

# Portable Low Cost Datalogger

## Part of the NOMAD® Family

OM-SC  
\$235



OM-SC-KIT, \$465, datalogger complete with RS-232 cable and DC voltage input cable. Shown close to actual size.

- ✓ **Measures and Records DC Current, DC Voltage Temperature, Contact Closure and Ambient Light**
- ✓ **Time Extension Recording—Automatic Sampling up to 1 Year**
- ✓ **Automatic Scaling Provides for Best Resolution**
- ✓ **Easy-to-Use Windows® Software**

Whether the OM-SC datalogger records for an hour, a week or a year, by using its innovative time extension recording technique, the completed recording is at a sampling interval that is appropriate for the length of the recording session. Initially the datalogger samples every 0.88 seconds. In 2 hours, its memory is full. It then doubles its sampling interval and continues recording. After 4 hours, its memory is full again using a sampling interval of 1.76 seconds. Each time its memory fills up, the OM-SC doubles its sampling interval and repeats the process. Refer to the table above for a list of sampling intervals corresponding to various lengths of recording sessions. The OM-SC records temperature with

its internal thermistor temperature sensor or with an optional external temperature sensor. The datalogger also measures DC voltage, DC current (the OM-SC datalogger can be used to record 4 to 20 mA current loop signals and then to scale, plot, print, totalize and save the data in the process units being measured) and contact status. It is not necessary to specify the recording function in advance; you specify it when downloading to your computer.

Automatic scaling permits the OM-SC to operate over wide ranges of DC voltage and DC current signal levels. The datalogger starts recording at its lowest scale range and rescales each time the signal exceeds the scale range. Automatic scaling also functions when the OM-SC is recording temperature; it allows the datalogger's 256 steps of resolution to be used to maximum advantage. When recording temperature, the scale range is determined by the maximum temperature recorded, and the resolution is best at the top of the range. The OM-SC initially scales itself on its first reading and is limited to four scale changes after that.

The OM-SC software produces a clear, well-formatted presentation quality graph. The vertical grid lines fall on major time increments. A zoom

function permits the user to examine details in the record and select a portion of the graph for display. The graph includes the datalogger's serial number, complete date and time information, title provided by the user, sample rate, min/max and average signal readings, and the online signal reading. The finished graph can be printed or exported to other software. The data can be saved to disk and imported into common spreadsheet programs.

The operation of the datalogger is controlled by a button on the front of the unit. The mode of operation is indicated by a light to the left of the button. There are three modes of operation: RECORD, STANDBY, and SLEEP. RECORD is entered from SLEEP by a press of the button; the light makes double blinks to indicate that the datalogger is recording. STANDBY is entered from RECORD by a press of the button; it is indicated by single blinks on the light. In the STANDBY mode the datalogger does not record; it keeps time and retains data for later downloading to the computer. SLEEP is entered from RECORD or STANDBY by a long (2 seconds or more) press of the button. In the SLEEP mode the datalogger is inactive, and the light does not blink. Data can be downloaded from the datalogger only when it is in the RECORD or STANDBY modes.

## Specifications

**No. of Channels:** 1

**Input Types:** Temperature via internal thermistor, DC voltage, DC current, contact closure, ambient light

**Input Connection:** DC voltage, DC current, contact closure, ambient light via plug-in cable

**Measurement Range:** DC voltage; 400 mV to 27 Vdc; DC current; 4 to 20 mA; temperature via internal sensor; 0 to 70°C (32 to 158°F); temperature via external sensor; -55 to 140°C (-67 to 284°F); contact closure; dry contacts; ambient light; 10 to 2000 lumens/sq. meter via external ambient light sensor with plug-in cable

**Accuracy:** DC Voltage;  $\pm 1.4\%$  of scale; DC Current;  $\pm 0.3$  mA; temperature;  $\pm 1.0$  °C or better when range of recorded temperature is 0 to 70 °C; ambient light;  $\pm 2$  lumens  $\pm 20\%$  of rdg

**Resolution:** DC Voltage; 0.4% of scale; DC Current; 0.1 mA; temperature; 0.3°C or better when range of recorded temperature is 0 to 70°C

**Sample Rate:** 4096/hr max

**Data Storage:** 8192 readings

**Storage Technique:**

Time extension recording

**Power:** 3V lithium battery

**Battery Life:** Up to 1 year of continuous recording at 25°C

**Operating Temperature:**

-20 to 70°C (-4 to 158°F)

