

### **Contact Us**

We understand there are times when our customers may need guidance on the best solution for their requirements. If you would like further information or to discuss your temperature monitoring application, please contact our customer service department who will be pleased to assist.

We are here to help so please contact us on:

Telephone: (800) 555 6658

Email: sales@comarkusa.com

Website: www.comarkusa.com

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#### **Comark Instruments**

P.O. Box 500 Beaverton, OR 97077, USA Tel: +1 (503) 643 5204 Toll Free: (800) 555 6658 Email: sales@comarkusa.com

### Warranty Statement

Each Comark product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is one (1) year, unless otherwise stated, and the warranty period begins on the date of shipment. Temperature probes are warranted for six (6) months.

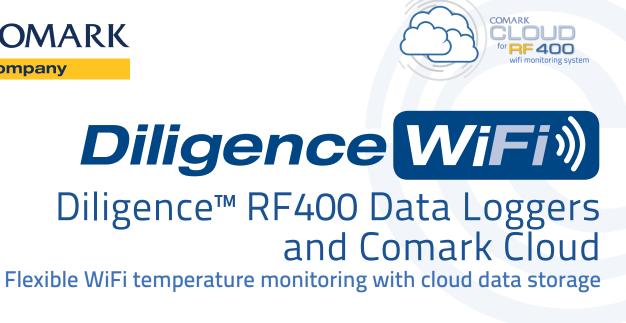
The warranty extends only to the original buyer or end-user of a Comark authorized reseller. This warranty does not cover damage resulting from normal wear and tear, abuse, misuse, accidental breakage, negligence, defects caused by modifications, repair and servicing not made or authorised by Comark Instruments, damage caused by handling, operating, storing, or using the product outside the intended uses described by our product literature. Disposable batteries are also exempt from warranty.

Warranties on dishwasher safe models apply only where the product has been used or cleaned in a commercial dishwasher. Comark Instruments products are not suitable for use or cleaning in domestic dishwashers.

Comark's warranty obligation is limited, at Comark's option, to refund of the purchase price, free of charge repair, or replacement of a defective product returned within the warranty period. Products must be returned to Comark or one of Comark's authorized service agents.

This warranty is the buyer's sole and exclusive remedy and is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of fitness for a particular purpose. Comark shall not be liable for any special, indirect, incidental or consequential damages or losses, including loss of data, whether arising from breach of warranty or based on contract, tort, reliance or any other theory. Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warrant may not apply to every buyer.





# Comark Diligence<sup>™</sup> WiFi

The Comark RF400 range provides ultimate flexibility in temperature measurement

### Our data loggers, your WiFi

Setting up a network of Comark's RF400 data loggers couldn't be easier.

Temperature and humidity data logging is covered by two models, the RF411-T temperature data logger and the RF413-TH temperature and humidity data logger.

System set up is easy using the free Comark Cloud App which is available in Android and iOS. Download the App and use to pair up an RF400 data logger in minutes over your WiFi network. As soon as the Diligence™ WiFi RF400 network is set up, temperature and/or humidity readings are continually collected. Data is transmitted wirelessly via your WiFi network to the Comark Cloud.



#### **RF411-T Temperature Data Logger**

Measures the temperature of the local environment.

- Temperature range: -0.4°F to +131°F / -18°C to +55°C
- Supplied with RF401-T short air probe
- RF401-TP and RF402-TP+ probes are available separately as an accessory
- Data logger automatically detects other probe types and adjusts temperature range and accuracy of measurement
- Powered using the supplied AA cells
- Batteries can be supplemented with a mains power supply, RF420 available separately
- Local Alarm Notification via Multi-colour LED and Buzzer



It is able to detect whether an RF401-T short air probe, an RF401-TP thermistor probe or an RF402-TP+ high accuracy thermistor probe is fitted and operate accordingly. With the neat fitting on the underside of the case, it is possible to attach two separate probes, each measuring different environments.

**RF400** Temperature Probes





Short air probe supplied free of charge with

### the RF411-T data logger.

 Temperature range: -0.4°F to +131°F / -18°C to +55°C

- Accuracy (full range): ±1°F / ±0.5°C
- Shown fixed in place above on RF411-T
- Available as an accessory
- Available as an accessory



### **RF400** Specialist Probes



# Configuring your RF400 data loggers is as easy as 1, 2, 3

### The Intelligent Data Logger

The Comark RF411-T is an intelligent temperature data logger that is able to detect and react to the temperature probe type attached.

