



## ■ Main Features

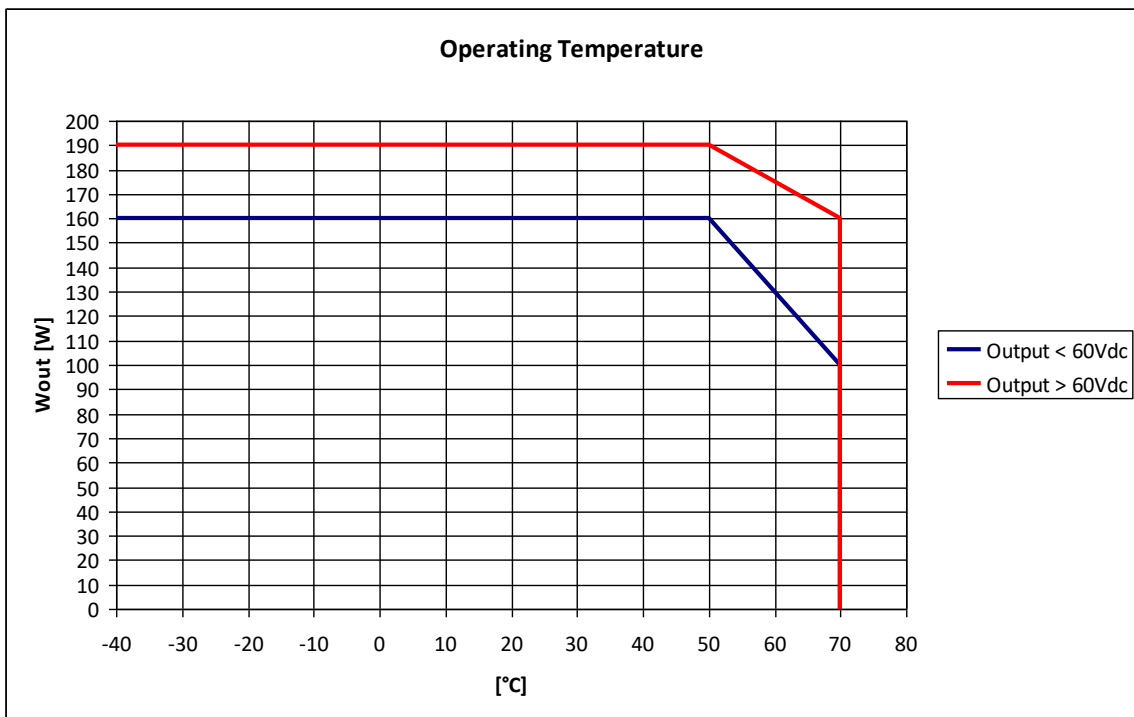
- High efficiency and compact size
- Active PFC
- Digital Power regulation
- Wide input voltage range 170...550Vac
- Wide output voltage range 24...120Vdc, user settable
- User settable current limitation threshold
- Remote ON/OFF or other remote control functions
- Modbus over RS-485 interface for control and monitoring
- Multiple protections
- 2 user programmable voltage steps with settable duration
- Can be used as battery charger (lead acid, nickel, lithium)
- Can be used for LED lighting
- Can be paralleled for power or redundancy (with external ORing Module)
- Up to 50°C operating temperature with no derating
- Suitable for **POWERMASTER** software (available for Windows and Android OS)
- Excellent versatility, allowing parts stock savings

