

Ideal for Desktop/Laptop/PDA use



DESCRIPTION

The **MicroDAQ SRL-30/73** is a multi-function analog and digital I/O product which communicates to the host PC via a RS-232 or RS-485 serial interface. The unit has a 14-bit resolution and is the perfect measurement device for portable, laboratory or classroom use.

Two interface versions are available for the serial MicroDAQ range, these include RS-232 models and RS-485 models. The RS-232 models are best suited for short distances (up to 30 metres) or for use with hand held PC's such as PDA's.

The RS-485 models allow for long distance data transmission (up to 1200 metres). These RS-485 models are ideally suited for process control applications in a plant or industrial environment, which require long cable runs.

Featuring 16 analog inputs and 16 Thermocouple inputs, the unit can be used to measure voltage signals from sensors, transducers, accelerometers, Thermocouples and much more. It also features four analog outputs which can be used as reference voltages and many other applications. The digital I/O is available in 3 sets of 8 channels which can be programmed as inputs or outputs.

All standard type J / K / E / T / R / S / B / C / N thermocouples are supported, providing a temperature accuracy of better than 1 degree. A special cold-junction compensation module is provided with each unit to ensure accurate temperature measurements. This plugs into one of the SRL-30-73's DB-25 connector(s) and has screw terminals fitted for easily interfacing thermocouple wires.

The SRL-30-73 is the perfect measurement tool for customers who wish to do temperature measurement, but do not want the hassle or investment of PLC or SCADA systems. Typical applications include monitoring of furnaces, cold storage, computer server rooms and environmental monitoring to name but a few.

Drivers are provided for the most popular operating systems, as well as for the WindowsCE© family of products including PocketPC2002 and PocketPC2003. This support allows the serial MicroDAQ range to be controlled directly from a palm held PC with a serial port. Each unit is supplied with a WindowsCE API and control panel which is downloaded from a PC to the handheld device. Embedded Visual C++ and embedded Visual Basic examples are supplied.

Specifications

| | |
|--------------------------------|-------------------------------|
| Analog Inputs (A/D) | |
| Input Characteristics | |
| Input Channels: | 16 Single Ended |
| Input Ranges: | ±2.5V ±5V ±10V 0-5V 0-10V |
| Gain Scale: | 1 / 10 / 100 |
| Resolution: | 14-bit |
| Input Coupling: | DC |
| Max Sampling Rate: | 3kHz |
| Clock Source: | Internal 10MHz |
| | External – Convert (EXT_CLK) |
| Gate Source: | External – Convert (EXT_GATE) |
| Input Impedance: | 1M Ohm |
| System Noise: | ±1 LSB |
| Analog Outputs (D/A) | |
| Output Characteristics | |
| Output Channels: | 4 |
| Output Range: | ±10V |
| Resolution: | 14-bit |
| Full Scale Error: | ±2 LSB |
| Settling Time: | 1mS to 0.1% of full scale |
| Output Drive | ±10V @ 5mA |
| Power-On State: | 0V |
| Digital I/O (DIO) | |
| No. of TTL Lines: | 24 |
| Logic Levels: | |
| Input Low Voltage: | -0.5V to 0.8V |
| Input High Voltage: | 2.0V to 5.0V |
| Output High Voltage Min: | 2.4V |
| Output Low Voltage Max: | 0.45V |
| Maximum Output Current: | 2mA |
| Temperature Inputs (TC) | |
| Input Channels: | 16 |
| TC Range: | ±75mV |
| Gain: | Hardware TC |
| Resolution: | 14-bit |
| Input Coupling: | DC |
| Input Impedance: | 1M Ohm |
| System Noise: | 1 LSB |

FEATURES

- RS-232 or RS-485 Interface
- 16 Single Ended Analog Input Channels
- 14-bit A/D Resolution
- 3kHz Total Sampling Speed
- Onboard 16K FIFO
- 4 x 14-bit Analog Outputs
- 24 x DIO Lines (3 x 8-bit ports)
- 16 Thermocouple Inputs
- Thermocouple Accuracy: 1 Degree
- Thermocouples Supported: Type J, K, E, T, R, S, B, C, N
- I/O Connector 4 x DB25-Male (1 for A/D, 1 for DIO & 2 for TC)
- LED Indication for power
- Ideal for Portable/Laptop use
- Housing: Plastic ABS with rubber feet
- Operating Temp: 0 to 70 Deg. Celcius
- O/S Support for Windows 98/ME/XP/2000 & Linux
- Includes EDRE SDK, EDRE-Labview, EDRE-Testpoint & WaveView for Windows.
- Power: Supplied with 1A 9VDC External PSU
- Power Consumption: 900mA typ. @ 9VDC
- Dimensions: 65(H) x 80(W) x 148(L) mm

Ordering Information

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|---|---|
| Supplied with EDR Enhanced Software & Universal Switch Mode 9V PSU | |
| SRL-30A16-73T16-RS232 | RS232 16(SE) or 8(DIFF) Channel 250KHz 14-bit A/D, 4 x 14-bit DACs, 16 Channel 14-bit Thermocouple Input Unit; 24 DIO - incl 2 Mtr RS232 cable; & 2 x CJC Screw Terminal Adaptors |
| SRL-30A16-73T16-RS485 | RS485 16(SE) or 8(DIFF) Channel 250KHz 14-bit A/D, 4 x 14-bit DACs, 16 Channel 14-bit Thermocouple Input Unit; 24 DIO & 2 x CJC Screw Terminal Adaptors - Incl. ADPT-9 |

| DB-25M | DB-25 (M) | DB-25M |
|---------------|-------------------|-----------------|
| PA1 14 1 PA0 | ACH1 14 1 ACH0 | 8.4V 14 1 AGND |
| PA3 15 2 PA2 | ACH3 15 2 ACH2 | +15V 15 2 AGND |
| PA5 16 3 PA4 | ACH5 16 3 ACH4 | CJC 16 3 AGND |
| PA7 17 4 PA6 | ACH7 17 4 ACH6 | -15V 17 4 AGND |
| PB1 18 5 PB0 | ACH9 18 5 ACH8 | CH7- 18 5 AGND |
| PB3 19 6 PB2 | ACH11 19 6 ACH10 | CH6- 19 6 CH7+ |
| PB5 20 7 PB4 | ACH13 20 7 ACH12 | CH5- 20 7 CH6+ |
| PB7 21 8 PB6 | ACH15 21 8 ACH14 | CH4- 21 8 CH5+ |
| PC1 22 9 PC0 | DAC0 22 9 AGND | CH3- 22 9 CH4+ |
| PC3 23 10 PC2 | DAC2 23 10 DAC1 | CH2- 23 10 CH3+ |
| PC5 24 11 PC4 | NC 24 11 DAC3 | CH1- 24 11 CH2+ |
| PC7 25 12 PC6 | EXT_TRIG 25 12 NC | CH0- 25 12 CH1+ |
| | | CH0+ 25 13 |

Digital I/O

Analog

Thermocouple I/O