

# Squirrel SQ1000 DATA LOGGER

*The Squirrel SQ1000 Series reliably measure and record inputs from a variety of sensors, making them suitable for a wide range of tasks in many industrial, scientific and research applications. The SQ1000 can be used as a portable meter, standalone data logger or as a PC based data acquisition system.*

## Key Features

- Battery or mains operated and easily portable.
- Simple 3 button set-up via built in display or from PC.
- Measure 8 or 16 channels of temperature, humidity, pressure, voltage or 4 to 20 mA.
- User selectable recording ranges and logging modes for application flexibility.
- Non-volatile memory provides up to 2 million readings of secure data.
- Time and date reported with each reading.
- Readings can be scaled into meaningful engineering units (e.g. m/sec, ppm).
- Low power consumption for long term unattended use or portable operation.
- Industry Standard input sockets for ease of use.
- Remote set-up and download via GSM, PSTN, radio or satellite modem links for 'set & forget' applications.
- Ethernet option allows loggers to be sited anywhere you have a network port, making installation easier and more cost effective.

## Standard Features

- 12bit resolution.
- Highly accurate:  $\pm(0.1\%$  of reading,  $+0.2\%$  of range span).
- Up to 4 sensor power outputs.
- 1 pulse count channel.
- 8 event/digital channels.
- External triggers can start and stop the logger.
- Environmental operation:  $-30$  to  $+65^{\circ}\text{C}$ , 0 to 95%RH.
- External power supply: 9 to 14Vdc (9V internal battery included).
- Communications via RS232C with auto-baud detect.

- Rapid memory download at 19.2 kbit/s.
- Up to 99 logger 'runs' may be stored.
- Alphanumeric display of 2 x 16 characters shows readings and status of logger.
- Small size: 180x120x60mm, weight 1kg.
- 16 channel models: 180x120x90mm.
- Standard 64K memory

## Optional Features

- Fast sampling up to 0.1 second on all channels.
- Alarms can be set for all channels.
- Logger configurations tailored to specific needs.
- Expandable up to 99 channels.

*Talk to Grant for  
all your data  
logging solutions*



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## System Specification

### Standard models and channels

SQUIRREL MODEL	ANALOG INPUT CHANNELS			VOLTAGE / CURRENT	SENSOR POWER OUTPUT	DIGITAL CHANNELS	
	THERMISTOR Y, S, U-TYPE	PT100	THERMOCOUPLE K / T			PULSE COUNT	EVENT / DIGITAL
1001	4	—	—	4	4	1	8
1002	8	—	—	—	—	1	8
1003	—	—	4	4	4	1	8
1004	—	8	—	—	—	1	8
1005	—	—	8	—	—	1	8
1007	—	—	—	8	4	1	8
1021	8	—	—	8	8	1	8
1022	16	—	—	—	—	1	8
1023	—	—	8	8	4	1	8
1025	—	—	16	—	—	1	8
1026	—	8	—	8	4	1	8
1027	—	—	—	16	8	1	8

### Standard ranges for temperature channels

Each channel can be individually set to any of the ranges listed for the Squirrel model and Pt100 input channels can be used with 4, 3 or 2 wire sensors

INPUT TYPE	RANGES °C	(°F)	RESOLUTION °C	SQUIRREL MODEL
Y, S, U: Thermistor	-50 to 150	(-58 to 302)	0.05 (-5 to 75) 0.1 (-25 to 100) 0.2 (-40 to 125) 0.4 (-50 to 150)	1001, 1002, 1021, 1022
P: Pt100	-200 to 100	(-328 to 212)	0.1	1004, 1026
	-200 to 400	(-328 to 752)	0.2	
	-200 to 600	(-328 to 1112)	0.25	
K: Thermocouple	-200 to 450	(-328 to 842)	0.2	1003 1005, 1023, 1025
	-200 to 200	(-328 to 392)	0.1	
	-200 to 450	(-328 to 842)	0.2	
	-200 to 1200	(-328 to 2192)	0.5	
T: Thermocouple	-200 to 350	(-328 to 662)	0.2	1003 1005, 1023, 1025
	-200 to 200	(-328 to 392)	0.1	
	-200 to 350	(-328 to 662)	0.2	

### Standard ranges for d.c. voltage/current channels

Each voltage/current channel can be set to any of the 18 voltage ranges or the 2 current ranges

RANGE	RESOLUTION	RANGE	RESOLUTION	RANGE	RESOLUTION	RANGE	RESOLUTION
0 to 50mV	50µV	0 to 500mV	0.5mV	0 to 5V	5mV	0 to 20mA	10µA
-25 to 25mV	50µV	-250 to 250mV	0.5mV	-2.5 to 2.5V	5mV	4 to 20mA*	0.05%
0 to 100mV	50µV	0 to 1V	0.5mV	0 to 10V	5mV		
-50 to 50mV	50µV	-500 to 500mV	0.5mV	-5 to 5V	5mV		
0 to 200mV	50µV	0 to 2V	0.5mV	0 to 20V	5mV		
-100 to 100mV	50µV	-1 to 1V	0.5mV	-10 to 10V	5mV		

For channel configurations tailored to your specific needs, please contact our sales department

### The Total Solution

Years of experience in solving data logging problems means Grant can help you save time by putting together the right package, starting with the sensor right through to the data analysis.



### Software

#### SquirrelView

Powerful and easy to use spreadsheet style software for configuring, downloading, displaying and analysing data from your Squirrel data logger. Upgrade to SquirrelView plus and with just a few mouse clicks you will quickly be able to view real time charts or historical data. You can also quickly download the data for use in your favourite spreadsheet, database or analysis program.

SquirrelView plus allows you to display up to 30 channels of data, manual and automatic scaling of charts, list readings in tabular format with data and time. Ethernet and modem connection is also supported.

### Accessories

Grant supply a full range including:

- ¥ Weatherproof enclosure / carry case.
- ¥ Tamperproof wall brackets.
- ¥ Test & calibration certificates.
- ¥ Wide range of temperature and humidity sensors.

**Guarantee** The Grant SQ1000 data acquisition system is guaranteed against faulty materials or workmanship for three years. If repairs are carried out under guarantee, no charge is made for labour or materials, and within the United Kingdom, no charge is made for carriage.  
**CE mark** The Grant SQ1000 data acquisition system bears a CE mark and meets relevant European directives.  
**Quality Statement** Grant Instruments operates a Quality Management System complying with BS EN ISO 9002: 1994. It is Grant's policy to supply customers with products which are fit for their intended purpose, safe in use, perform reliably to published specification and are backed by a fast and efficient customer support service.