SiPM

Quick Start Guide

SiPM – Silicon Photomultiplier

PEBIAS
Bias Source

KETEK

Key Features Overview

- Benchtop Bias Supply for any KETEK SiPM
- Switchable Polarity, 20 V – 40 V output
- Switchable Current Limit 2 mA / 20 mA
- Low Output Voltage Ripple < 2 mV rms
- Bias Voltage Regulation by Potentiometer
- International Power Supply included

Introduction

The KETEK SiPM Bias Source powers all KETEK Silicon Photomultipliers. It is an ideal addition to the KETEK SiPM Evaluation Kit and can be used with any single KETEK SiPM or KETEK SiPM Array.

Safety

This document contains some information and warnings which have to be followed by the user to ensure safe operation and to retain the instrument in a safe condition.
The KETEK SiPM Bias Source is intended for evaluation purposes only. It has been designed for indoor use in laboratory environment for a temperature range 5°C to 40°C, 20% - 80% RH (non-condensing). Do not operate while condensation is present.
Use of the the KETEK SiPM Bias Source in a manner not specified by these instructions may impair the safety protection provided. Do not operate it outside its rated supply voltages or environmental range.
When the KETEK SiPM Bias Source is connected to its supply, the Bias Output is live. Opening the covers or removal of parts exposes live parts. It must be disconnected from all voltage sources before it is opened for any adjustment, replacement, maintenance or repair which may be only carried out by a trained person who is aware of the hazard involved.

Caution

This product is intended for evaluation purposes only. Therefore it is to be handled only by trained personnel in a laboratory environment.

Specifications

Preamplifier Specifications

Parameter	Specification
Power Input	12 V DC
Output Voltag	20 V – 40 V, SMA type
Output Current Limit	2 mA or 20 mA, switchable
Output Polarity	Positive or negative, switchable
Output Ripple	Y 2 mV rms
Operating Range	+5°C to 40°C
EMC Norm	EN 61326:2013
EMC Specification	EN 55011, class B
EMC Frequency Range	30 MHz to 1 GHz
Dimensions	71 x 57 x 18 mm^3 (L x W x H)
Power Adapter Input	90 V – 264 V AC, 47 – 63 Hz
Power Adapter Output	12 V DC, 0.85 A
Power Adapter Specification	Meets CEC + ErP Level V

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RoHS Compliant
CE EN 61326 EN 61000
ISO 9001

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Front and Rear Panel Connections

The front and rear panels with their corresponding controls are shown in fig. 1a and 1b.
As soon as the Bias Source is powered the green Power On LED lights up and the Bias Output is switched on.
The bias voltage is set with a screwdriver at the potentiometer and can be measured e.g. with a multimeter to adjust the required value.
The Current Limit LED is only lit in case the set current limit is reached. All controls can be switched while the power is on.

Fig. 1a
PEBIAS Front Panel

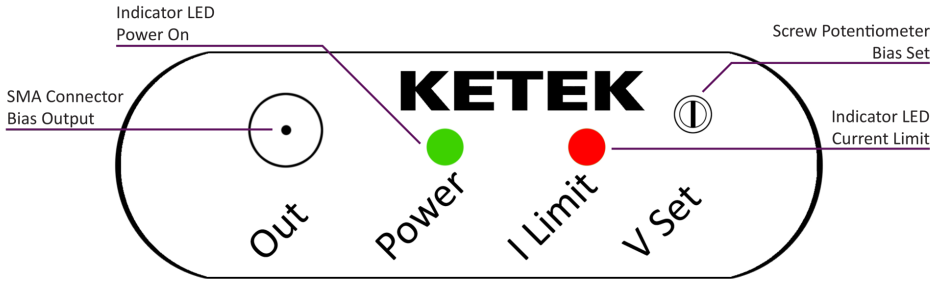
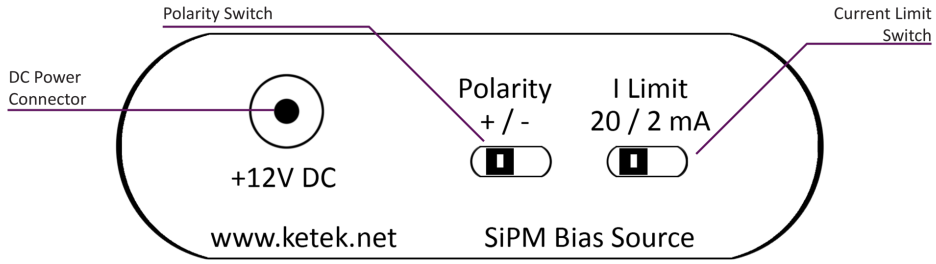


Fig. 1b
PEBIAS Rear Panel



Revision History

Revision and Date	Changes
Rev. 2020-B April 2020	Updated design and layout
Rev. 2016-A July 2016	Initial Release

Important Notice

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