



RTR-5x Product Summary

Comprising a handheld Data Collector and a family of wireless Data Recorders, TandD's RTR-5x series is completely unique in today's marketplace. There is no other product, or set of products in combination, that offers equivalent functionality or addresses such a diversity of data logging needs. Ideal for out of doors or mobile applications, the RTR-5x series is designed for use in wet, condensing or freezing environments,



where items to be monitored are in motion, or where physical access to the measuring device is either impractical or undesirable. Various data types are logged in compact, battery powered Data Recorders of a ruggedized, water-resistant, and even waterproof design. Data stored by the recorders is then read with a handheld Data Collector over a wireless radio-frequency link. Downloaded data can then be viewed directly with the handheld collector through the integrated graphical LCD display, stored for future reference or uploaded via a USB connection to a PC.

Data Collector



The handheld RTR-57C data collector is the heart of the system. This compact, battery powered device is the instrument that is used to collect, store and read the data from the deployed loggers. The RTR-57C is used during set up to "register" each of the uniquely coded data recorders that are to be included in the system. It can then be used to establish recording parameters, start and stop recording, download logged data and even monitor information in real time from selected devices: all without the need to use a PC. The Data Collector has a scan mode where it will detect and report which registered recorders are within effective transmission range. The device incorporates a large, backlit multi-function LCD that is used to display system information, operational status and downloaded data. It also displays user option menus, which are easily navigated with a simple to use, push to select, thumbwheel control. A special feature of the RTR-57C is its graphical display mode that can be used to view a graph of

downloaded data directly on the unit. The RTR-57C can store up to 256,000 readings from as many as 250 separate recording sessions. Interface to a PC is accomplished through a standard USB connection. While most operation between the Data Collector and Data Recorders can be accomplished independently, a connection with the PC is required for system setup and for transferring data that has been collected.

Data Recorders

The RTR-5x Data Recorders are portable, compact, battery powered data logging devices intended for deployment in the field, in mobile applications, where measurements in motion are required, or practically any place where physical retrieval of the monitoring device is impractical or undesirable. Their ruggedized, water proof / resistant design makes them ideal for use in wet, condensing or freezing environments. It is even possible to monitor and download the RTR-51C while it is fully immersed! Within the line are models that measure temperature, temperature in combination with relative humidity, and voltage / pulsed events. Sensors can be either internal to the unit, or external, depending on the degree of water resistance and measurement range that is required. Models with external sensors can be fitted with a variety of sensor types and lengths, depending on the application. Battery life is dependent on sampling rate and frequency of downloading, but typically runs 6 months. All Data Recorders come in large battery capacity “L” versions that can last up to 2 ½ years.

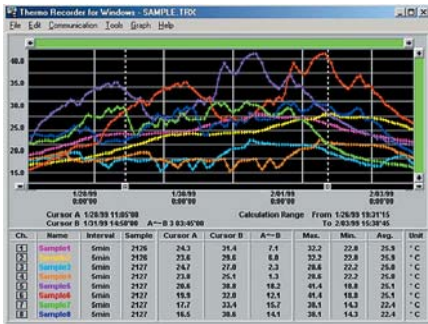


Model	Measures	Sensor	Water
RTR-51	Temperature	Internal	Proof
RTR-52	Temperature	External	Resistant
RTR-53	Temp + RH	External	Resistant
RVR-52	Voltage / Pulse	N/A	Resistant



These devices can record and store up to 16,000 readings between downloads, and can be programmed to sample as often as once per second, or as seldom as once per hour. All models incorporate an easy to read LCD which displays the current sensor reading, and provides important information to the user, such as memory full or battery low indications. Temperature measuring models can be easily programmed by the user to display readings in either degrees Fahrenheit or Centigrade. The RVR-52 can be set to record analog DC voltage levels, programmed to record pulse trains, or monitor on / off type digital events.

T&D Recorder for Windows



Every RTR-57C ships with T&D Recorder for Windows software, included at no extra charge. This easy to use, intuitive program provides for all aspects of system and device setup, control of data recording, downloading of recorded data from the RTR-57C and has built-in tools for file management and display.

When recorded data is downloaded from an RTR-57C, a data collection report is displayed in an easy to view session list. These sessions can be saved to file in either graphical or tabular format. An event viewer

mode is also included for displaying sessions recorded with the RVR-52. TandD Recorder for Windows allows for simultaneous, color-coded, graphical viewing of up to 8 channels of recorded data. The individual channels can be scaled, re-ordered, viewed or hidden according to needs. The view can be adjusted to taste using the built in zoom-in / zoom-out feature. Tabular files can be exported as ASCII text in CSV format for use in external application packages, such as Excel or LabView. In addition to storing, viewing and exporting data sessions, T&D Recorder for Windows also includes a complete file print capability for printing hard copy in both graphical and tabular formats.

Setup & Registration

System setup begins with installation of the T&D Recorder for Windows software, which is as simple as inserting the CD ROM into the PC and following the on-screen menus. Next the RTR-57C Data Collector is connected to a USB port on the PC using the provided cable, and a logical connection is made with the software establishing the Data Collector as the base unit. Once this is complete the process of Data Recorder device registration can begin. Each Data Recorder comes from the factory pre-programmed with a unique serial number identifier. The registration process is



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MAIN MENU
  GATHER DATA
  SEARCH RMOTE
  MONITOR MODE
  GATHER DATA
  DATA LIST
  REC SETTINGS
  
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used to let the system know which recorders to recognize, and to assign them into groups with logical names for each device. Registration is accomplished by opening the T&D Recorder for Windows software, clicking the RTR-5 Series Registration button, placing each Data Recorder onto the faceplate of the RTR-57C and clicking the collect registration info button, then assigning the group and unit names. It's as simple as that!

Operation



Once device registration is complete the Data Recorders are ready to be deployed. Use the thumbwheel and menus on the handheld RTR-57C Data Collector, or the T&D Recorder for Windows software, to set up each RTR-5x Data Recorder for start time, recording mode and sample interval. Then, place the units in the areas they are to measure and

let them go to work! Use the Data Collector anywhere within 100 meters of the recorders to download their stored data and restart a new recording session as appropriate for the application. Monitor measurements in real time directly with the handheld, or upload sessions to a PC for file archive and exporting to other applications.

Quick Specs

Data Capacity of Loggers:	16,000 Samples
Sampling Rate:	1 per second (max) to 1 per hour (min)
Data Capacity of Collector:	256,000 Samples in 250 Sessions
Maximum Number of Loggers:	3,840 (60 groups of 64 units)
Transmission Range:	100 Meters (approx.)
Temperature Range:	-60C to 155C
Humidity Range:	10 to 95% RH
Voltage Range:	0 to 6.5 VDC
Battery Life:	6 Months – 2.5 Years (“L” models)
Communication Frequency:	900MHz

Applications

Agriculture:	Farms, Vineyards, Greenhouses, Dairies, Nurseries and Silos
Transportation:	Trucks, Containers, Air Cargo, Rail
Environmental:	Forestry, Fisheries, Water Quality, Sewers
Facilities:	HVAC, Warehouses, Museums, Clean Rooms, Towers, Tunnels
Food Processing:	Storage, Serving, Handling, Preparation, Display
Machinery:	Production Lines, Conveyers, Moving Machines
Medical:	Pharmaceutical, Bio-Materials Storage & Transport

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