



OMEGAdata™ Series Data Acquisition Systems

OMK-PG812 Low Cost Parallel Port System with Signal Conditioning Options

OMK-PG812
\$99

- ✓ Eight Single-ended or Four Differential Analog Inputs
- ✓ Programmable Gains of 1, 2, 4, 5, 8, 10, 16 or 20
- ✓ Flexible Expansion and Signal Conditioning for Thermocouple, Millivolt and Frequency Signals
- ✓ Four Digital I/O Lines (Input or Output)
- ✓ 12-Bit Resolution
- ✓ Compatible with Windows 95/98/NT4/2000/ME



OMK-PG812
Shown larger
than actual size



The OMK-PG812 is a low cost data acquisition system compatible with most IBM personal computers and compatibles. It plugs directly into the personal computer's parallel port and derives its power from the parallel port's signal lines. It may be used with desktop PCs or because of its compact size it is ideally suited for field use with a portable computer. The OMK-PG812 is an inexpensive, low speed data acquisition product that is very easy to use. Simply plug it in, load its software, connect your devices and you are ready to begin acquiring data. The OMK-PG812 works under Windows 95/98/NT 4.0/2000 and Me. Custom application development with Microsoft Visual Basic, Microsoft Visual C++, Borland C++ Builder, Borland Delphi and others is supported with a simple to use ActiveX control. The OMK-PG812

has eight analog inputs with 11-bit resolution in single-ended mode and 12-bit resolution in differential mode. The inputs when used differentially in pairs have an input range of 0 to 5 V. The gain of each channel or differential pair is programmable to gains of 1, 2, 4, 5, 8, 10, 16 or 20. The maximum sampling rate using the standard software package is 50 samples/sec. The OMK-PG812 also includes four digital I/O lines that can be used for input or output.

Signal Conditioning

The OMK-PG812 has a signal conditioning accessory module that gives the OMK-PG812 the ability to accept thermocouple and millivolt signals which are not directly readable by the OMK PG812. The signal conditioner is supported by the software included with the OMK-PG812. The signal conditioner plugs directly into the OMK-PG812 and will not operate alone.

OMK-PGEX1 Universal Signal Conditioner Input for Thermocouples, Voltages and Frequency

The OMK-PGEX1 signal conditioning module extends the inputs of the OMK-PG812 by adding four thermocouple/differential millivolt inputs and a frequency-to-voltage converter. Five of the base analog input channels from the OMK-PG812 are also passed through the OMK-PGEX1 module. The differential millivolt input has a range of -6.5 to 46.5 mV. The frequency input has three different ranges set by an external jumper. The frequency ranges are: 0 to 100 Hz, 0 to 500 Hz or 0 to 1000 Hz.

OMK-STP25A

The OMK-STP25A is a general purpose screw terminal panel that plugs directly into the OMK-PG812 or OMK-PGEX1. This screw terminal panel brings all signals out to external screw terminals.

Specifications

OMK-PG812

Parallel Port Compatibility:

SPP, BPP, EPP, ECP (modules are self-clocking to eliminate port speed problems)

Number of Analog Inputs:

8 single-ended or 4 differential

Resolution: 11-bit (single-ended), 12-bit (differential)

Programmable Gains: 1, 2, 4, 5, 8, 10, 16 or 20

Analog Input Range: 2.048 or 2.500 Vdc

Input Impedance: 10K Ω

Offset Error: ± 3 LSB

Linearity Error: ± 0.5 LSB

Gain Error: ± 1.0 LSB

Overvoltage Protection: ± 15 Vdc

DIGITAL I/O

Number of Digital I/O Lines: 4

Max. Current (Sinking): 4 mA

Max. Current (Sourcing): 0.5 mA

Overvoltage Protection: ± 5 Vdc

OMK-PGEX1

Number of Thermocouple Inputs: 4 (J, K, T or millivolt)

Ranges:

Type J (-50 to 800°C);

Type K (-50 to 1000°C);

Type T (-25 to 500°C);

Millivolt -6.5 to 46.5 mV

Thermocouple Accuracy: $\pm 1.0^\circ\text{C}$ @ 25 °C

Thermocouple Resolution: 1°C

Millivolt Accuracy: $\pm 0.5\%$ F.S.

Millivolt Resolution: 0.01 mV

FREQUENCY INPUTS

Number of Inputs: 1

Signal Level: min ± 100 mV, max ± 4 V

Range: 0 to 100 Hz, 0 to 500 Hz or 0 to 1000 Hz

Accuracy: $\pm 1\%$ F.S.

Resolution: 1 Hz

VOLTAGE INPUTS

Number of Inputs: 5

Range: 0 to 2.048 or 0 to 2.500 Vdc

Programmable Gains: 1, 2, 4, 5, 8, 10, 16 or 20

Accuracy/Resolution: same as OMK-PG812

PHYSICAL (ALL MODELS)

Operating Temperature Range: 0 to 70°C

(32 to 156°F)

Dimensions: 58.4mmH x 55.8mmW x 15.2 mmD (2.3 x 2.2 x 0.6")

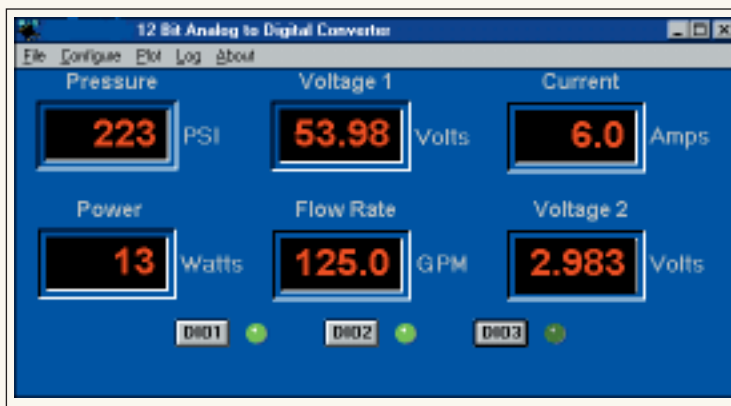
Power Consumption: 50 mW

To Order (Specify Model No.)

Model No.	Price	Description
OMK-PG812	\$99	Low cost parallel port data acquisition system with programmable gain
OMK-PGEX1	110	Thermocouple, millivolt, frequency input signal conditioner for OMK-PG812
OMK-STP25A	35	Screw terminal panel, plugs into OMK-PG812 and OMK-PGEX1 signal conditioners

OMK-PG812 includes Windows data acquisition software, Active X controls and complete operator's manual on CD ROM.

Ordering Example: OMK-PG812 parallel port data acquisition system, OMK-PGEX1 signal conditioner and OMK-STP25A screw terminal panel, \$99 + 110 + 35 = \$244.



SOFTWARE

The OMK-PG812 comes with a standard software package. This package includes:

- Microsoft Windows data display and data logging software

The OMK-PG812 Microsoft Windows compatible software, which is supplied with the product includes everything needed to display, scale or offset each input.

Each displayed value has a title and unit label that you may customize. The software also displays the status of the 4 digital I/O lines. The standard software panel comes with a Data Plotter. The analog input values may be plotted vs. time. The input values may also be logged to disk at user-specified intervals for later viewing and manipulation with a spread sheet or other program.



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