You choose your probes, attach to the data logger and measure your temperature - it really is that simple!





Barrel Probe with 3 metre long cable. Supplied free of charge with RF412-TP data logger.

- Temperature range:
  - -40°F to +257°F / -40°C to +125°C
- Accuracy: ±1.5°F at +5°F to +158°F
  - ±0.8°C at -15°C to +70°C
- Thermistor sensor
- Barrel probe 5mm diameter, 75mm long



### **RF402-TP+** Temperature Probe

High Accuracy Barrel Probe with 3 metre long cable.

- Temperature range:
- -40 to +125°C / -40 to +257°F
- Accuracy: ±0.4°F at +5°F to +176°F ±0.2°C at -15°C to +80°C
- Thermistor sensor
- Barrel probe 5mm diameter, 75mm long
- Available as an accessory

### **RF400 Glycol Temperature Probe**

Gycol probes acts as a damped temperature probe for use with RF411-T and RF412-TP data loggers.

- Temperature Measurement Range: 40°F to +212°F / -40°C to +100°C
- Glycol Buffer Response Time (t90\*): 40 Minutes
- Glycol Buffer probe Lead length: 3 Metres
- Available as an accessory

## Learn more about RF400 data logger models

# Comark Diligence™ WiFi

The Comark RF400 range provides ultimate flexibility in temperature measurement

### **RF412-TP Temperature Data Logger**

Measures temperature with a barrel probe with 3m lead

- Temperature range: -40°F to +257°F / -40°C to +125°C
- Supplied with RF401-TP barrel probe with 3m lead
- RF401-T short air probe and RF402-TP+ probes are available separately as an accessory
- Data logger automatically detects other probe types and adjusts temperature range and accuracy of measurement
- Powered using the supplied AA cells
- Batteries can be supplemented with a mains power supply, RF420 available separately
- Local Alarm Notification via Multi-colour LED and Buzzer



### RF413-TH Temperature and Humidity Data Logger

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Measures temperature and humidity levels in the local environment

- Temperature range: -22°F to +176°F / -30°C to +80°C
- Humidity Range: 0% RH to 100% RH
- Supplied with RF403-TH air temperature and humidity probe with 2m lead
- Powered using the supplied AA cells
- Batteries can be supplemented with a mains power supply, RF420 available separately
- Local Alarm Notification via Multi-colour LED and Buzzer



**Note:** The RF414-TC is supplied with the RF404-TC adaptor and probe unit. The adaptor can be used for a range of Type T or Type K probes manufactured by Comark Instruments. The RF414-TC data logger can be used as dual channel but an additional RF404-TC adaptor will need to be purchased.

### Visibility and reporting

Access your Comark Cloud account from wherever you are in the world using any internet enabled device. This could be a PC at the office or at home, an iPad, tablet or mobile phone with a web browser.

Comark Cloud makes that task of continuously monitoring environments easier by providing automated temperature and humidity data and alerts 24 hours a day, 7 days a week.

You can even receive alerts by email and SMS text (via an email to SMS service such as Textmagic.com) which enable you take immediate action to prevent the loss of costly stock.

No more missed records, no more time consuming paper work!

### **RF414-TC Temperature Data Logger**

Measures temperature with RF404-TC Adaptor and Type K Probe

- Measurement Range K Type (included): +32°F to 392°F / 0°C to +200°C
- Measurement Range K Type: -328°F to +2372°F / -200°C to +1300°C
- Measurement Range T Type: -328°F to +734°F / -200°C to 390°C
- Typical Accuracy: ±2°F / ±1°C
- Supplied with RF404-TC Adaptor and Type K probe with 1.5m Lead
- Powered using the supplied AA cells
- Batteries can be supplemented with a mains power supply, RF420 available separately
- Compatible with Type T and Type K probes with a sub-miniature connector
- Local Alarm Notification via Multi-colour LED and Buzzer

# Comark Diligence<sup>™</sup> WiFi and Comark Cloud



### Manage, monitor and report on data

Comark Cloud provides complete temperature and humidity safety data management. All your data can be accessed easily from the dashboard where you can manage and view the most important aspects of your system.

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### **Ouickview Dashboard**

Check the most important information and review the system at a glance.

