High Voltage Modules

- Slim design
- Precise output voltage
- Short circuit protected
- Output voltage monitor
- Logical on/off switch
- Optional temperature compensation

The HV-modules made by m-u-t are designed for driving Avalanche photodiodes, photomultiplier, laserdiodes, piezo actors and similar products which require operating voltages up to 3KV.

High precision output voltage control

Depending on the selected HV-module, the output voltage can be adjusted from 50 V to 3 kV either positive or negative. With the short circuit resistant output voltage monitor, the output voltage can be controlled within limits of ± 0.1%. This high stability of the output voltage ensures precise operation of the connected devices.

Short circuit resistant output current

The output current is limited to 0.2 mA or 1mA. For all HV-modules the output current is limited to 103 % specified max current to protect the HV module and the electronic module behind it against short circuit events.

Electronic on/off switch

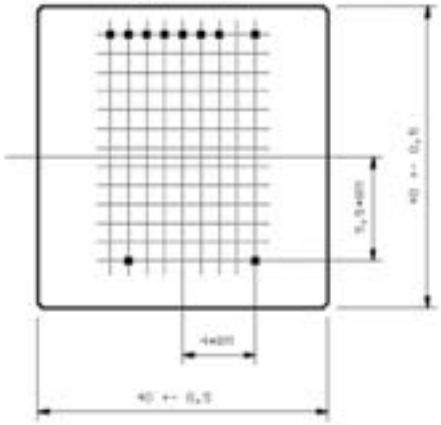
The HV modules have an inhibit port for shutting down the output voltage if required. This is an open port which can be connected either to a mechanical switch or any digital signal. Closing the port will shut down the output voltage.

Temperature compensation for APDs

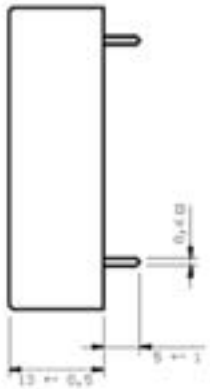
Avalanche photodiodes require a temperature compensation for perfect operation. m-u-t offers a modified HV module for that purpose, integrating a temperature compensation circuit. These ABC-modules come with an external SI-temperature sensor, and they also can be operated with temperature sensors which are installed inside the APD module.

Top view

Bottom view



Side view



Precise and protected control voltage

The output voltage is set by a control voltage with ± 0.1 % precision. This control voltage, ranging from 0 V to 5 V, is protected against overvoltage, which also protects the output voltage.

Technical Specifications

General	
Operating voltage	+12 V - +15 V
Control voltage	0 V - +5 V (0 V - 3 V for ABC-Module)
Monitoring voltage	0 V - +5 V
Stability at full load	10 - 30 mV/V
Correction time (0.1%)	800 ms
Storage temperature	-20° C - +85° C
Operating temperature	0° C - +50° C
Dimensions (w x h x d)	40 mm x 10 mm x 40 mm
Weight	34 g

Individual Specifications HV-modules

	HV 1000-41	HV 1200-41	HV 1200-43	HV 3200-42
Output voltage	30 V - 1000 V	50 V - 1200 V	100 V - 1250 V	100 V - 3200 V
Polarity	-	-	-	+
Max. output current	2 mA	1 mA	1 mA	0.15 mA

Individual specifications AC-modules

	ABC 550-01	ABC 550-02
Output voltage	10 V - 550 V	10 V - 550 V
Polarity	+	+
Max. output current	2 mA	2 mA
Temperature sensor	PTC	SI-P-N Diode

Part numbers	
30-104 633	HV 1000-41
30-106 015	HV 1200-41
30-105 565	HV 1200-43
30-105 380	HV 3200-42
30-104 427	ABC 550-01
30-104423	ABC 550-02

HV-Module-e 1.0

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