

AM102 Anti-Aliasing Filter

Assembly P/N 11027980

DESCRIPTION

The AM102 provides anti-aliasing filtering for other C&H M/MA modules. The accessory module attaches to specially designed host C&H M/MA modules. The AM102 utilizes a three stage Sallen-Key design in a butterworth configuration to provide a maximally flat band-pass response. The butterworth response is ideal for instrumentation applications that require minimum deviation throughout the band-pass.

The anti-aliasing filter is a 6-pole lowpass active filter with selectable cutoff frequencies. The 6-pole characteristics include a sharp knee at the cutoff frequency, followed by a roll off rate of 120 dB per decade. The AM102 can be configured to eight different cutoff frequencies

SPECIFICATIONS

Filter Characteristics

Filter type.....6th order butterworth
Passband ripple.....< 0.5 dB to $0.5 \times f_c$, < 0.7 dB to $0.7 \times f_c$
Stopband attenuation> 20 dB at $2 \times f_c$
Attenuation rate 120 dB/decade
DC offset< 20 mV

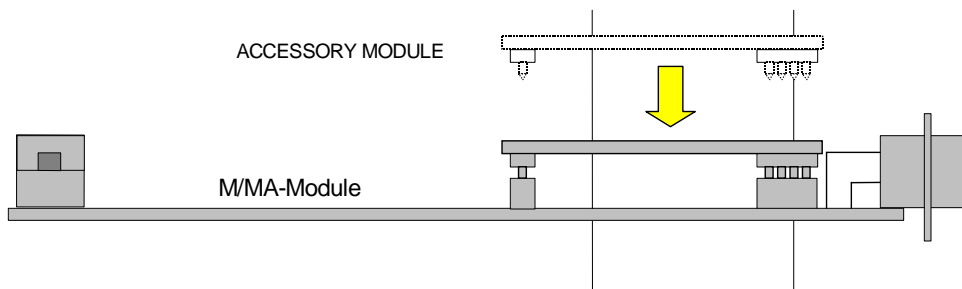
The AM102 uses the $\pm 12V$ power from the MA200.

The environmental specifications of the module are:

Operating Temperature:	0°C to +50°C
Storage Temperature:	-40°C to +70°C
Humidity:	<95% without condensation

INSTALLATION

To install AM102 to a MA200 through the 12-pin and 14-pin connectors as illustrated below.



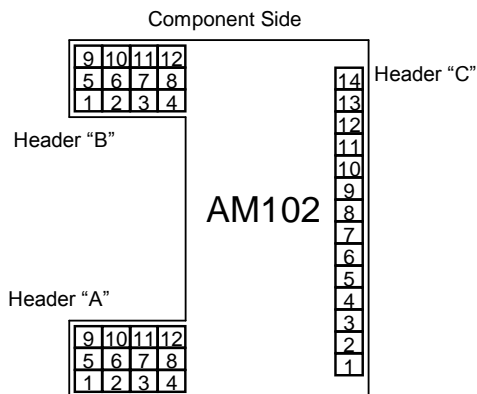
CONFIGURATION

The cutoff frequency selection is done through the connector signals AC0-AC2. These signals are controlled through the accessory module control register of the host M/MA module. The specific address and bit locations of this register can be found in the information on the host module.

AC2	AC1	AC0	Cutoff Frequency
0	0	0	48 KHz
0	0	1	32 KHz
0	1	0	24 KHz
0	1	1	16 KHz
1	0	0	2.4 KHz
1	0	1	1.6 KHz
1	1	0	240 Hz
1	1	1	160 Hz

I/O CONNECTOR

Header "A"		
Pin 11	=	GND
Pin 12	=	GND
Header "B"		
Pin 11	=	GND
Pin 12	=	GND
Header "C"		
Pin 1	=	SIGNAL IN
Pin 2	=	SIGNAL OUT
Pin 3	=	ENABLE
Pin 4	=	AC0
Pin 5	=	AC1
Pin 6	=	AC2
Pin 10	=	-12V
Pin 11	=	+12V
Pin 12	=	GND
Pin 13	=	SIGNAL OUT
Pin 14	=	GND



WARRANTY

C&H Technologies, Inc. warrants its modules to be free from defects in material and workmanship for three years from date of shipment. C&H will repair or replace the defective product without charge within the warranty period, provided the defective item is shipped, freight prepaid, to C&H Technologies, at 445 Round Rock West Drive, Round Rock, TX 78681. C&H will pay return freight charges to any point in the continental United States or Canada. Contact factory for full warranty statement.