LDP200-200

200W Programmable Power Supply

LDP200-200 is the first user programmable unit on the market that can supply any voltage between 36 and 205 VDC, offering unmatched flexibility for many applications.

Its compact size, high efficiency, excellent reliability together with easy installation makes it ideal for various industrial applications.

LDP200-200 is Class I isolation device suitable for SELV and PELV circuitry and is designed to be mounted on DIN rail and installed inside a protective enclosure.

RoHS Compliant

Key Features & Benefits

- High efficiency and compact size
- Active PFC
- Wide input voltage range 170 - 550 VAC
- Wide output voltage range 36 - 205 VDC, user settable
- 2 user programmable voltage steps with settable duration
- Digital control
- Remote ON/OFF or other remote control functions possible through ENABLE input
- Multiple protections
- Ideal for elevator application
- Excellent versatility, allowing parts stock savings
- Up to 50°C operating temperature with no derating

Applications

- Industrial Control
- Communication
- Instrumentation Equipment
- Renewable Energy Systems

1. MODEL SELECTION

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT
LDP200-200	230 / 400 V (range 170 - 550 VAC)	36-205 VDC	2.3 A max *

* 2.3 A max. for Vout < 80 V. For Vout > 80 V output is limited by output power 187 W max.

2. INPUT SPECIFICATIONS

Technical parameters are typical, measured in laboratory environment at 25°C and 400 VAC / 50 Hz, at nominal values, after minimum 5 minutes of operation.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input AC Voltage Range[1]	Single or two phases Operating	200 - 500 VAC 170 - 550 VAC
Input DC Voltage Range		250 – 725 VDC
Input Frequency		47 - 63 Hz
Input AC Current	Vin = 200 VAC Vin = 500 VAC	1.4 A 0.5 A
Input DC Current	Vin = 250 VDC Vin = 725 VDC	1.4 A 0.7 A
Power Factor Correction	Active	> 0.9
Standby Power		< 6 W
Inrush Peak Current		≤ 50 A
Touch (Leakage) Current		≤ 0.3 mA
Internal Protection Fuse	None, external fuse must be provided	
Recommended External Protection	It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	MCB 6 A, C curve or 4A D curve

[1] CB Scheme certified up to 528 VAC.

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power		200 W
Rated Voltage	1 V resolution programmable	36 – 205 VDC
Continuous Current	or Vout x Iout = max. 187 W for Vout > 80 V	Max 2.3 A
Overload Limit		2.4 A
Short Circuit Peak Current		2.5 A
Load Regulation		≤ 1%
Ripple & Noise[2]		≤ 600 mVpp
Hold up Time		≥ 30 ms
Protections	Overload and short circuit with constant current (3 s) and one shot (no auto recovery) Thermal protection Input undervoltage lockout (UVLO) Input overvoltage protection (VDR)	
Status Signals	7 segment, 3 digits display 3 programming keys ENABLE - Insulated remote ON/OFF input, active for 12 - 230 VAC/DC	
Parallel Connection	Possible with external ORing module	
Efficiency		> 87%
Dissipated Power		< 28 W

[2] Ripple and Noise are measured with 20 MHz bandwidth, probe terminated with a 0.1 µF MKP parallel capacitor.

4. ENVIRONMENTAL, EMC & SAFETY SPECIFICATIONS

PARAMETER		DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature		Overtemperature protection Start-up type tested: - 40°C[3]	- 40° to + 70°C
Temperature derating		Do not exceed Vout x Iout = max. 100 W at 70°C	- 4.2 W/°C over 50°C
Humidity		Non-condensing	5 – 95% RH
Life time Expectancy		At 25°C ambient full load	716864 h (8.1 years)
Overvoltage Category Pollution Degree			III (EN50178) 2 (IEC60664-1)
Isolation Voltage		Input to output Input to ground Input to Enable Output to ground Output to Enable Enable to ground	4.2 kVDC 3.4 kVDC 4.2 kVDC 1.65 kVDC 4.2 kVDC 4.2 kVDC
Safety Standards & Approvals		UL508 (reference) EN60950 (certified) EN50178 (reference)	
EMC Standards	Emission:	EN55011 (CISPR11) EN55022 (CISPR22) EN12015 EN61000-3-2	Class A Class A Class A Class A
	Immunity:	EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-11 EN12016	Level 3 Level 3 Level 3 Level 4 Level 2
Protection Degree		EN60529	IP20
Vibration Sinusoidal		IEC 60068-2-6	(5-17.8 Hz: ±1.6mm; 17.8-500 Hz: 2 g 2 Hours / axis (X,Y,Z)
Shock		IEC 60068-2-27	(30 g 6 ms, 20 g 11ms; 3 bumps / direction, 18 bumps total)

[3] Possible at nominal voltage with load derating.

