

From 6 kJ/s up to 15 kJ/s  
From 10 kV up to 50 kV



High Voltage Products. High Voltage Experts.

ACRX  
Series

## HV capacitor charging power supplies



*Instrumented version*



*Non-instrumented version*

• SPACE • AERONAUTICS • MILITARY • MEDICAL • NUCLEAR •

## Technical specifications

Characteristics	Values		
Input voltage	400 V <sub>AC</sub> or 480 V <sub>AC</sub> / 3 phases without neutral		
Output power	6, 8, 10, 12, or 15 kJ/s		
Output voltage	10 kV, 15 kV, 20 kV, 25 kV, 40 kV or 50 kV		
Polarity	Positive	Negative	Floating (Up to 10 kV)
Inrush current	$< 3 \times I_{\text{nominal}}$ (for up to 100 ms maxi)		
Efficiency	$> 85\%$		
Monitoring accuracies	$\pm 0,5\%$ of the full scale		
Output voltage programming	10 to 100% of the full scale		
Storage temperature	0°C to 85°C (30°F to 185°F)		
Operating temperature	$+ 10^{\circ}\text{C}$ to $35^{\circ}\text{C}$ (50°F to 95°F)		
Humidity	40% to 90%, non-condensing		
EN standards	Safety requirements: EN 61010-1 : 2001 EMC Emission: EN 61000-6-4 : 2001 EMC Immunity: EN 61000-6-2 : 2001		
Warranty	2 years for normal operating conditions		



## Human Machine Interface

The power supplies can be operated in remote mode (0-10V program and monitor). The analog programming, analog monitoring, faults and controls are available on the 25 pins Sub-D connector. On the front panel, lights are available to indicate the power supplies status.



### RS 232 / Ethernet

Using the switch located on the front panel, it is possible to control the charger in using the SUB-D connector 9 points (RS 232) or the connector RJ-45 (Ethernet).

### Optical links

An outer housing converts information in the lighting form. Optical fibers connecting the charger to the housing guarantee immunity against parasites and insulation between power and electrical control.



## Current regulation

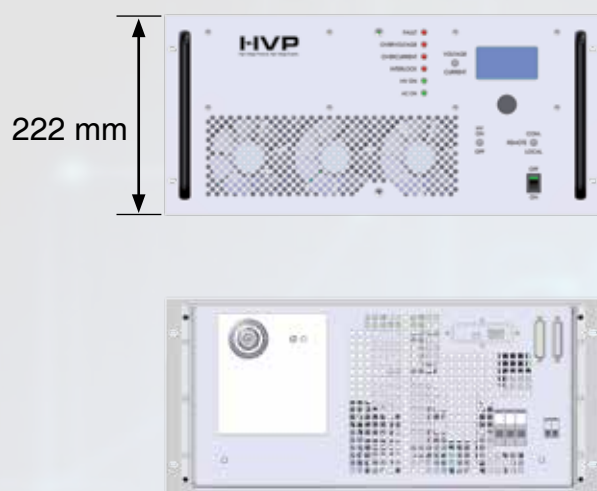
This option allows to adjust the charging current.

The power supply can be used with a constant current independently of the input voltage.

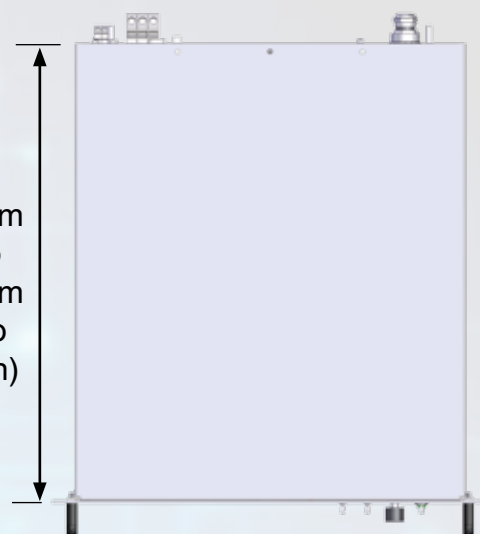
The current setting range depends on the characteristics of the current power / voltage output of the power supply.



## Outline drawing



510 mm  
up to  
600 mm  
(20 to  
23.6 in)

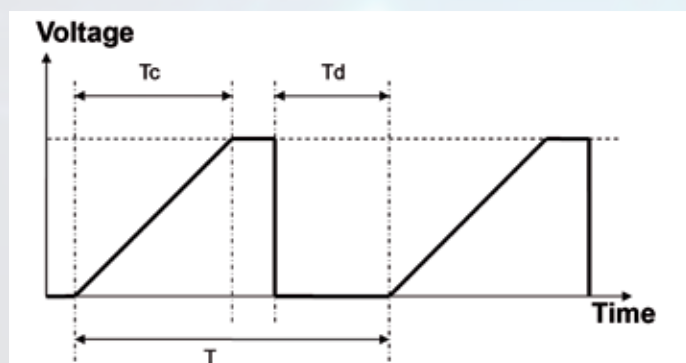


The power supply is a standard 19 inches width rack, with a 5U height (222 mm). The depth is between 510 mm to 600 mm, depending on the output power.

A plug and a 3 meters high voltage cable are supplied with the charger.



