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

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

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

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, ±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, ±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 SquirelView 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