



### ■ Main Features

- )] Compact size, standard enclosure shape
- )] Reliable topology, based on new technology of Electric Double Layer Capacitors
- )] > 7.6kJ (2.1Wh) energy storage
- )] Replaces 12V batteries for short term backup applications
- )] Extended operating temperature for high reliability
- )] Multiple parallel and series connection possibilities for voltage and/or current increase
- )] Reverse polarity and overcurrent protections
- )] Pluggable connectors
- )] Up to 85°C operating temperature

## TECHNICAL DATA

Model type	NCP12	
<b>GENERAL DATA</b>		
Input DC rated voltage	Nominal: 12Vdc Range: 0...16Vdc <b>ABSOLUTE MAXIMUM VOLTAGE: 17Vdc</b>	
Energy storage capacity	7.6kJ (2.1Wh)	
Input current for capacitor charging	20A Max	
Charging time	see chart (1)	
Output current for capacitor discharging	20A 30A for 5sec, see discharging charts (2,3,4)	
Protections	<ul style="list-style-type: none"> <li>▪ Reverse polarity connection</li> <li>▪ Short circuit through 30A/32V ATO blade, user replaceable</li> <li>▪ Overvoltage protection</li> </ul>	
Operating temperature	- 40°C...+ 85°C	
Voltage derating	- 120mV/°C over 65°C	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Cooling	Natural convection	
Charging / Discharging Cycles	500'000 at 25°C	
Life time expectation	10 years at 25°C	
MTBF	<ul style="list-style-type: none"> <li>▪ MIL-HDBK-217F</li> </ul>	> 500'000h at 25°C ambient full load
DC Bus / ground isolation	0.75kVdc	
Safety Standards	<ul style="list-style-type: none"> <li>▪ UL508 (reference)</li> <li>▪ EN60950 (reference)</li> </ul>	
EMC Emission	<ul style="list-style-type: none"> <li>▪ EN55011 (CISPR11) Class B</li> <li>▪ EN55022 (CISPR22) Class B</li> </ul>	
EMC Immunity	<ul style="list-style-type: none"> <li>▪ EN61000-4-2 Level 3</li> <li>▪ EN61000-4-3 Level 3</li> <li>▪ EN61000-4-4 Level 3</li> <li>▪ EN61000-4-5 Level 1</li> </ul>	
Protection degree	<ul style="list-style-type: none"> <li>▪ EN60529 IP20</li> </ul>	
Vibration sinusoidal	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)</li> </ul>	
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)</li> </ul>	
Connection terminals	2.5mm <sup>2</sup> , screw type pluggable (24...12AWG)	
Case material	Aluminum	
Weight	0.75kg	
Size (W x H x D)	80.0 x 120.0 x 100.0mm	

**Notes:**

- Technical parameters are typical, measured in laboratory environment at 25°C and 16Vdc.
- Data may change without prior notice in order to improve the product

