

Evolution Diligence EV Data Loggers



The Comark Diligence EV range includes ten data loggers that can handle almost every requirement.

Applications include the food industry, building services, scientific experiments, production processes, monitoring PLC and other control systems, heating, ventilating and air conditioning systems. All loggers feature:

- Tough moulded cases, dust and waterproof to IP67 standards
- Large memory capacity of up to 16000 readings
- Ability to log over multiple periods
- Windows™ based Evolution software, for fast, effective data download and analysis
- LED indication of active logging and alarm conditions, plus audible alarm warning
- LCD on selected models, for instant checks on readings and alarms
- Single button control of all main functions
- Choice of single or multi-sensor temperature models
- Ability to scroll display between readings from all sensors in use (N2012, N2013 and N2014 only)
- Long battery life, up to five years



1 *N2001/N2011

- One channel, internal temperature sensor
- LCD on N2011

2 *N2002/N2012

- Five channels, one internal temperature sensor and up to four external thermistor sensors using the N2000BOX multi-link
- LCD on N2012
- Lumberg connector for direct probe connection or multi-link

3 *N2003/N2013

- Two channels, internal temperature and external humidity sensors
- LCD on N2013

4 *N2004/N2014

- Three channels, with up to three external type K or T thermocouple probes using the adaptor cables
- Additional ambient temperature measurement from PK31L or PT31L probes or the adaptor cables
- Can also measure from a single thermistor probe
- Lumberg connector for direct probe connection or multi-link
- Adaptors – N2000ADP/K, type K or N2000ADP/T, type T for up to three probes with sub-miniature connectors
- LCD on N2014

5 *N2005/N2015

Logger features:

- Measurement range 4 to 20mA
- Lumberg 6-pin socket for sensor connection via ADP50 connection lead

- Programmable selection of measurement parameters, temperature, humidity, pressure, flow, pH, current, voltage and user definable
- LCD on N2015

Evolution software features, specific to N2005/N2015:

- Selection of resolution between 0 and 4 decimals (on PC and printouts)
- Freeform text of up to eight characters for user definable measurement units
- Description of logging run and channel names
- Selection of over range and under range points
- Selection of scale high and low values equating to 20mA and 4mA

DILIGENCE EV KITS AND ACCESSORIES

A selection of logger kits is available. Please refer to the Comark price list.

***N1SW** Evolution software. Please refer to page 17 for details.

***N2000INT** PC interface for programming loggers and downloading data.

***N2000BOX** Multi-link to connect external probes to N2002 or N2012.



N2000INT

***N2000ADP/K** Adaptor cable to connect up to three type K thermocouple probes to N2004 or N2014.

***N2000ADP/T** Adaptor cable to connect up to three type T thermocouple probes to N2004 or N2014.

***ADP50** Connection lead with Lumberg plug and 200mm wire with stripped and tinned ends, for N2005 or N2015.



N2000BOX

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Sensor Type	
N2001, N2011, N2002, N2012, N2003, N2013	Thermistor
N2004, N2014	Type K or T thermocouple
Measurement Range	
N2001, N2011, N2002, N2012 internal sensor	-40°C to +70°C
N2002, N2012 external sensor	-40°C to +150°C
N2003, N2013	
Temperature	-20°C to +60°C
Humidity	0 to 97% RH non condensing
N2004, N2014	
Type K	-200°C to +1372°C
Type T	-200°C to +400°C
Thermistor	-40°C to +70°C
N2005, N2015	4 to 20mA
Scales	
Temperature	°C, °F
Humidity	RH or DP
Display Resolution	
Temperature	0.1° (N2014 only, 1° below -100° and above +1000°)
Humidity	0.1% RH
N2015 only	4 digits 1 decimal place (software allows 0 to 4 decimals in logged data*)
System Accuracy	
Temperature N2001, N2011, N2002, N2012, N2003, N2013	
-25°C to +50°C	±0.5°C
-40°C to +80°C	±1°C
+80°C to +150°C	±2°C (typical)
Humidity N2003, N2013	
-20°C to +60°C	±3% RH
Instrument Accuracy at +20°C ambient	
N2004, N2014	±0.5°C ±0.3% of reading
N2005, N2015	±0.3% of full scale
Memory 32K	Samples
1 channel	16000
2 channels	8000
3 channels	5300
4 channels	4000
5 channels	3200
Logging Frequency	Programmable between 1 second and 99 hours
Ambient Storage	-40°C to +70°C
Battery Type	1 x AA size 3.6V replaceable lithium battery, part number A17476
Battery Life	Up to 5 years
Case Material	ABS
Environmental Protection to IP67, EN 60529, IEC 529	YES
LED indication	Red = alarm, Green = logger active
*Software selection of decimals will affect recorded values, e.g. selection of 0 decimals = a value of ±32000 and a selection of 4 decimals = a value of ±3,2000	