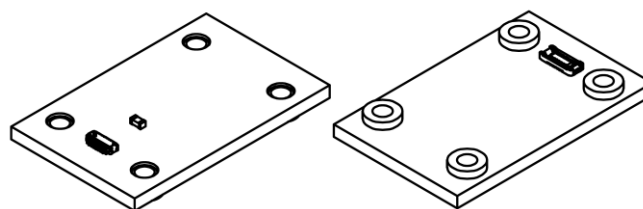


# AMS-100k-LPF

## PRELIMINARY DATASHEET

### Low pass filter for the AMS detection module series



#### FEATURES

Compatible with the [AMS3140-01](#) and [AMS6140-01](#)  
 Bandwidth: 100 kHz  
 Rapid prototyping and proof-of-concept development  
 Designed for easy integration with the AMS detection module series

#### GENERAL DESCRIPTION

The AMS-100k-LPF is an external low-pass filter for the AMS module series. It is designed to be an easy tool for rapid prototyping and proof-of-concept work when the default responsivity of the module is too low. The AMS-100k-LPF can be used as a “transparent” extension board that provides only filtering of the differential output signal. The functionality of the other signals remains unchanged. Besides connectors and mechanical spacer, the AMS-100k-LPF contains only one capacitor as shown in FIGURE 1.

#### CONNECTIVITY

There are two sockets placed on the board (see FIGURE 2). P1 is the interface to the AMS module. P2 acts as an output socket with a pinout exactly the same as on the AMS module.  
 The part number of P2 is the same as on the AMS module. Please check the datasheet of the [AMS module series](#) module for more details about pin functions.

#### ELECTRICAL DIAGRAM

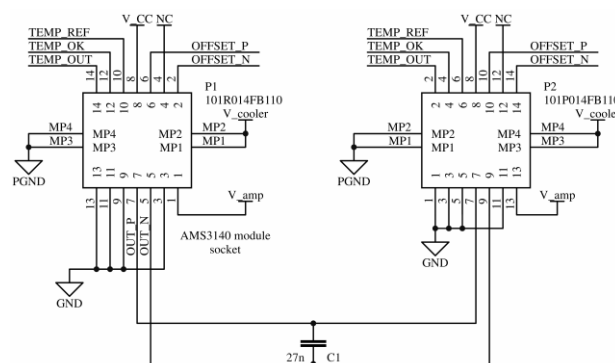


FIGURE 1. Schematic diagram of the AMS-100k-LPF

TABLE 1. P2 socket pin functions

Pin number	Symbol	Function
1, 3, 5, 11	GND	Signal and amplifier supply ground
7	OUT_AMP_P	Amplified positive signal output
9	OUT_AMP_N	Amplified negative signal output
12	NC	Not used. Leave floating
2	TEMP_OUT	Analog temperature output
4	TEMP_OK	Comparator output signal
6	TEMP_REF	Temperature reference voltage
13	V <sub>amp</sub>	Amplifier supply input
8	V <sub>cc</sub>	Internal supply voltage output
10	OFFSET_P	DC offset for positive signal output
14	OFFSET_N	DC offset for negative signal output
MP3, MP4	V <sub>cooler</sub>	Supply voltage input for the temperature controller
MP1, MP2	PGND	Ground path for temperature controller. Connect to GND

For more information please check the datasheet of the [AMS3140-01](#) module.

## MECHANICAL REQUIREMENTS

There are four spacers mounted on the PCB to keep the proper distance between the AMS module and AMS-100k-LPF.

Warning! The P1 socket is very sensitive to mechanical stress.

The AMS-100k-LPF has to be fixed to the AMS detection module with screws and nuts. Caution is required when assembling the adapter with the module.

## MECHANICAL LAYOUT

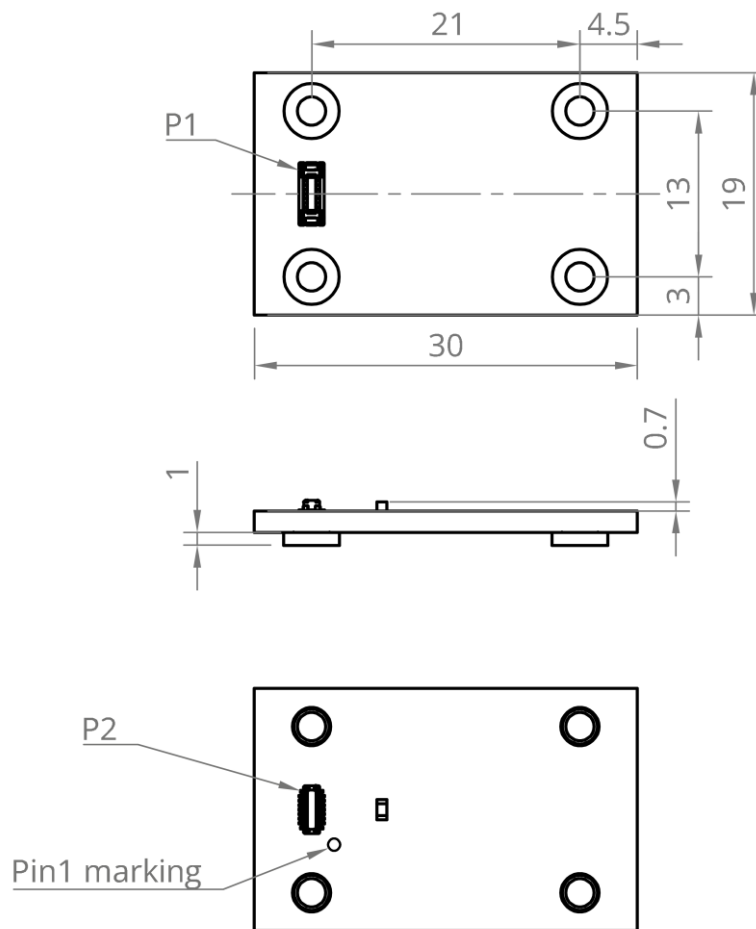


FIGURE 2. Dimensions of the AMS-100k-LPF (given in mm)