn ON / OFF external sensors, etc...in time with the starting of recording. Possible to measure current with the RVR-5203 4-20mA Probe. In order to download data via wireless communication, it is necessary to purchase either an RTR-57U, RTR-5W, and/or RTR-50 unit. -For optical communication, TR-50C can also be used for all types of units.		
(*1)When measuring and recording using Fahrenheit, although it is possible to measure between -327.8 and 1112 degrees, the LCD on the Logger can only show between -199.9 and 999.9 degrees. (*2)One data set consists of readings for all channels in that type of unit. (*3)When using RTR-05B1 it is necessary to purchase Lithium Battery (LS26500). For details, contact your local authorized representative. (*4)Battery life depends on measurement environment, recording interval and battery performance. (*5)Water protection is rated as splashproof (IP64) when the sensor is connected. Not for continued immersion.			

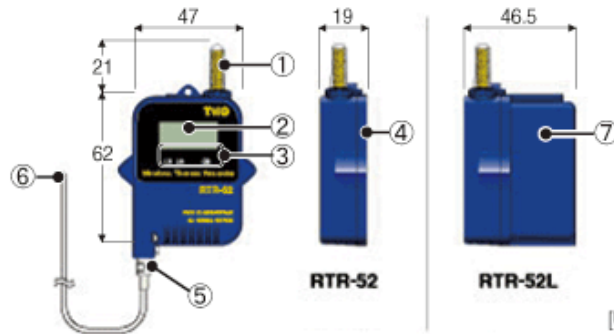
**RTR-51/51A /51L/ 51AL**



[Unit:mm]

- 1. Antenna
- 2. LCD Display
- 3. Optical Port
- 4. Back Case
- 5. Internal temperature sensor
- 6. Large Capacity Battery

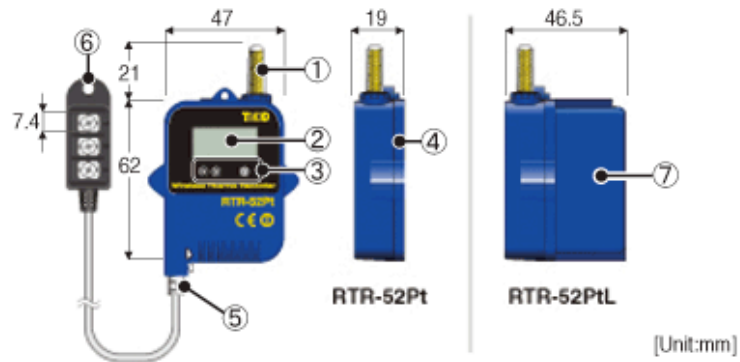
**RTR-52/52A /52L/ 52AL**



[Unit:mm]

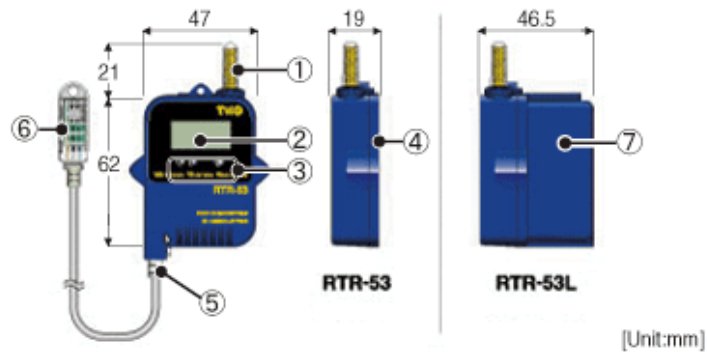
- 1. Antenna
- 2. LCD Display
- 3. Optical Port
- 4. Back Case
- 5. Connector
- 6. Thermistor
- 7. Large Capacity Battery

**RTR-52Pt / 52PtL**



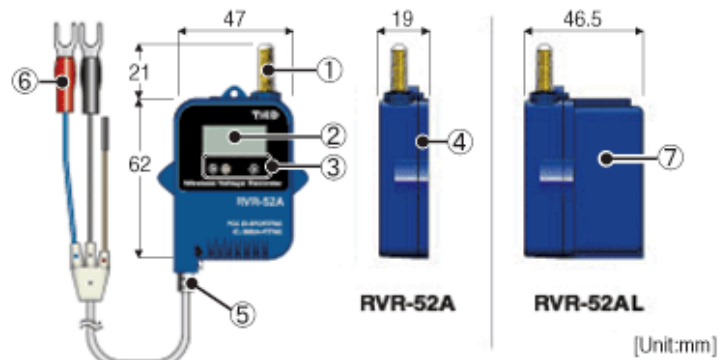
1. Antenna
2. LCD Display
3. Optical Port
4. Back Case
5. Connector
6. Sensor Adaptor (RTR-05P1) terminal block (Screw : M3.5)
7. Large Capacity Battery

**RTR-53/53A / 53L/53AL**



1. Antenna
2. LCD Display
3. Optical Port
4. Back Case
5. Connector
6. Thermistor
7. Large Capacity Battery

**RVR-52A / 52AL**



1. Antenna
2. LCD Display
3. Optical Port
4. Back Case
5. Connector
6. M3.5 Tongue Terminal
7. Large Capacity Battery