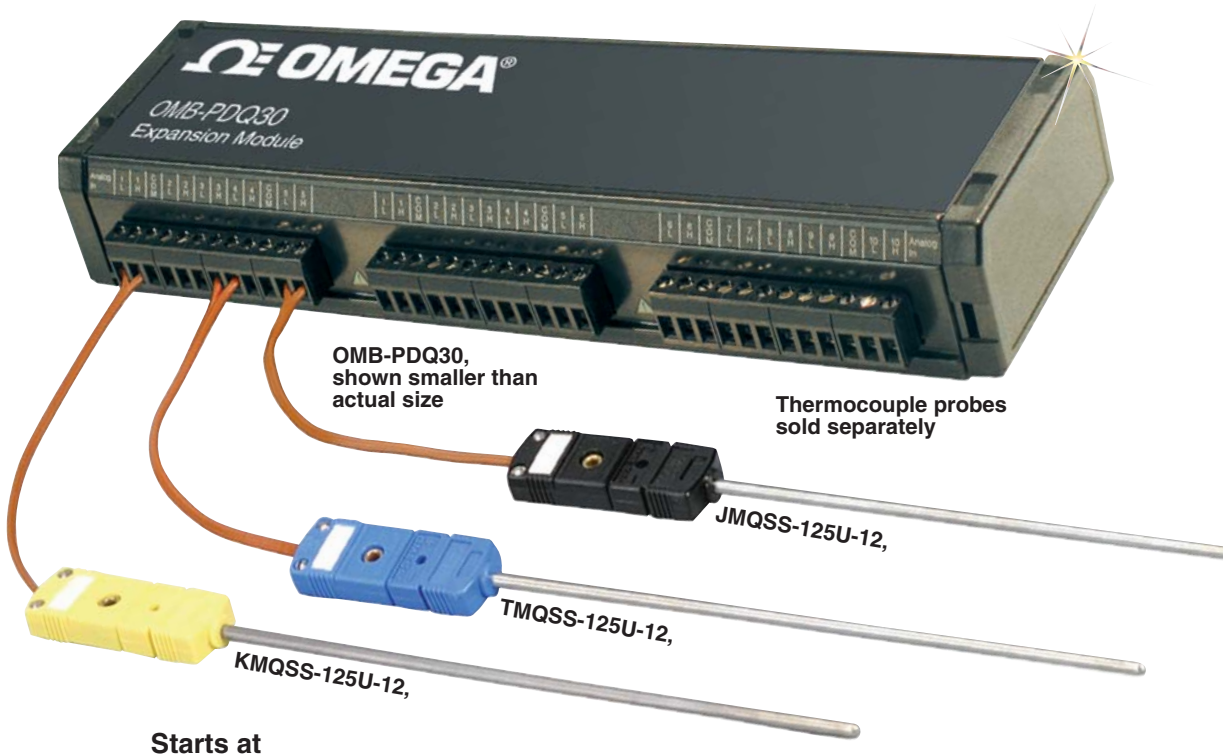


OMB-PDQ30

Analog Input Expansion Module for OMB-DAQ-3000 Series and OMB-DAQBOARD-3000 Series



Starts at



- ✔ Adds 24 Differential/48 Single-Ended Inputs to OMB-DAQBOARD-3000 Series PCI Boards and OMB-DAQ-3000 Series Personal Daq USB Data Acquisition Modules
- ✔ Any Input Can be a Voltage or a Thermocouple
- ✔ Convenient Removable Screw-Terminal Connections

The OMB-PDQ30 analog input expansion module increases total channel capacity of an OMB-DAQBOARD-3000 Series PCI bus data acquisition board or OMB-DAQ-3000 Series Personal Daq USB data acquisition module to a total of 32 differential or 64 single-ended analog inputs.

The OMB-PDQ30 attaches to an OMB-DAQBOARD-3000 Series board via an optional OMB-CA-266-3 cable, and to the OMB-DAQ-3000 Series either by plugging directly into the Personal Daq module with included clips, or via an optional OMB-CA-96 cable if it is necessary to have some distance between devices. Voltage measurements via the OMB-PDQ30 have the same ranges as the host OMB-DAQBOARD-3000 Series PCI board or OMB-DAQ-3000 Series Personal Daq USB module.

When used with either host, the OMB-PDQ30 also adds thermocouple measurement capability, in which the A/D operates in a programmable, over-sample/digital filtering mode to provide low-noise and stable temperature measurements.



