

DPx - Mini - Precision High Voltage Module

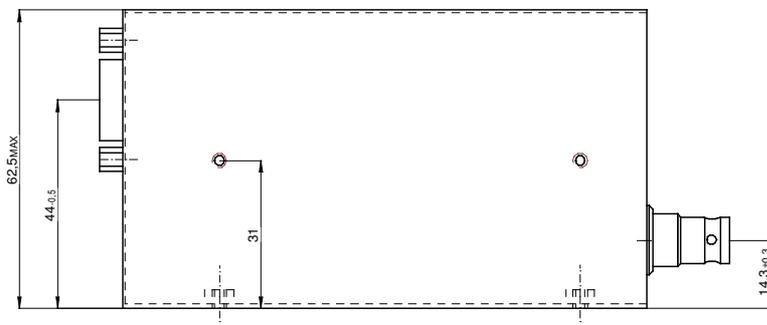
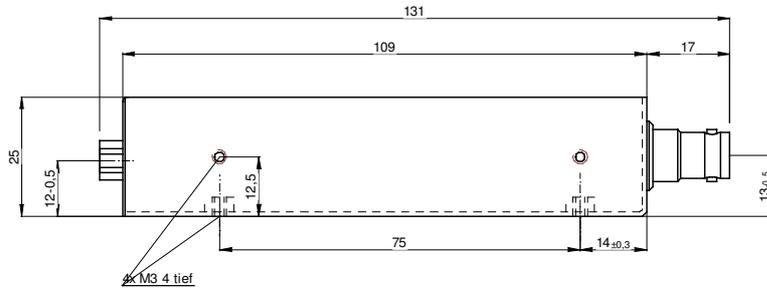
Technical Data DPx ¹⁾ vv iii 24 5 M ²⁾ iii	05 156	10 805	20 405	30 305	40 205	60 105	80 105	100 504
V _{nom}	500 V	1 kV	2 kV	3 kV	4 kV	6 kV	8 kV	10 kV
I _{nom}	15 mA	8 mA	4 mA	3 mA	2 mA	1 mA	1 mA	0.5 mA
Ripple and noise V _{p-p}	typ. < 10 mV					< 30 mV		
Polarity (factory fixed)	¹⁾ x = n : negative (related to GND) ¹⁾ x = p : positive (related to GND)							
V _{in}	24 V-DC ± 5% / < 0,8 A (V _{out} = 0 ; I _{out} = 0: < 50 mA)							
Stability	ΔV_{out} ($\Delta V_{IN} \pm 5\%$ or load to no load) < $1 * 10^{-5} * V_{nom}$							
Temperature coefficient	< $5 * 10^{-5}/K$							
Temperature range	operating: -20°C to +40°C				storage: -20°C to +85°C			
Control and Remote control with	direct coupled analogue I/O with V _{set/mon} = 0 to 5 V							
HV output	- ²⁾ S : built-in SHV-connector (up to 8 kV) / KINGS-connector (10 kV) - optional ²⁾ K: Lemo HV-cable, shielded (LEMO 9106330 / 130660), - short-circuit and overload protection							
HV return	- connector exterior side or shield of cable, metal box is connected to GND							
Attention ! Only one short circuit or arc per second allowed! The integral output current must be externally limited to the nominal output current of the module otherwise.								
9-pin male D-Sub connector								
PIN	Name	Description						
1	0V	Power 0V (internal connected to GND)						
2	IMON	Monitor voltage corresponding I _{out} $I_{out}= 0$ to $I_{nom} \pm 1\% \Rightarrow I_{mon} = 0$ to 5V (R _i = 10 kΩ)						
3	INH	INHIBIT (TTL level, LOW=active $\Rightarrow V_{out} = 0$) HIGH or n.c. $\Rightarrow V_{out}$ according to V _{set})						
4	ISET	$I_{set} = 0$ bis 5V $\Rightarrow I_{out} = 0$ to $I_{nom} \pm 1\%$ I_{set} internally connected to V _{ref} via 10 kΩ						
5	+ VIN	+ 24V						
6	GND	Signal GND						
7	VMON	Monitor voltage corresponding V _{out} $V_{out}= 0$ to $V_{nom} \pm 1\% \Rightarrow V_{mon} = 0$ to 5V (R _i = 10 kΩ)						
8	VSET	Set voltage: $V_{set} = 0$ to 5V (R _i = 1 MΩ) $\Rightarrow V_{out} = 0$ to $V_{nom} \pm 1\%$						
9	REF	V _{ref} = 5 V ± 1% (1 mA) Internal reference voltage for an external pot.(Sliding contact on VSET or ISET)						

