

High Voltage Power Supply EPS series 60 W

Technical data	EPX ¹ 05 127 24 5	EPX ¹ 10 606 24 5	EPX ¹ 15 406 24 5	EPX ¹ 20 306 24 5	EPX ¹ 30 206 24 5	EPX ¹ 40 156 24 5	EPX ¹ 50 126 24 5	EPX ¹ 60 106 24 5	EPX ¹ 80 705 24 5	EPX ¹ 100 505 24 5
V _{OUTnom} [kV] ¹ X = p:	+ 0.5	+ 1	+ 1.5	+ 2	+ 3	+ 4	+ 5	+ 6	+ 8	+ 10
	¹ X = n:	- 0.5	- 1	- 1.5	- 2	- 3	- 4	- 5	- 6	- 8
I _{OUTnom} [mA]	120	60	40	30	20	15	12	10	7	5
Internal capacitor [nF]										
Damping resistor [kΩ]										
Discharge resistor [MΩ]										
Ripple & noise (f > 10 Hz) [V _{P-P}]	< 0.25	< 0.5	< 0.75	< 1	< 1.5	< 2	< 2.5	< 3	< 4	< 5
Stability	$< 2 * 10^{-4} * V_{nom} \quad (\Delta R_{LOAD})$					$< 1 * 10^{-4} * V_{nom} \quad (\Delta V_{IN})$				
Accuracy of nominals	$\pm 1 \% * V_{OUTnom}$					$\pm 1 \% * I_{OUTnom}$				

We reserve the right to make changes in the product design without reservation and without notification to the user.
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High Voltage Power Supply EPS C-CHARGER series 60 W

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

Technical data	EPX ¹⁾ 05 127 24 5_CLD	EPX ¹⁾ 10 606 24 5_CLD	EPX ¹⁾ 15 406 24 5_CLD	EPX ¹⁾ 20 306 24 5_CLD	EPX ¹⁾ 30 206 24 5_CLD	EPX ¹⁾ 40 156 24 5_CLD	EPX ¹⁾ 50 126 24 5_CLD	
V_{OUTnom} [kV]	¹⁾ X = p:	+ 0.5	+ 1	+ 1.5	+ 2	+ 3	+ 4	+ 5
	¹⁾ X = n:	- 0.5	- 1	- 1.5	- 2	- 3	- 4	- 5
I_{OUTnom} [mA]	120	60	40	30	20	15	12	
Internal capacitor [nF]								
Damping resistor [kΩ]								
Discharge resistor [MΩ]								
Technical data	EPX ¹⁾ 60 106 24 5_CLD	EPX ¹⁾ 80 705 24 5_CLD	EPX ¹⁾ 100 505 24 5_CLD	EPX ¹⁾ 150 405 24 5_CLD	EPX ¹⁾ 200 305 24 5_CLD	EPX ¹⁾ 300 205 24 5_CLD		
V_{OUTnom} [kV]	¹⁾ X = p:	+ 6	+ 8	+ 10	+ 15	+ 20	+ 30	
	¹⁾ X = n:	- 6	- 8	- 10	- 15	- 20	- 30	
I_{OUTnom} [mA]	10	7	5	4	3	2		
Internal capacitor [nF]								
Damping resistor [kΩ]								
Discharge resistor [MΩ]								
Ripple & noise	< 3% * V_{nom} on resistive load at nominal load							
Accuracy of nominals	$\pm 1\% * V_{OUTnom}$			$\pm 1\% * I_{OUTnom}$				
Repeat accuracy	< 1% * V_{OUT}							

General technical data	
Temperature coefficient	$2 * 10^{-4}/K$
Protection	<p>- Output short-circuit and overload protection</p> <p>- Internal temperature control</p> <p>If using EPS:</p> <p>- INHIBIT signal = active: High voltage switching-off without ramp (switching-on with ramp)</p> <p>- Attention ! There is only one short circuit or arc per second allowed! The integral output current must limited to the max. output current of the module external otherwise.</p> <p>If using EPS C-Charger:</p> <p>- INHIBIT signal = active: High voltage switching-off without ramp (switching-on without ramp)</p> <p>- Attention ! Please shut off the high voltage generation with this signal before you will start the discharge!</p>
V_{IN}	(22,8 – 26,4) V-DC / max. 9 A (see 2-pin screw terminal)
Control	<p>- with built-in analog I/O (V_{SET} and V_{MON})</p> <p>- with signal HV-ON or HV-OFF:</p> <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	0 °C up to +50 °C under full load conditions !
Storage temperature	-20 °C up to +60 °C
Cooling	<p>Convection cooling must be sufficient under load conditions !</p> <p>There must not be any covers at points of airflow!</p>
HV output	Shielded HV cable, length 600 mm
Dimension (W/H/D)	Metal box : (108/57/185) mm
2-pin screw terminal	<p>Left pin: PWR_+ 24V Right pin: PWR_0V (internal connected with V_{SIG_0V} and GND, LOW potential)</p>

PIN	Name	Description 9-pin D-Sub connector
1	GND	GND (internal connected with V _{SIG_0V} and Power_0 V, LOW potential)
2	IMON	Monitor voltage corresponding I _{OUT} : I _{OUT} = 0 to I _{OUTnom} ± 1 % ⇒ V ₂₋₆ = 0 to 5 V
3	INH	TTL level, LOW = active ⇒ V _{OUT} = 0 HIGH (or nc.) ⇒ V _{OUT} according V_V _{SET}
4	ISET	Setting current: V ₄₋₆ = 0 to 5 V ⇒ I _{OUT} = 0 to I _{OUTnom} ± 1 % (R _i = 100 kΩ) n.c.: I _{OUTnom} is possible I _{OUTnom} isn't internal limited! If V ₄₋₆ > 5 V ⇒ I _{OUT} > I _{OUTnom} is available ! Please don't use V₄₋₆ > 5 V!
5	ON	TTL level, LOW ⇒ V _{OUT} according V_V _{SET} HIGH (or nc.) ⇒ V _{OUT} = 0
6	GND	Signal 0 V (internal connected with PWR_0V and GND)
7	VMON	Monitor voltage corresponding V _{OUT} : V _{OUT} = 0 to V _{OUTnom} ± 1 % ⇒ V ₇₋₆ = 0 to 5 V
8	VSET	Setting voltage: V ₈₋₆ = 0 to 5 V ⇒ V _{OUT} = 0 to V _{OUTnom} ± 1 %
9	REF	V ₉₋₆ = 5 V (1 mA) Reference voltage for an external potentiometer (Sliding contact on V_V _{SET} or V_I _{SET})