TC TYPES AND ACCURACY ¹

Thermocouple	Temperature Range °C	Accuracy (±°C)	Noise (±°C)
J	-200 to 760	1.1	0.2
K	-200 to 1200	1.2	0.2
T	-200 to 400	1.1	0.2
E	-270 to 650	1.0	0.2
R	-50 to 1768	2.5	0.2
S	-50 to 1768	2.6	0.2
B	50 to 1780	3.3	0.2
N	-270 to 1300	1.5	0.2

¹ Assumes 256 average mode applied, CMV = 0.0V, 30 minute warm-up and 25°C ambient temperature. Excludes thermocouple errors.

Voltage Range*	Accuracy ± (% of Reading + % Range) 23°C ± 10°C, 1 year	Temperature Coefficient ± (ppm of Reading + ppm Range) /°C 0 to 13°C and 33 to 60°C	Noise** (cts RMS)
10 V	0.031% + 0.008%	14 + 8	2
5 V	0.031% + 0.009%	14 + 9	2
2 V	0.031% + 0.010%	14 + 10	2
1 V	0.031% + 0.012%	14 + 12	3
500 mV	0.031% + 0.018%	14 + 18	5
200 mV	0.036% + 0.012%	14 + 12	9
100 mV	0.042% + 0.018%	14 + 18	17

* Specifications assume differential input single channel scan, 1-MHz scan rate, unfiltered, CMV = 0.0V, 30 minute warm-up.

** Noise reflects 10,000 samples at 1-MHz, typical, differential short.

Specifications

GENERAL

Operating Temperature:

-30 to 70°C (-22 to 158°F)

Storage Temperature:

-40 to 80°C (-40 to 176°F)

Warm-Up: 30 min to rated specifications

Relative Humidity:

0 to 95%, non-condensing

Vibration: MIL STD 810E, category 1 and 10

Communications

Connector: 25-pin DSUB

Signal I/O Connector:

6 removable screw-terminal blocks (12 connections each)

Dimensions:

269 W x 92 D x 45 mm H
(10.6 x 3.6 x 1.6")

Weight: 400 g (0.88 lb)

Power: Supplied by

OMB-DAQBOARD-3000 Series PCI

board or OMB-DAQ-3000 Series

Personal Daq USB module;

400 mW max

ANALOG INPUTS

Channels: 48 single-ended inputs,

24 channels of differential inputs

Voltage Measurement Speed:

1 µs per channel

Temperature Measurement

Speed: Programmable from

100 µs to 20 ms per channel

Ranges: ±10 V, ±5 V,

±2 V, ±1 V, ±500 mV,

±200 mV, ±100 mV,

universal thermocouple

Total Harmonic

Distortion:

-80 dB typical for

±10 V range,

1 kHz fundamental

Signal to Noise

and Distortion:

72 dB typical for

±10 V range, 1 kHz

Fundamental

Input Impedance: 10 MΩ

(single-ended); 20 MΩ

(differential)

Bias Current:

40 pA typical (0 to 35°C)

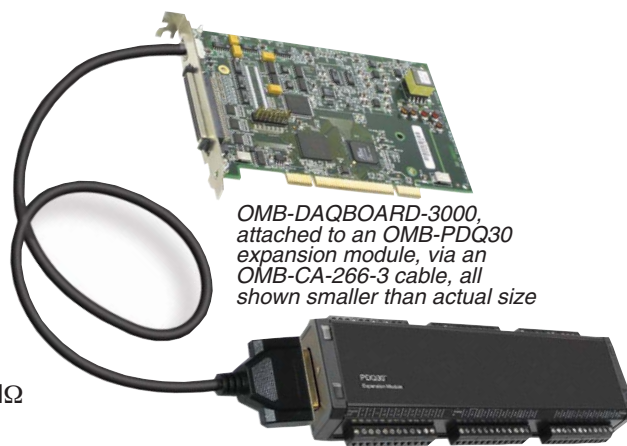
Over-Voltage

Protection: ±30 V

Ranges: Software or sequencer

selectable on a per-channel basis

Crosstalk: -90 dB DC to 60 Hz; 86 dB @ 10 kHz, typical



ALL MODELS AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)		
Model Number		Description
OMB-PDQ30		Analog input expansion module, adds 24DE/48SE channels to OMB-DAQ-3000 Series acquisition modules and OMB-DAQBOARD-3000 Series PCI bus data acquisition cards
OMB-CA-266-3		OMB-DAQBOARD-3000 Series to OMB-PDQ30 cable, 0.9 m (3')

Ordering Example: OMB-PDQ30 analog input expansion module and OMEGACARESM 1-year extended warranty (adds 1-year to standard 1-year warranty) for OMB-PDQ30,



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• Flow and Level

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