

# Squirrel SQ2010

A powerful portable data logger

**Grant**  
DATA ACQUISITION

- Flexible
- Very easy to use
- Economical
- Handheld
- USB connectivity
- 4 differential or 8 single ended channels
- RS232 output for modem and wireless connection (via interface units)



## Overview

The Squirrel 2010 is a versatile general purpose logger with 4 to 8 analogue input channels to measure current, voltage, resistance and temperature, plus 8 digital channels to automatically trigger or stop logging. An RS232 port is included, allowing connection to modems and other networking devices.

It is a small, truly portable logger which is also suitable for bench based and fixed installations. Easily programmed via the four integral push buttons and large graphical display and with a basic accuracy of 0.1%, the Squirrel 2010 is able to fulfil many routine data logging needs, including more demanding applications requiring up to 10 readings per second on one channel.

## Key features

- Small truly portable data logger
- 4 to 8 universal analogue inputs (current, voltage, resistance, temperature) plus 8 digital inputs
- 16 derived / calculated channels
- 2 alarm outputs and 2 pulse counter inputs (1 at 64 KHz, 1 at 100Hz)
- Configured via large easy-to-read graphical display
- 0.1% accuracy
- Up to 1.8 million readings
- Supplied with SquirrelView set-up / download software

Power output for sensor excitation / external devices

USB and RS232 connectivity for quick and easy PC and peripherals communication e.g. Ethernet converter, wifi wireless converter or GSM modem

Easy-to-use removable connector system

4 to 8 universal analogue inputs (4 differential, 8 single ended) for recording temperature, current, voltage and resistance

Range of trigger functions via 8 digital inputs; 2 pulse rate/counter inputs; 2 alarm/relay outputs

Power supply—internal alkaline batteries, external DC power or via USB connection to PC



SQ2010 – Technical specifications	
No. of analogue channels	8 single ended or 4 differential inputs
Channel expansion	No
Universal Input	Yes
Voltage Ranges; Differential and Single Ended	-6 to 25, -0.6 to 2.4, $\pm 0.3V$ , -0.15 to 0.15, -0.075 to 0.075 -6 to 12, -6 to 6, -3 to 3, -0.6 to 1.2, -0.6 to 0.6
Common mode	25v
Current Ranges, Differential (Requires external 10R shunt)	4 to 20mA, $\pm 30mA$
Thermocouple Ranges; Differential and Single Ended	-200 to 1200°C, J-type -200 to 1372°C, K-type -200 to 1300°C, N-type -50 to 1768°C, R-type -50 to 1768°C, S-type -200 to 400°C, T-type
Resistance Ranges, all 2 wire	0 to 1250R, 0 to 5000R 0 to 300000R, 0 to 20000R
Thermistor Ranges	-50 to 150°C, U & UU-type -50 to 150°C, Y-type -30 to 150, S-type
Pt100/1000, 2-wire	-200 to 850°C
Internal reference temperature	-50 to 150°C
Pulse Count Ranges	0 to 100Hz (1 input) 0 to 64kHz (1 input) 0 to 16000000 Count
Digital State/Event Ranges	8 state inputs or 1 x 8 bit binary
Digital/Alarm Outputs	2 open drain FETs, 18V, 0.1A
A/D Resolution	24 bit
Accuracy	0.1% of range + 0.1% of reading
Clock Resolution/Accuracy	1s/10ppm Normal Mode – each input sampled at a maximum rate of 1 reading per second. Double-speed (mains reject off) – one input can be sampled at 10 readings per second and all others are sampled at a maximum rate of 1 reading per second
No of Intervals	4
Data Scaling	Yes
Data Statistics	Yes from within SquirrelView Plus PC software
Calculated Channels	Yes, up to 16
Memory Internal	16M (1 to 1.8 million readings)
Display/Keypad	128*64 dot graphical display, 4 button keypad
Internal Battery	2 C cells
Battery Life	Up to 5 days with continuous usage whilst sampling all channels once per second
External Power	Yes, 8 to 28V dc & USB when plugged in
Sensor Power Output	5V at 50mA, external 8-28V at 100mA (when connected)
Networking	Via RS232 to Ethernet adaptor (Netport, part no. SQ20A801)
Modem Support	Via RS232 modem (GSM Modem, part no. SQ20A802)
Actions & Triggers	As SQ2020/40 although two alarm outputs
PC Setup	Yes, SquirrelView compatible
Front Panel Setup	Via 4 integral 4 keys. All essential functionality available via key pad e.g. channel configuration, start / stop logging etc. Other advanced functions e.g. calculated channels and channel descriptions are available via connection to a PC running SquirrelView
Stored setups	6
Third Party Programming	As 20xx driver suite allows
Operating temp	-20 to 65°C
Dimensions	W175 x D135 x H55mm, Weight 0.7kg



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