

High Voltage Power Supply EPS series 150 W

Technical data	EPX ¹ 10 157 24 5	EPX ¹ 20 756 24 5	EPX ¹ 40 406 24 5	EPX ¹ 80 206 24 5	EPX ¹ 120 126 24 5	EPX ¹ 150 106 24 5	EPX ¹ 200 755 24 5	EPX ¹ 300 505 24 5	
V _{nom} [kV]) ¹ X = p:	+ 1	+ 2	+ 4	+ 8	+ 12	+ 15	+ 20	+ 30
) ¹ X = n:	- 1	- 2	- 4	- 8	- 12	- 15	- 20	- 30
I _{nom} [mA]	150	75	40	20	12,5	10	7,5	5	
Internal capacitor [nF]	1100	600	55	45	20	18	9,5	2,6	
Damping resistor [kΩ]	0,1	0,1	0,3	1	6	6	10	10	
Discharge resistor [MΩ]	8,5	8,5	27,5	250	330	330	330	330	
Ripple & noise (f > 10 Hz)	< 0,5 V _{P-P}	< 0,8 V _{P-P}	< 2 V _{P-P}	< 4 V _{P-P}	< 5 V _{P-P}	< 6 V _{P-P}	< 5 V _{P-P}	< 15 V _{P-P}	
Stability	$< 2 * 10^{-4} * V_{nom} \quad (\Delta R_{LOAD})$				$< 1 * 10^{-4} * V_{nom} \quad (\Delta V_{IN})$				
Accuracy	$\pm 1 \% * V_{nom}$				$\pm 1 \% * I_{nom}$				
Temp. coefficient	$2 * 10^{-4}/K$								
Errors (stored)	<ul style="list-style-type: none"> - Supply over and under voltage, over temperature, energizing the power supply without activation the Inhibit signal - Errors can be reset by activating Inhibit (pin 3 of AIO -> low) 								
Attention !	<ul style="list-style-type: none"> - Over voltage protection - Internal temperature monitoring with over temperature switching-off, - INHIBIT signal for switching-off the high voltage generation immediately - Protection against inadvertent activation the high voltage generation after energizing the power supply 								
There is only one short circuit or arc per second allowed!									

High Voltage Power Supply EPS C-CHARGER series 150 W

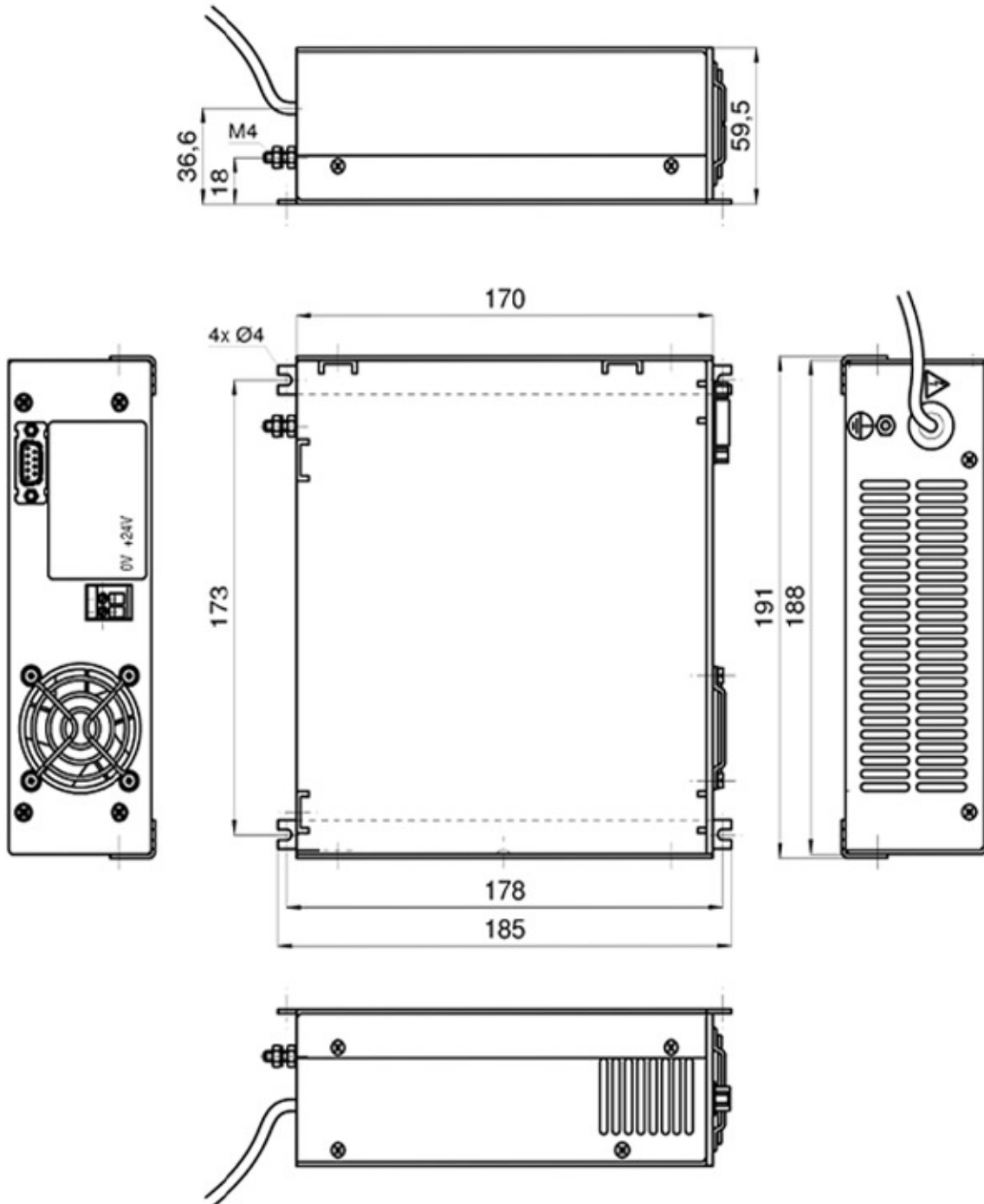
C-charger: charging with $I_{OUT} = \text{constant}$ according V_{I_SET} up to V_{V_SET}