## Charging profile and definitions



T : Period (s)  
 $F = 1/T$  : Repetition frequency (Hz)  
 Tc : Charging time (s)  
 Td : Dead time (s)

$$E = \frac{1}{2} C V^2$$

$$Ps = E / T$$

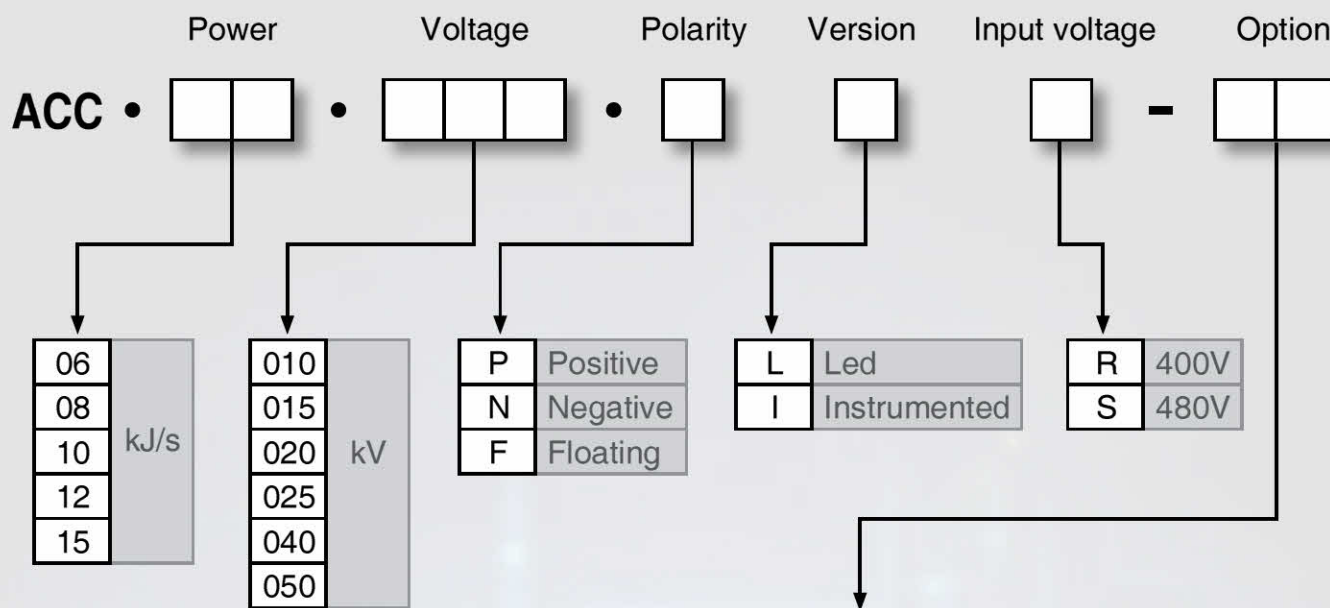
With

E : Energy stored in the capacitor load (J)  
 Ps : Mean output power (J/s)  
 V : Output voltage (V)  
 C : Capacitor value (F)

The dead time (Td) after discharge is adjustable. It could vary from 100  $\mu$ s to 10 ms (400  $\mu$ s is installed in factory by default).



## Model number

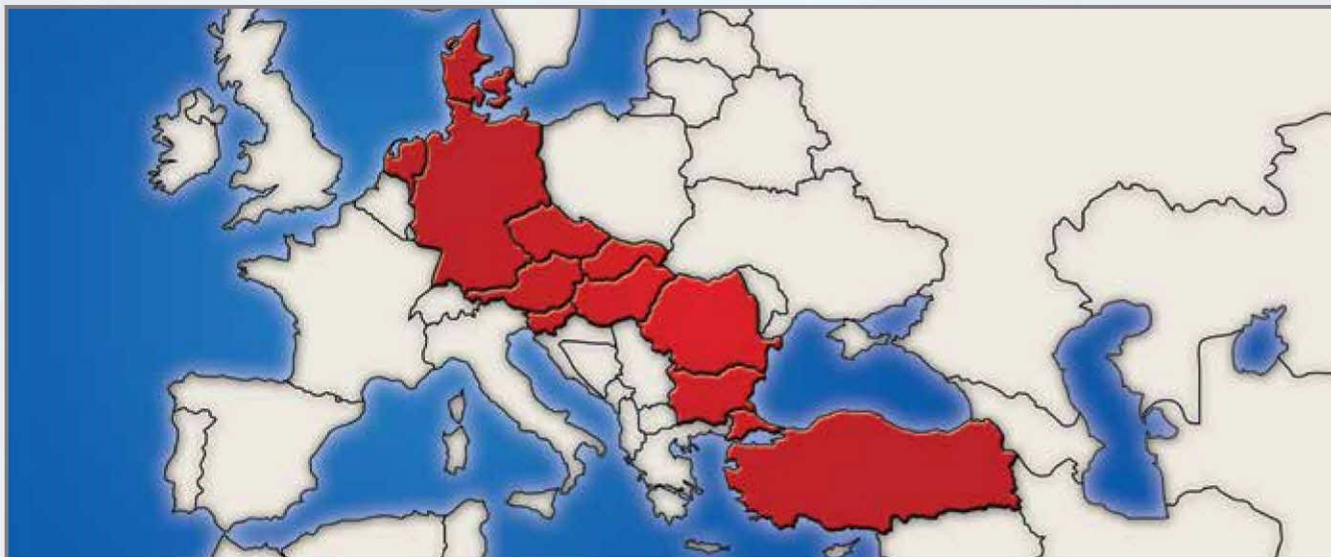


*Example :*

**ACC • 10 • 025 • NIR - 10 - 30**

Power supply 10 kJ/s, 25 kV, negative polarity, instrumented version,  
Mains 400V, with current regulation option and RS 232 / Ethernet standard interface

## Locations



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