**Storage Temperature:**

-40 to 85°C (-40 to 185°F)

**Relative Humidity:**

0 to 100% non-condensing

**Dimensions:**

38 H x 57 W x 21 mm D

(1½ x 2¼ x ⅜")

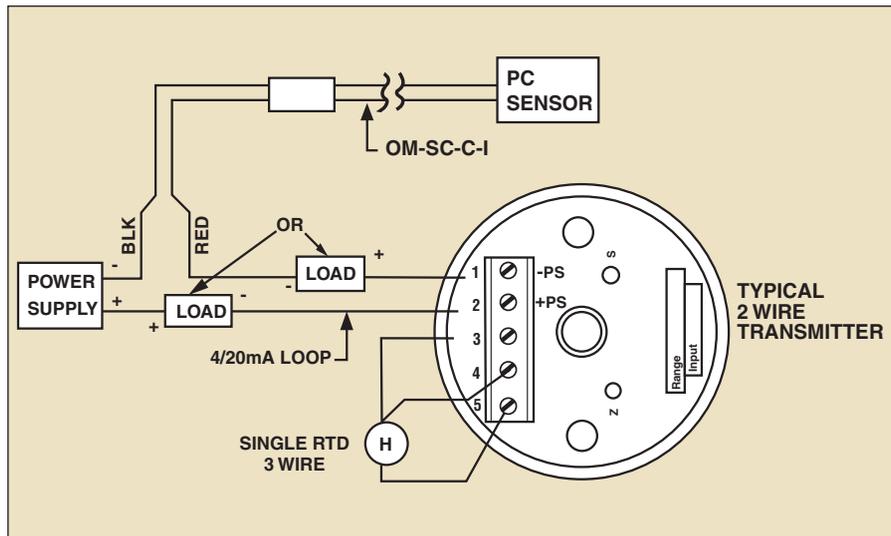
**Weight:** 28 g (1 oz)

## Recording Current Loop Signals

Range	Accuracy (Including Resolution)
419 mV	$\pm 6$ mV
851 mV	$\pm 12$ mV
1.72 V	$\pm 24$ mV
3.44 V	$\pm 48$ mV
6.90 V	$\pm 96$ mV
13.8 V	$\pm 192$ mV
27.6 V	$\pm 384$ mV

## Sampling

Sampling Intervals	Samples Per Hour	Length of Recording Session
0.88 seconds	4096	2 hours
1.76 seconds	2048	4 hours
3.52 seconds	1024	8 hours
7.03 seconds	512	16 hours
14.06 seconds	256	32 hours
0.47 minutes	128	2.66 days
0.94 minutes	64	5.33 days
1.88 minutes	32	10.8 days
3.75 minutes	16	3.02 weeks
7.5 minutes	8	6.1 weeks
15 minutes	4	12 weeks
30 minutes	2	5.63 months
1 hour	1	11.2 months



## To Order (Specify Model Number)

Model No.	Price	Description
OM-SC-KIT	\$465	Datalogger kit*
OM-SC	235	Portable datalogger
OM-SC-C-T	45	Remote temperature input cable, 20 to 80°C
OM-SC-C-HT	45	Remote temperature input cable, 25 to 140°C
OM-SC-C-LT	45	Remote temperature input cable, -55 to 25°C
OM-SC-C-I	95	Current (4 to 20 mA) input cable
OM-SC-C-V	45	DC voltage/contact closure input cable
OM-SC-C-AL	109	Ambient light sensor
OM-SC-S-I	118	Windows software (on CD ROM) and RS-232 cable with DB9F termination

\* Includes **OM-SC** datalogger, **OM-SC-C-T** (temperature input cable), **OM-SC-C-I** (4 to 20 mA input cable), **OM-SC-C-V** (DC voltage/contact closure input cable), **OM-SC-C-AL** (ambient light sensor), and **OM-SC-S-I** (Windows software and RS-232 cable)

Comes with complete operator's manual.

**Ordering Example:** **OM-SC** datalogger, **OM-SC-C-T** remote temperature input cable, **OM-SC-C-V** voltage/contact closure input cable and **OM-SC-S-I** Windows software and RS-232 cable, \$235 + 45 + 45 + 118 = \$443.



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