NOTE: Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

5. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		0.75 kg
Dimensions (W x H x D)		80 x 120 x 102 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm²
Case Material	Aluminum	

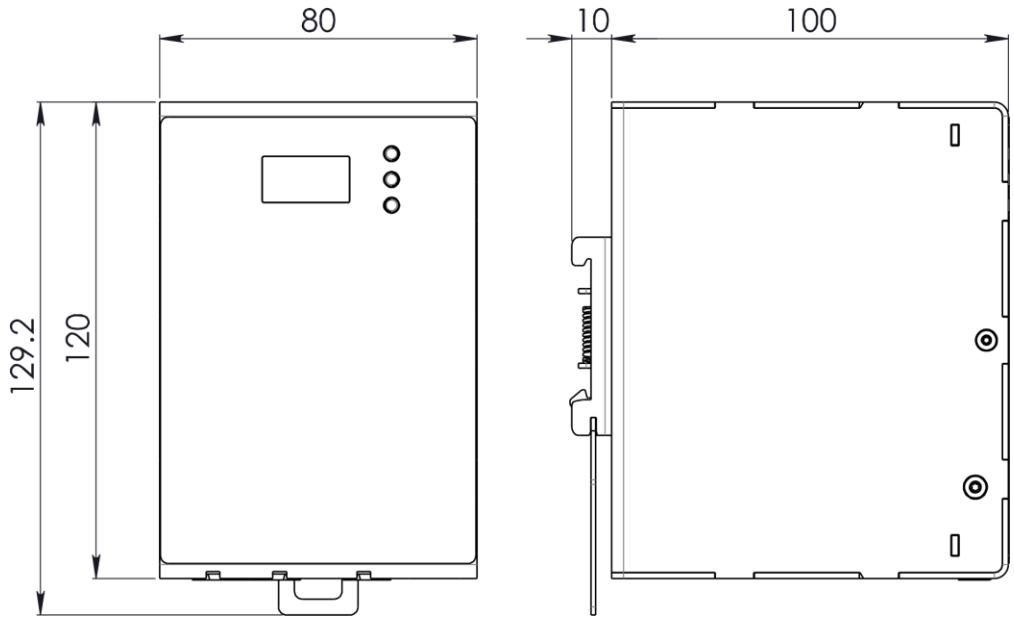
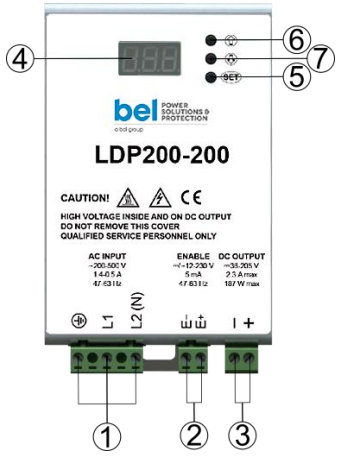


Figure 1. Mechanical Drawing

6. PIN LAYOUT & DESCRIPTION



PIN	DESCRIPTION
1	AC/DC input
2	Enable input
3	DC output (load)
4	Display
5	Set button
6	Increase button
7	Decrease button

INPUT CONNECTION	OUTPUT CONNECTION
Single phase: L1 = Line N = Neutral ⏚ = Earth ground	+ = Positive DC - = Negative DC
Two phase: L1 = Phase 1 L2 = Phase 2 ⏚ = Earth ground	
DC: L1 = + Positive DC L2 = - Negative DC ⏚ = Earth ground	
ENABLE: (12 – 230 VAC/DC) E+ = Positive DC E- = Negative DC	

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.
TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.