## TECHNICAL DATA

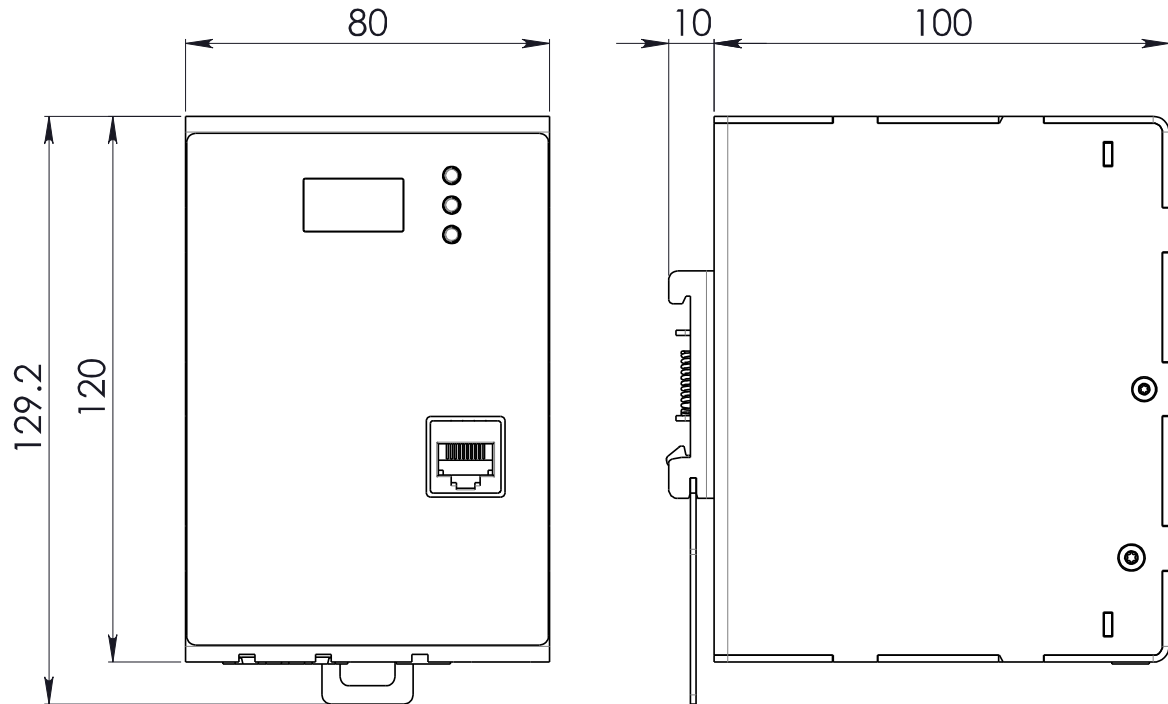
Model type	SBP200L	
<b>OUTPUT DATA</b>		
Rated voltage	24...120Vdc	
Adj. output voltage range	24...120Vdc (1V resolution programmable)	
Continuous current	4.0A @ 24Vdc, 3.0A @ 48Vdc, or $V_{out} \times I_{out} = 200W$ Max. for $V_{out} > 48Vdc$	
Overload limit	4.4A to 1.9A (depending on Vout)	
Short circuit peak current	4.9A to 2.2A (depending on Vout)	
Load regulation	≤ 1%	
Ripple & Noise <sup>1</sup>	≤ 200mVpp	
Hold up time	≥ 25ms	
Battery charger function	C.C. / C.V. (setup via front panel or <b>POWERMASTER</b> application)	
Battery chemistries	<ul style="list-style-type: none"> <li>▪ Lead Acid</li> <li>▪ Lithium</li> </ul>	
Protections	<ul style="list-style-type: none"> <li>▪ Overload and short circuit protection</li> <li>▪ Thermal protection</li> <li>▪ Input undervoltage lockout (UVLO)</li> <li>▪ Input overvoltage protection (VDR)</li> </ul>	
Status Signals	<ul style="list-style-type: none"> <li>▪ 7 segment, 3 digits display</li> <li>▪ 3 programming keys</li> <li>▪ <b>ENABLE</b> - isolated remote ON/OFF input, active for 5...30Vdc</li> <li>▪ <b>DC OK</b> - dry contact (NO, 24Vdc / 1A)</li> <li>▪ <b>Modbus</b> over <b>RS-485</b> interface</li> </ul>	
Parallel connection	Possible for power and redundancy (with external ORing module)	
<b>INPUT DATA</b>		
Input AC rated voltage	Nominal: 1/2 phases 200...500Vac	
Frequency	Range: 170...550Vac 47...63Hz	
Input DC rated voltage	250...725Vdc	
Input AC rated current	1.4A	
Vin = 200Vac	0.5A	
Vin = 500Vac		
Input DC rated current	1.0A	
Vin = 250Vdc	0.4A	
Vin = 725Vdc		
Standby power	< 4W	
Power Factor Correction	Active > 0.9	
Inrush peak current <sup>2</sup> / I <sup>2</sup> t	≤ 40A / 0.69A <sup>2</sup> s	
Touch (leakage) current	≤ 0.4mA	
Internal Protection fuse	None, external fuse must be provided	
Recommended external protection	MCB 10A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	
<b>GENERAL DATA</b>		
Efficiency	> 82% ... > 90% (depending Vout)	
Dissipated power	< 21W	
Operating temperature <sup>3</sup>	- 40°C...+ 70°C	
Derating	Over 60Vdc: - 1.5W/°C over 50°C Under 60Vdc: - 3.0W/°C over 50°C See Fig.1	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	71'686h (8.1 years) at 25°C ambient full load	
MTBF	<ul style="list-style-type: none"> <li>▪ MIL-HDBK-217F &gt; 500'000h at 25°C ambient full load</li> </ul>	
Overvoltage category	<ul style="list-style-type: none"> <li>▪ EN50178 III</li> </ul>	
Pollution degree	<ul style="list-style-type: none"> <li>▪ IEC60664-1 2</li> </ul>	
Input / output isolation	4.2kVdc	
Input / ground isolation	2.2kVdc	
Output / ground isolation	0.75kVdc	
Safety Standards	<ul style="list-style-type: none"> <li>▪ UL508 (reference)</li> <li>▪ IEC/EN61010-1</li> <li>▪ IEC/EN61010-2-201</li> <li>▪ IEC/EN60950</li> </ul>	
EMC Emission	<ul style="list-style-type: none"> <li>▪ EN55011 (CISPR11) Class A</li> <li>▪ EN55022 (CISPR22) Class A</li> <li>▪ EN61000-3-2 Class A</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 4</li> <li>▪ EN61000-4-11 Level 2</li> </ul>	
Protection degree	<ul style="list-style-type: none"> <li>▪ EN60529 IP20</li> </ul>	
Vibration sinusoidal	<ul style="list-style-type: none"> <li>▪ IEC60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)</li> </ul>	
Shock	<ul style="list-style-type: none"> <li>▪ IEC60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)</li> </ul>	
IN/OUT Connection terminals	2.5mm <sup>2</sup> , screw type pluggable (24...12AWG)	
Auxiliary connection terminals	Up to 0.5mm <sup>2</sup> , Fast pluggable type (20AWG)	
Communication interface connector	RS-485 through RJ45 Female	