Mounting instruction

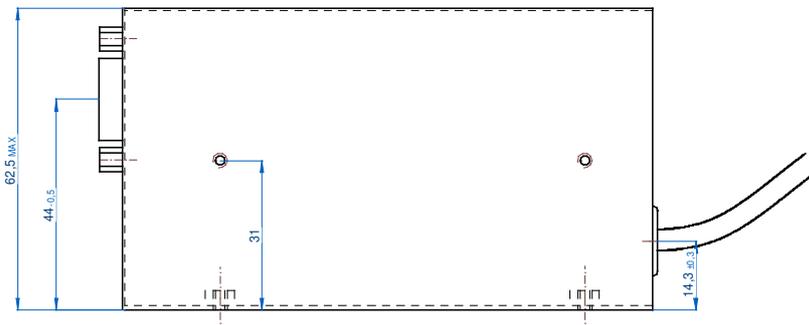
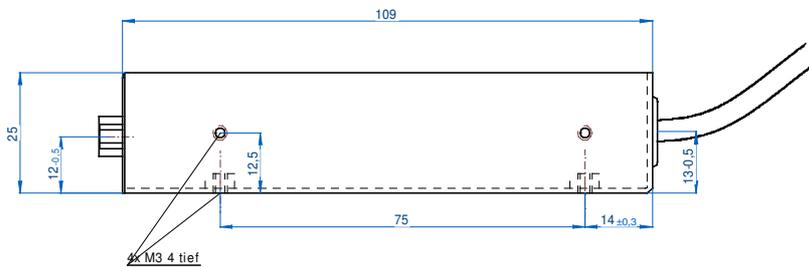
The module can be mounted with two screws M3 (screw-in depth max. 4 mm!) in horizontal or upright position (for position of the insert nuts see dimensions).

The power loss is dissipated via the module base (109 x 62,5 resp. 98 x 74 mm²). If the module is mounted on this base, a small thermal contact resistance between base and assembling plane must be ensured!