Technical data	EPX ¹⁾ 10 157 24 5_CLD	EPX ¹⁾ 20 756 24 5_CLD	EPX ¹⁾ 40 406 24 5_CLD	EPX ¹⁾ 80 206 24 5_CLD	EPX ¹⁾ 120 126 24 5_CLD	EPX ¹⁾ 200 755 24 5_CLD	EPX ¹⁾ 300 505 24 5_CLD	
V_{nom} [kV]	¹⁾ $x = p:$	+ 1	+ 2	+ 4	+ 8	+ 12	+ 20	+ 30
	¹⁾ $x = n:$	- 1	- 2	- 4	- 8	- 12	- 20	- 30
I_{nom} [mA]	150	75	40	20	12,5	7,5	5	
Internal capacitor [nF]	220	200	13,6	7,5	3,5	2,8	1,1	
Damping resistor [kΩ]	0,11	0,4	1	4	4	10	10	
Discharge resistor [MΩ]	24	8,5	28	250	330	330	330	
Ripple and noise	< 3% * V_{nom} on resistive load at nominal load							
Accuracy	$\pm 1 \% * V_{nom}$			$\pm 1 \% * I_{nom}$				
Repeat accuracy	< 1 % * V_{nom}							
Temp. coefficient	$2 * 10^{-4}/K$							
Errors (stored)	<ul style="list-style-type: none"> - Output over voltage, supply over and under voltage, over temperature, energizing the power supply without activation the Inhibit signal - Errors can be reset by activating Inhibit (pin 3 of AIO -> low) 							
Protection	<ul style="list-style-type: none"> - Over voltage protection with switching-off the high voltage generation - Internal temperature monitoring with over temperature switching-off, - INHIBIT signal for switching-off the high voltage generation immediately - Protection against inadvertent activation the high voltage generation after energizing the power supply 							
Attention !	<ul style="list-style-type: none"> - There are only 5 short circuits or arcs per second allowed!. 							

General technical data	
V_{IN}	(21 - 29) V-DC / max. 9 A (see 2-pin screw terminal)
Control	<ul style="list-style-type: none"> - with built-in analog I/O (V_{SET} and V_{MON}) - with signal HV-ON or HV-OFF: <ul style="list-style-type: none"> • EPS: High voltage switching-on or -off with ramp (4s up to V_{OUTnom}) • EPS C-Charger: High voltage switching-on or -off without ramp
Operating temperature	-25°C up to +65°C under full load conditions !
Storage temperature	-30°C up to +85°C
Cooling	Forced cooling with integrated fan It is not allowed to cover any air input or output slots!
HV output	Shielded HV cable, length 600 mm
Dimension (W/H/D)	Metal box : (188/60/170) mm without assembly bracket
2-pin screw terminal	Right pin: PWR_+ 24V Left pin: PWR_0V (internal connected with V_{SIG_0V} and GND, LOW potential)
Earth connection /GND	Screw bolt M4 on the rear

Analog interface (AIO), male D-SUB-9 connector			
Pin	Name	Description	
Pin 1	GND	0 V	connected with GND and 0 V supply
Pin 2	IMON	Monitor output current	$I_{out} = 0$ to I_{nom} $\Rightarrow V_{MON_I} = 0$ to $5\text{ V}^{1)}$
Pin 3	INH	HV inhibited / enabled error reset	TTL level low, activ 0 V – 1 V high, inactiv 3.5 V – 10 V or open
Pin 4	ISET	Set value output current	$V_{SET_I} = 0$ to $5\text{ V}^{1)}$ $\Rightarrow I_{out} = 0$ to I_{Nom}
Pin 5	ON	HV on / off	TTL level low, HV on 0 V – 1 V high, HV off 3.5 V – 10 V or open
Pin 6	0V	Return of pins 2-9	connected with GND and 0 V supply
Pin 7	VMON	Monitor output voltage	$V_{out} = 0$ to V_{nom} $\Rightarrow V_{MON_V} = 0$ to $5\text{ V}^{1)}$
Pin 8	VSET	Set value output voltage	$V_{SET_V} = 0$ to $5\text{ V}^{1)}$ $\Rightarrow V_{out} = 0$ to V_{nom}
Pin 9	REF	reference voltage	$V_{Ref} = 5.0\text{ V}^{1)}$ at 10 k Ω load

¹⁾ optional 10 V



We reserve the right to make changes in the product design without reservation and without notification to the user.
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