

MODEL FLX-306

6-Channel Plug-In Filter/Amplifier Card

- **6 Channels per Card**
- **Differential/Single-Ended Input**
- **Common Mode Rejection: >80dB.**
- **Fixed Cutoff Frequency: Customer defined**
1Hz to 1MHz, Low-Pass
1Hz to 600kHz, High-Pass
- **Gain: Customer defined 1 to 10,000**
- **Plugs Into FLX-3007 Chassis**



DESCRIPTION

The FLX-306 Analog Filter/Amplifier Card is ideal for signal conditioning applications where Bessel or Butterworth filters are needed. A choice of high-pass, low-pass or band-pass filtering is available. Customer defined cutoff frequencies are from 1Hz to 1MHz (low-pass and band-pass) and 1Hz to 600kHz (high-pass), and also a choice of 6dB to 96dB/octave rolloff is provided for either filter type. The FLX-306 accepts input signals between $\pm 10V$. Because of its differential input configuration, the FLX-306 has a low noise of $10\mu V$ (referred to input). CMRR is $>80dB$ and signal-to-noise ratio is $>120dB$.

The differential input amplifier and output amplifier in each channel allow for resistor programmable gain from 1 to 100, for a total gain of 10,000 if needed. Maximum gain available is determined by the cutoff frequency and bandwidth of the filter selected.

Filter and amplifier characteristics are customer-defined in each channel, and may be changed at a later time by replacing the filter/amplifier plug-in 3F Filter/Amplifier Module for each channel.

The FLX-306 is one of many plug-in cards available for the FLX-3007, 7-slot chassis system.

SPECIFICATIONS

Specifications apply at $25^{\circ}C$, $\pm 5^{\circ}C$.

Number of Channels: 2, differential.

Input Amplifier Characteristics

Maximum Input: $\pm 10V$ peak.

Coupling: DC and AC, 0.8Hz.

Input Impedance: 150k ohm or greater.

CMRR: typically $>80dB$ to 1kHz.

Gain (customer defined): Any specified value 1-100, 3%.

Connectors: Screw terminal type.

Filter Characteristics

Input Type (customer defined): Butterworth or Bessel.

Function: Low-pass, high-pass or band-pass

Number of Poles (customer defined): 1 to 8 and 16.

Cutoff Frequency (customer defined): Any specified fixed between 1Hz to 1MHz, low-pass and band-pass; 1Hz to 600kHz, high-pass. Maximum frequency range is determined by max. gain selected, consult factory.

Passband Flatness: 10Hz to 200kHz, 0.2dB.

Output Amplifier Characteristics

Maximum Output Voltage: $\pm 10V_{peak}$.

Impedance: 50 ohms.

Gain (customer defined): Any specified value 1-100, 3%.

Maximum Common Mode Voltage: $(diff\ signal \times gain) + (V_{cm}) < \pm 10V$.

Output DC Offset Voltage: $< 1mV$.

Noise (input shorted): $10\mu V_{rms}$ typical, $20\mu V_{rms}$ max referred to input.

Noise Spectral Density (100Hz to 300kHz): $40nV/\sqrt{Hz}$ typical, $100nV/\sqrt{Hz}$ max.

Signal-to-Noise (7Vrms): $> 100dB$.

Connectors: Screw terminal type.

General

Power Consumption: -15V, 166ma; +15V, 225mA.

Operating Temperature: $0^{\circ}C$ to $+45^{\circ}C$.

Storage Temperature: $-25^{\circ}C$ to $+70^{\circ}C$.

Dimensions: 0.93" wide, 5" high, 10.5" deep.

Weight: 2 lbs.

Accessories

3F Series Modules: Plug-In Filter/Amplifier Modules.



Other FLX-3007 Chassis

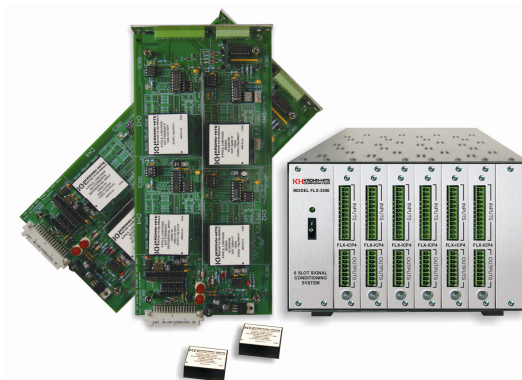
The FLX-3007 Chassis has a maximum of 7-slots. Other family of FLX cards available are:

FLX-ICP4: 4 Channel Differential Piezoelectric Sensor Filter/Amplifier Card.

FLX-302: 2 Channel Differential/Single-Ended Filter/Amplifier Card with BNC Connectors.

FLX-303: 3 Channel Single-Ended Filter Amplifier Card with BNC connectors.

FLX-700: High Gain Preamplifier Card.



Specifications subject to change without notice.