- See favourite data logger status easily
- Review recent data logger events
- View data, and clear alerts Quickly navigate to the detail on data loggers, stored data

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### Data Logger Management

Manage your data loggers from the management screen.

- Search by data logger location, filter by type, or use textbased search
- Quickly access and change data logger settings
- Easily acknowledge and reset alarms devices, data and events

## Data Analysis and

Review and analyse your

- Compare data from multiple devices
- Compare data from different time periods
- View data summaries
- Print or export your results

# Diligence™ WiFi RF400 Data Logger Specifications

### RF400 Data Logger Specification (All models)

	Battery Life*	
	Power Supply	
	Operating Range	
	Logger Rate (User Configurable)	
	Transmission Period (User Configurable)	
	Logger Dimensions	
	Protection Rating	
	Temperature Selection	
	Resolution (Temperature)	
	Resolution (Humidity)	
	WiFi Setup**	Use the new (
	WiFi Compliance	IEEE 802.1

### RF411-T Data Logger Specification

Temperature Measurement Range Temperature Accuracy (Full range) Temperature Probe (Included)

### RF412-TP Data Logger Specification

Temperature Measurement Range

Resolution

Temperature Accuracy (Full Range) Temperature Probe (Included)

### RF413-TH Data Logger Specification

Temperature Measurement Range

Temperature Accuracy (+5 to +60°C / +41°F to +140°F)

Temperature Accuracy (Full range)

Humidity Accuracy @25°C / 77°F (Full range)

Temperature and Humidity Probe (included)

### RF414-TP Data Logger Specification

Temperature Measurement Range - Type K

Temperature Measurement Range - Type T

Typical Temperature Accuracy

Thermocouple Probe Adaptor and

Type K Probe Included

Included probe Accuracy

### For more details of the Diligence™ WiFi range, please see www.comarkUSA.com

Home Devices 4

### **Advanced Alarms**

and events

Never miss a critical event in your system.

- Notify multiple recipients
- Delay and repeat notifications
- Escalate ignored notification



# Reporting

data with powerful graphing functionality:

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### Comark Cloud App

Use the Comark Cloud App to set up loggers and access data conveniently using a smartphone or tablet

- Download easily from the App Store or on Google Play.
- Monitor your data loggers on-the-go
- View all data logger data live in a range of format styles
- Receive notifications if a data logger goes into alarm mode

#### \*Battery Life and Power Supply

Battery life is dependent on: transmission period, WiFi encryption method, WiFi encryption key rotation frequency (determined by the router/access point), signal strength between router/access point and WiFi device, presence volume and type of WiFi traffic from other devices, sample rate and operating temperature. For extended low temperature operation, below 0°C/32°F, Comark recommends the use of Energizer L91's AA cells for improved battery life

\*\*Setup of the logger can only be completed with the use of a compatible Android or iOS Device using the new Comark Cloud App. The app is compatible with all iOS Devices and Android Devices running Android 5.0 or above with a screen resolution of at least 800\*600.

2 years depending on frequency of transmissions
4 x 1.5V AA Alkaline cells (Supplied)
-0.4°F to +131°F / -18°C to +55°C
10 seconds to 12 hours
1 minute to 24 hours
Height 93mm x Width 93mm x Depth 32mm
IP67
°F or °C
0.1°
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Comark Cloud App for all Setup and Programming. No PC Software required.
1b/g/n compliant, supports WEP, WPA/WPA2 encryption and enterprise networks (PEAP, EAP-FAST, EAP-TTLS)
-0.4°F to +131°F / -18°C to +55°C /
±1°F / ±0.5°C
RF401-T Short Air Probe
-40°F to +257°F / -40 to +125°C
0.1°
±1.5°F at +5°F to +158°F / ±0.8°C at -15°C to +70°C
RF401-TP Temperature Probe with 3m Lead
-22°F to +176°F / -30°C to +80°C
±0.6°F / ±0.3°C
±1.1°F / ±0.8°C
±5.0% RH
RF403-TH Temperature and Humidity 2m Lead
-328°F to +2372°F / -200°C to +1300°C
-328°F to +734°F / -200°C to +390°C
±2°F / ±1°C
RF404-TC Adaptor with Type K Probe with 1.5m Lead
±2°F (+32 to +392°F) / ±1°C (0 to +200°C)