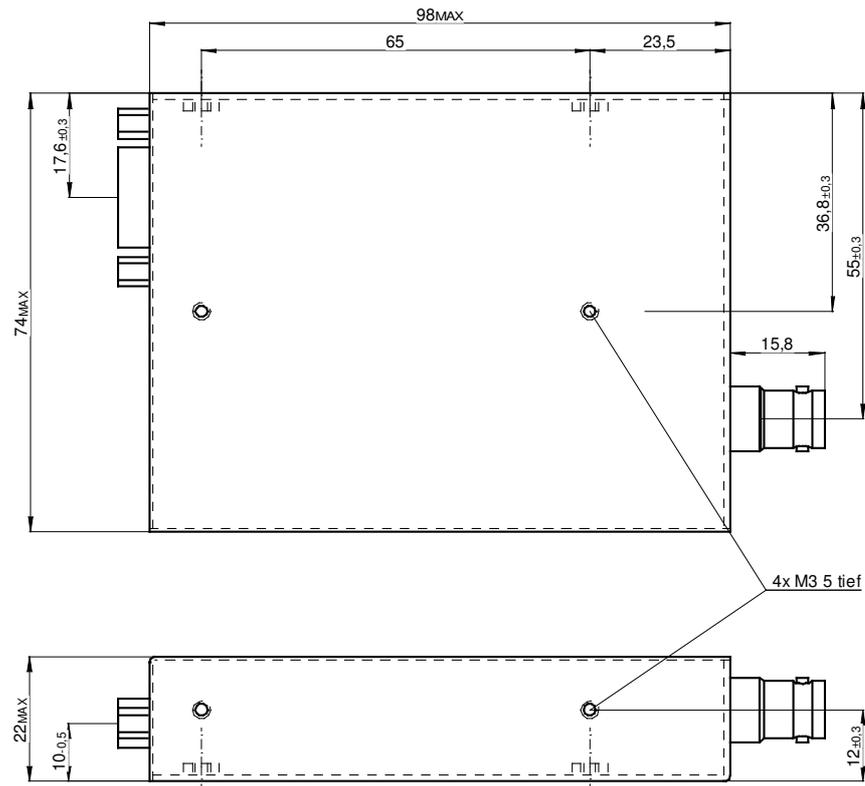
Dimensions



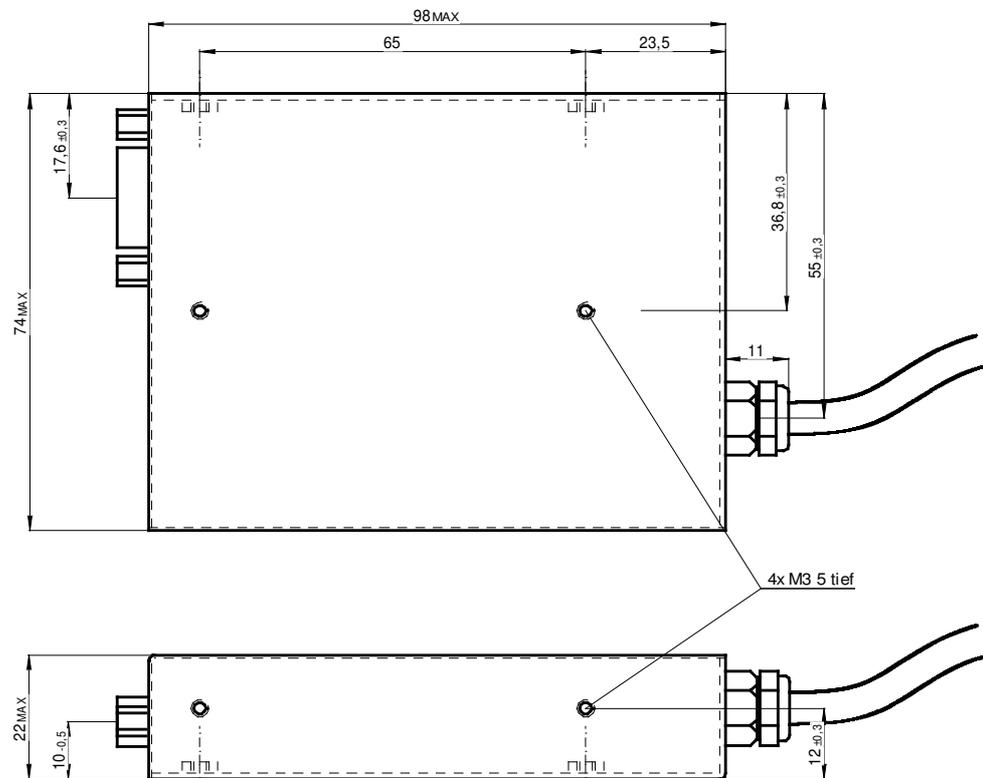
Dimensions $500 \text{ V} \leq V_{\text{nom}} \leq 6 \text{ kV} / \text{S (SHV)}$