CHARGING / DISCHARGING

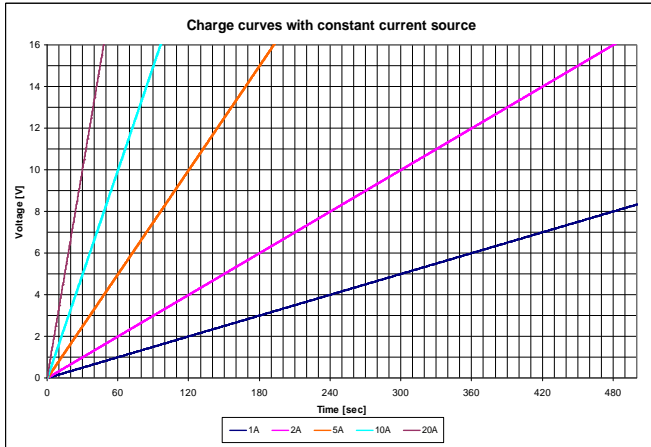


Chart 1

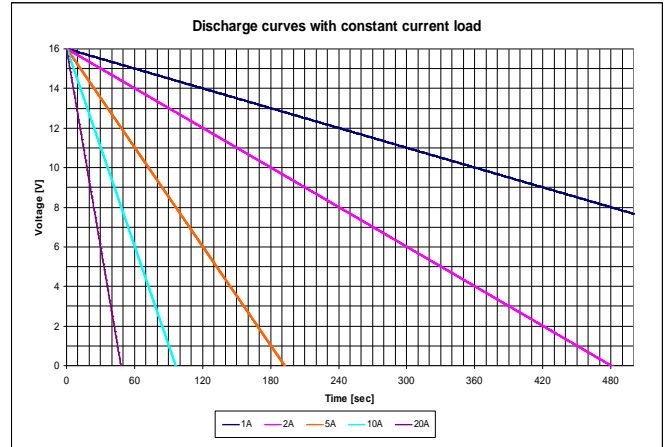


Chart 2

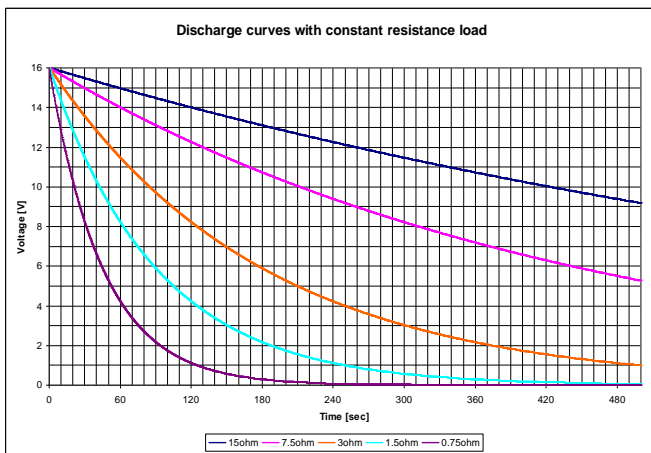


Chart 3

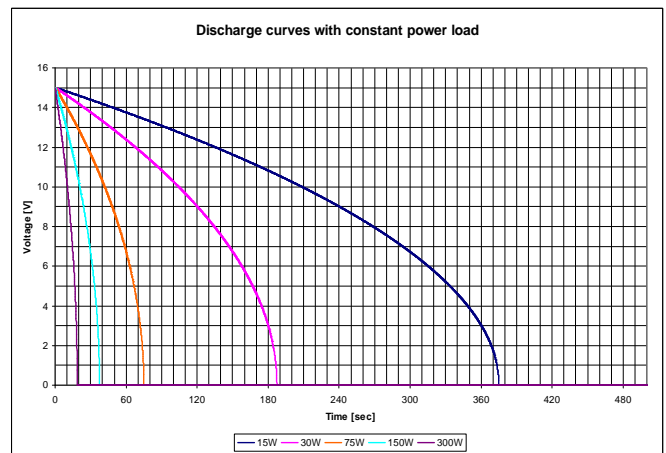
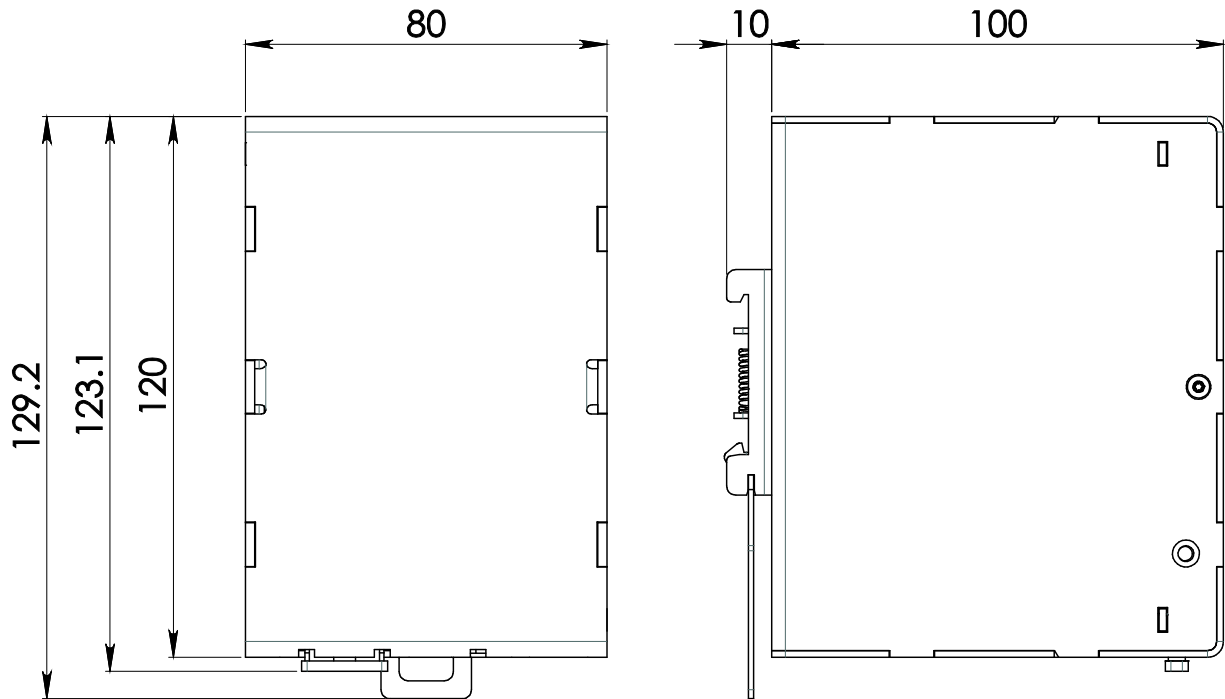


Chart 4

**DIMENSIONS**



**CONNECTION**



**Input/Output Connection:**

- + = Positive DC
- - = Negative DC