

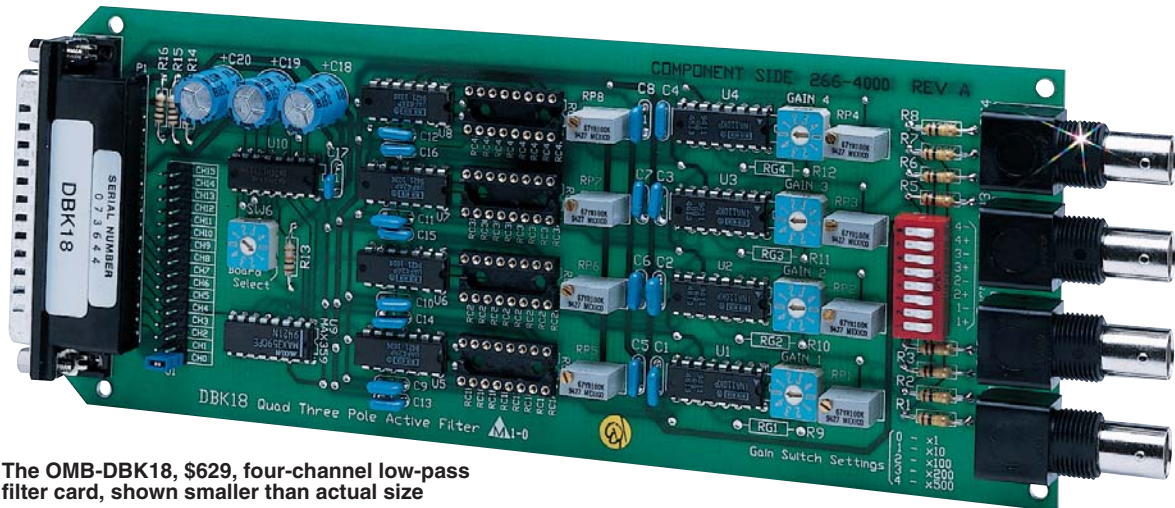
# OMB-DBK18

## 4-Channel Low-Pass Filter Card

### for Use with OMB-DAQBOARD-2000 Series and OMB-LOGBOOK Systems

Model OMB-DBK18

**\$629**



The OMB-DBK18, \$629, four-channel low-pass filter card, shown smaller than actual size

- ✓ Provides Four Independent Three-Pole Low-Pass Filter Channels
- ✓ Provides a Separate Instrumentation Amplifier Input Stage for Each Channel
- ✓ User-Configurable from DC to 50 kHz Cut-Off

The OMB-DBK18 low-pass filter card provides OMEGA's OMB-LOGBOOK and OMB-DAQBOARD-2000 Series data acquisition systems with four low-pass filters that can be individually configured for a cut-off frequency from DC to 50 kHz, and for Butterworth, Chebyshev or Bessel characteristics. Each OMB-DBK18 provides four channels of differential voltage input to an OMB-LOGBOOK and OMB-DAQBOARD-2000 Series. The systems' sixteen analog input channels can each accept four OMB-DBK18 cards, for a total of 256 analog input channels with low-pass filtering.

Each of the OMB-DBK18's four channels features an instrumentation amplifier with switch-selectable gains of x1, 10, 100, 200 and 500. Each channel is also equipped with a location for a user-selected gain resistor, allowing you to select a custom gain range of up to x500.

The OMB-DBK18's frequency-determined resistor and capacitor locations are on machined-pin IC sockets for maximum flexibility. The card is provided with blank plug-in headers for each channel, to which you can add passive components for particular frequencies.

The OMB-DBK18 is equipped with BNC input connectors. Its differential inputs are equipped with switchable 100 K bias resistors that are referenced to analog common.

#### Specifications

**Connector:** DB37 male, mates with P1 pinout on the OMB-LOGBOOK and OMB-DAQBOARD-2000 Series; signal inputs accepted via BNC connectors

**Number of Channels:** 4

**Number of Cards Addressable:** 64

**Input Type:** Differential  
**Voltage Input Ranges:**

- 0 to ±5 Vdc
- 0 to ±500 mVdc
- 0 to ±50 mVdc
- 0 to ±25 mVdc
- 0 to ±10 mVdc

**For Custom Gains:**

$$R_{\text{user}} = \frac{40,000}{\text{Gain}-1} - 80 \text{ (Ohms)}$$

**Input Amplifier Slew Rate:** 12 V/μs min

**Input Gains:** x1, 10, 100, 200, 500 and user determined up to 500

**Input Offset Voltage:** [500 + 5000/G] μV max (nullable)

**Input Offset Drift:** [±5 + 100/G] μV/°C max

**Input Impedance:** 5 x 10<sup>12</sup> Ohms parallel with 6 pF

**Gain Errors (max):**

x1	0.04%	x200	0.4%
x10	0.1%	x500	1.0%
x100	0.2%		

**Number of Poles/Filter:** 3  
**Types of Filters:** Bessel, Butterworth and Chebyshev

**Frequency Range:** 0.1 Hz to 50 kHz; the frequency is set by installation of 4 to 6 resistors and/or capacitors in the provided socket locations

**Cables:** Use OMB-CA-37-x with OMB-LOGBOOK and OMB-DAQBOARD-2000 Series

**AVAILABLE FOR FAST DELIVERY!**

#### To Order (Specify Model Number)

Model Number	Price	Description
OMB-DBK18	\$629	4-Channel Low-Pass Filter Card

Ordering Example: OMB-DBK18 is a 4-channel low-pass filter card, \$629.



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