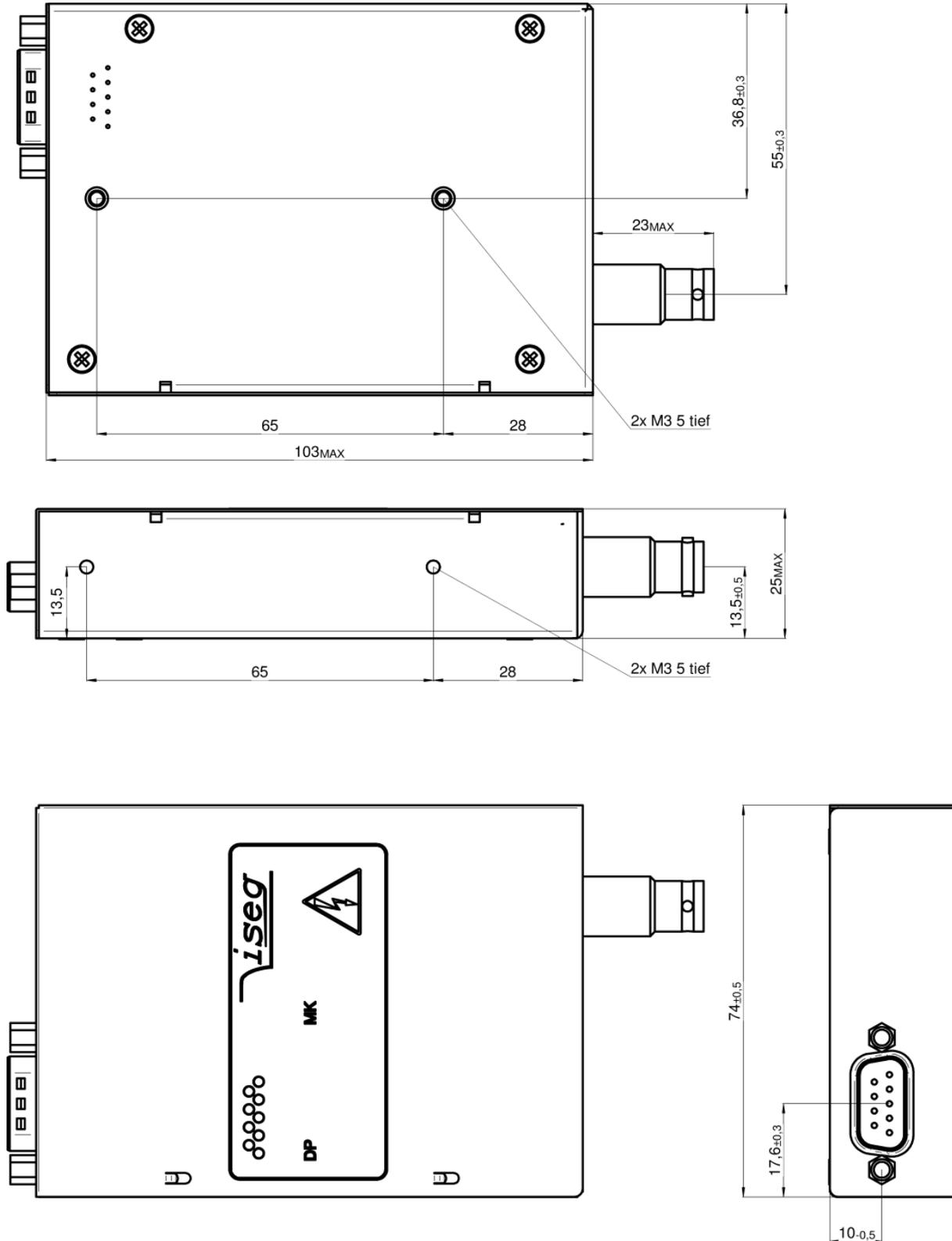
Dimensions $500 \text{ V} \leq V_{\text{nom}} \leq 6 \text{ kV} / \text{K (cable)}$



Dimensions $V_{nom} = 8 \text{ kV} / \text{S (SHV)}$



Dimensions $8 \text{ kV} \leq V_{nom} \leq 10 \text{ kV} / \text{K (cable)}$



Dimensions $8 \text{ kV} \leq V_{\text{nom}} \leq 10 \text{ kV} / \text{S (KINGS)}$

The information in this manual is subject to change without notice. We take no responsibility whatsoever for any error in the document. We reserve the right to make changes in the product design without reservation and without notification to the users.

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