Case material	Aluminum
Weight	0.75kg
Size (W x H x D)	80.0 x 120.0 x 100.0mm
<p>1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.                  2) Peak current measured after 0.2ms from main connection; 400Vac/50Hz; Ambient temperature at 25°C; Cold Start.                  3) Start-up type tested: - 40°C, possible at nominal voltage with load deration.</p> <p><b>Notes:</b>                  - For more details, performance and descriptions regarding all parameters not indicated in the above table, please refer to the user manual downloadable from <a href="http://www.nextys.com">www.nextys.com</a>                  - Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.                  - Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.                  - Data may change without prior notice in order to improve the product.</p>	

**Fig.1**



**DIMENSIONS**



**CONNECTION**



**Input Connection:**

- Single phase:
- L1 = Line
  - N = Neutral
  - ⊕ = Earth ground
- 2 phases:
- L1 = Phase 1
  - L2 = Phase 2
  - ⊕ = Earth ground
- DC:
- L1 = + Positive DC
  - L2 = - Negative DC
  - ⊕ = Earth ground

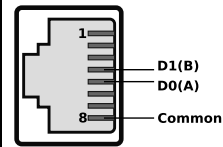
- ENABLE: (5...30Vdc)**
- + = Positive DC
  - - = Negative DC

**Output Connection:**

- + = Positive DC
- - = Negative DC

- Signaling:  
**DC OK: dry contact**
- + = NO
  - - = COM

**RS-485**



- PIN4 = TX/RX D1
- PIN5 = TX/RX D0
- PIN8 = GND