SQUIRREL SPECIAL 1000 SERIES

Eltek
SPECIALIST
DATA LOGGERS

Easy to use customised data loggers

Eltek SQ1000 Series Squirrel data loggers provide a flexible combination of channels, ranges, memory sizes and extra options. If there is not already a model which fits a particular application, then Eltek can almost certainly make one.

Key Features

- Modular construction

- Battery or mains operated and easily portable

- Configuration and Metering by:

    - Panel controls and display

    - Locally connected PC (using Darca Software)

    - Remotely connected PC (using Darca Software) via GSM, landline or radio modem

- Multi language set up menu

- Measure up to 124 analogue or digital channels, such as temperature, humidity, pressure, voltage, resistance, current or any other suitable sensor output

- Non volatile internal memory providing up to 2 million readings of secure data

- PC Card slot option provides extra memory

- Readings can be scaled into appropriate units (e.g. m/sec, p.p.m.)

- Low power consumption for long term unattended use or portable operation

- Clearly labelled connector panel for quick on-site installation

- Customised firmware for specialised requirements

1067MC

1063

1043

1021pHC

Examples of Squirrels from the Eltek range

Common Features

- Highly accurate: ±(0.1% of reading, +0.2% of range span)

- 12 bit resolution

- Internal memory can store 250 000 readings

- Sensor power outputs

- 1 pulse count channel and 8 event/digital channels

- in addition to other inputs

- External triggers can start and stop the logger

- Environmental: -30 to +65°C, 0 to 95° RH non-condensing

- External power supply: 9 to 14V DC (internal battery: 9V)

- Communications via RS232C with auto-baud detect

- Rapid memory download at 38400 baud

- Up to 99 logging "runs" may be stored

- Alphanumeric display, 2 lines of 16 characters

- Compact size 180mm x 120mm, depth 60 to 260mm dependant on product specification.

- 3 year guarantee

Optional Features

- Fast sampling interval of 0.1 second for 8 channels

- Expandable to 124 channels

- Alarms and threshold can be set for all channels

- Internal memory expandable to 2,080,000 readings

- Logger configurations tailored to specific needs

- Networking loggers - for large systems

- LAN Network adaptor for Ethernet connection - type MOXA D311

- USB adapter

- GSM modem

- Text messaging

- pH input adapter

System Specification

Logging Modes
Interval / average / event /
externally triggered

Log / Scan Interval
1 sec to 24 hours
Optional: 0.1 sec minimum

Analogue Inputs
Accuracy: ±(0.1% of reading,
+0.2% of range span)
Common mode range: 15V
Input Impedance: 1M

Analogue Input Types & Ranges
see tables below

Sensor Excitation
5V/supply voltage - internally selectable

Digital Inputs
0 / 5V or volt free contacts
8 inputs per logger channel

Pulse counters
Each counter up to 2KHz signal or
100Hz volt free contact. A total of
650K counts software selectable

Data memory
Internal memory: 250,000 readings
Option: 2 million readings or PC
slot with SRAM card (2 million
readings)
Memory modes: stop when full or
overwrite current run

Scaling Data
Readings scaled as engineering units

Configuration
Panel controls and display and/or
Darca Lite or Darca Plus (PC Software)

Display
2 line, 32-character display for local status
monitoring, configuration and stored
readings

Communications
RS232 half duplex - 2400 to 38.4K Baud
Modem compatible protocol

Darca Software
Darca Lite for control, download and export
Darca Plus with graphing and analysis tools

Power supply
Internal: 6 x AA Alkaline batteries
External: 9 to 14 VDC (1.4 watts)
Mains adapter: 12 VDC 6 watts
Battery Life: sampling 8 channels
every 5 minutes provides typically
6 months operation

Case
Scratch resistant Nextel coated
ABS
width 180mm, height 120mm,
depth - see table below

Operating Environment
Temperature range:-30 to 65°C
Humidity: 95% non condensing.
For harsh environments an
optional IP67 enclosure is available

Modules and Inputs

Eltek loggers are made up from a family of **modules** to provide the functionality required. A mix of 8 modules can be assembled in a variable depth case providing customised versions for specific applications.

Designation	Input Type
U	thermistor
K	K thermocouple
T	T thermocouple
V	voltage
C	current
P	Pt100
D	Event/digital (8 lines)

Module	Inputs	Module	Inputs
M01	4 U + 4 V/C	M09	24 D
M02	8 U	M10	8 AC voltage
M03	4 K/T + 4 V/C	M11	4 V/C + 4 pulse count
M04	8 Pt100	M12	8 pH
M05	8 K/T	M13	4pH + 2 conductivity
M06	2P + 4 P/V/C + 2V/C	M25	16 K/T
M07	8 V/C		
M08	8 pulse count		

Refer to website for a comprehensive list of modules and sensors options available.

Models and Channels

Below is listed a sample of frequently ordered **models**:

Model	Channel Configuration	Modules	Case depth mm
1023A	12K/T+4V/C	M05+M03	85
1023B	4K/t+12V/C	M03+M07	85
1024	16P	M04+M04	85
1026KTA	8K/T+2P+4P/V/C+2V/C	M05+M06	85
1033	16K/T+8V/C	M25+M07	85
1035	24K/T	M05+M25	85

Model	Channel Configuration	Modules	Case depth mm
1036KT	8K/T+8P+8V/C	M05+M04a+M07	110
1043	16V/C+16K/T	M25+M07x2	110
1047	32V/C	M07x4	135
1063	24V/C+24K/T	M05+M25+M07x3	160
1067	48V/C	M07x6	185
1085	64K/T	M25x4	135

Standard ranges for temperature channels and DC voltage/current channels

Each channel can be individually set to any of the ranges listed for the Squirrel model. Other ranges and input types (e.g. thermocouples N,J,B,E,R,S) available to special order.

Temperature
Pt100 input channels can be used with 2,3 or 4 wire sensors

Input Type	Range °C	Resolution°C
Y,S,U Thermistor	-50 to 150	0.05(-5 to 75)
		0.1(-25 to 100)
		0.2(-40 to 125)
		0.4 (-50to150)
P: Pt100	-200 to 100	0.1
	-200 to 400	0.2
	-200 to 600	0.5
K: Thermocouple	-200 to 200	0.1
	-200 to 450	0.2
	-200 to 1200	0.5
T: Thermocouple	-200 to 350	0.2
	-200 to 200	0.1

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

50 V Resolution	0.5mV Resolution	5mV Resolution
0 to 50mV	0 to 500mV	0 to 5V
-25 to 25mV	-250 to 250mV	-2.5 to 2.5V
0 to 100mV	0 to 1V	0 to 10V
-50 to 50mV	-500 to 500mV	-5 to 5V
0 to 200mV	0 to 2V	0 to 20V
-100 to 100mV	-1 to 1V	-10 to 10V

Range	Resolution
0 to 20mA	10 A
4 to 20mA*	0.05%
* displayed as 0-100%	

Guarantee: Equipment manufactured by Eltek is guaranteed against faulty materials or workmanship for three years. For repairs carried out under guarantee, no charge is made for labour, materials or return carriage.