

Diligence Ev N2000 Series Data Loggers



Comark's Diligence EV range of data loggers provides a complete solution for the measurement of temperature, humidity or mA current.

The loggers are stand-alone, lightweight and small enough to be used almost anywhere that regular monitoring is required, reducing the need for manual checks and improving the accuracy of your information.

Use with EV Software to program logger tasks, download and analyse data, keeping permanent records to meet the requirements of industry regulations.

Housed in a robust case and waterproof to IP67 standards, the Diligence EV range includes multi-sensor models, capable of simultaneously monitoring several temperature locations.

Features

- LCD display screen allows instant checks of current readings and alarms
- Large memory capacity with wraparound for continual real-time and historic data collection no forgotten readings, just log data and download
- Alarm indication lights instantly warn of potentially unsafe conditions allowing instant corrective action
- Water and dustproof sealed to IP67 standards for long life expectancy and accuracy
- Lumberg connector provides secure connection of a wide range of Comark probes-types K, T or thermistor (model dependent)
- Battery life up to five years enabling logging assignments over extended periods
- Models with external probes are ideal for monitoring fridges and freezers
- Models with built in sensor are suitable for chillers, storage and transport applications
- Model measuring mA current can be easily connected into the control loop and programmed to measure a wide range of parameters for process and building management checks such as pressure, pH, airflow, dissolved oxygen and many more
- UKAS Calibration Certificates available on most models
- Software available free of charge, download from product pages on www.comarkinstruments.com.

Warranty

All Comark instruments have a minimum one year warranty unless otherwise stated. The warranty for temperature probes is six months and all other probes are unwarranted because the conditions of use are beyond our control. The Comark Warranty covers manufacturing defects and component failure and applies worldwide. In line with our policy of continuous development, we reserve the right to alter any product specification without notice. Comark has an accredited UKAS (NIST equivalent) calibration laboratory for temperature and humidity measurement and offers full service and recalibration facilities.

Comark Instruments is committed to providing quality and affordable products to the food service industry. Our thermometers and humidity testers bring speed, accuracy and reliability to the transport, testing and storing of food under HACCP guidelines. A large variety of products, well-trained staff, and a commitment to customer satisfaction mean you can come to us for answers to all your temperature measurement needs!



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Diligence Ev

Comark N2000 Series

Data Loggers

Specifications

Sensor Type	
N2011, N2012, N2013	Thermistor
N2014	Type K or Type T thermocouple
Connector	
Lumberg	
Measurement Range	
N2011, N2012 internal sensor	-40°C to +70°C / -40°F to +158°F
N2012 external sensor	-40°C to +150°C / -40°F to +302°F
N2013 temperature	-20°C to +60°C / -4°F to +140°F
N2013 humidity	0 to 97% RH non condensing
N2014 - Type K	-200°C to +1372°C / -392°F to +2500°F
N2014 - Type T	-200°C to +400°C / -392°F to +752°F
N2014 - Thermistor	-40°C to +70°C / -40°F to +158°F
N2015	4 to 20mA
Scales	
Temperature	°C and °F
Humidity	RH or DP
Displayed Resolution	
Temperature	0.1° (1° below -100°C, -148°F and above +1000°C or °F)
Humidity	0.1% RH
N2014	0.2°
N2015 only	4 digits 1 decimal place
(software allows 0 to 4 decimals in logged data)	
Internal Accuracy at +20°C/+65°F ambient	
N2014	±0.5°C +0.5% (±0.9°F +0.5%) of reading over the range of -80°C to thermocouple limit
N2015	±0.3% of full scale
Memory	
32K	
1 channel	16000 samples
2 channels	8000 samples
3 channels	5300 samples
4 channels	4000 samples
5 channels	3200 samples
Logging Frequency	
N2014	2 seconds to 99 hours
Communications	
Via infrared interface	
Download Time	3 minutes per 10,000 readings (typical)
Ambient Storage	-40°C to +70°C / -40°F to +158°F
Battery Type	1 x AA size 3.6V replaceable lithium battery
Case Material	ABS
Environmental Protection	IP67, EN 60529, IEC 529

For more details for the Diligence WiFi range, please see www.comarkinstruments.com

* Software selection of decimals will affect recorded values, e.g. selection of 0 decimals = 1 value of ±32000 and a selection of 4 decimals = a value of ±3.2000

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The Professionals' Choice

Temperature and Humidity Monitoring



N2011



N2012



N2013



N2014

EVt2 Temperature Logger



Multi-Use Logger makes it easy to comply with USDA and HACCP requirements by monitoring the temperatures of meat, seafood and produce shipments 24/7.

- Review maximum, minimum and average trip temperatures plus total time in alarm, right on the screen
- Accept or reject a shipment in seconds
- Download data to a PC for permanent HACCP records
- Single button starts/stops logging
- Up to 3,000 readings with 1 sec to 99 hour intervals
- Special software for 21 CFR Part 11 compliance
- BioCote® antimicrobial protection
- Waterproof and rugged IP67 case

EVt Range

EVt2 Transport logger, multi-use

EVSU Software, standard

EVSU PRO Software for use with 21CFR Part 11

EVTUSB PC interface for programming and downloading data with USB connector

Diligence EV Product Line

N2011	Internal temperature sensor with LCD
N2012	Internal temperature sensor and up to 4 external sensors with N2000 Box with LCD
N2013	Single temperature and humidity alarm with LCD
N2014	Thermocouple logger with range of -328°F to +2502°F with N2000ADP/K and appropriate probes with LCD
N2000CRUSB	Communications interface with USB connection
N2000BOX	Multi-link box to connect up to 4 probes to N2012
N2000ADP/K	Type K Adaptor to connect up to 3 thermocouple probes to N2014
N2000ADP/T	Type T Adaptor to connect up to 3 thermocouple probes to N2014
EVSW	Standard software
EVSU PRO	Software for use with 21CFR Part 11
PX31L	Penetration probe, 1m long with 10cm stem for N2012
PK31L	Penetration probe, 1m long with stem for N2014

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Computer Docking Station for EVT Series

Part No: EVTCRU (3618071)

The EVTCRU Computer Docking Station (for EVT Series) is designed to work with the EVT Series Data Loggers for syncing data between the device and your PC.

- Retrieve Logged Data
- USB Cable Supplied
- Infrared Link to Loggers
- Warranty: 1 Year

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Computer Docking Station for EVT Series

The EVTCRU Computer Docking Station (for EVT Series) is designed to work with the EVT Series Data Loggers for syncing data between the device and your PC.

The EVTCRU Computer Docking Station (for EVT Series) connects to your PC via a standard USB A-Type connector, and provides an Infrared (IR) link to Data Loggers placed in the cradle.

[Related Products](#)

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Multi-Use Temperature Data Logger

Part No: N2011 (3060035)

The N2011 Multi-Use Temperature Data Logger allows easy monitoring of temperature sensitive systems, in transit or in storage. Complying with EN12830:1999 standard, it is perfectly suited for cold chain applications.

- Temperature Range: -40°C to +70°C / -40°F to +158°F
- Complies with Cold Chain EN12830:1999 standard
- Battery Life up to 5 Years
- Warranty: 2 Years



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Multi-Use Temperature Data Logger

The N2011 Multi-Use Temperature Data Logger allows easy monitoring of temperature sensitive systems, in transit or in storage. Complying with EN12830:1999 standard, it is perfectly suited for cold chain applications.

With a two year warranty and a long battery life of up to 5 years, the N2011 Data Logger is designed to give long-term, reliable performance.

One of our range of Diligence EV Data Loggers, the N2011 Data Logger is also ideal for monitoring building services, scientific experiments, production processes, and heating, ventilation and air conditioning systems, and comes with a [Biocote Antimicrobial Protection](#).

Comark offers a range of solutions for logging data, from small battery-operated [Data Loggers](#) to complete [Monitoring Systems](#).

Upgraded EV Software (July 2016)

Comark is pleased to announce that its suite of Software for EVt2 and N2000 Series Data Loggers, has had a major overhaul and upgrade.

The interface has been redesigned and the software upgraded to be fully compliant with Microsoft Windows 10.

The new EV Software can be downloaded from either the 'Support' tab on this page, or the dedicated 'Software' download page. To download the software, you must have a Comark Website account.

There are two versions available EV Software and EV PRO Software for 21 CFR Applications*.

***Note:** If you require the Professional version of the software and have not previously downloaded it from our website, please [contact us](#) and we'll ensure you get the link to download it.

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Technical Specifications

Name	Value
Sensor Type	Thermistor
Temperature Measurement Range	-40°C to +70°C / -40°F to +158°F
Scales	°C and °F
Display Resolution	0.1°
System Accuracy -25°C to +50°C	±0.5°C
System Accuracy -40°C to +70°C	±1°C
System Accuracy -13°F to +122°F	±1°F
System Accuracy -40°F to +158°F	±2°F
Memory 32K	1 Channel: 16000 samples, 2 Channels: 8000 samples, 3 Channels: 5300 samples, 4 Channels: 4000 samples, 5 Channels: 3200 samples
Download Time	3 minutes for 10,000 readings (typical)
Logging Frequency	Programmable between 1 second and 99 hours
Internal Sensor Response Time	T90 = 15 to 30 minutes in ambient air
Ambient Storage	-40°C to +70°C / -40°F to +158°F
Battery Type	1 x AA size 3.6V replaceable lithium battery
Battery Life	Up to 5 years
Case Material	ABS
Environmental Protection	IP67 BS EN 60529 IEC 529
LED Indication	Red = Alarm, Green = Logger Active
Dimensions	Length 88mm / 3.5in, Width 80mm / 3.1ins Depth 35mm / 1.4ins
Warranty	2 Years

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Computer Docking Station

Part No: N2000CRU (3618003)

The N2000CRU Computer Docking Station is designed to work with the N2000 Diligence Series Data Loggers for syncing data between the device and your PC.

- Retrieve Logged Data
- USB Cable Supplied
- Infrared Link to Loggers
- Warranty: 1 Year

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Computer Docking Station

The N2000CRU Computer Docking Station is designed to work with the N2000 Diligence Series Data Loggers for syncing data between the device and your PC.

The N2000CRU Computer Docking Station connects to your PC via a standard USB A-Type connector, and provides an Infrared (IR) link to Data Loggers placed in the cradle.