

velleman®

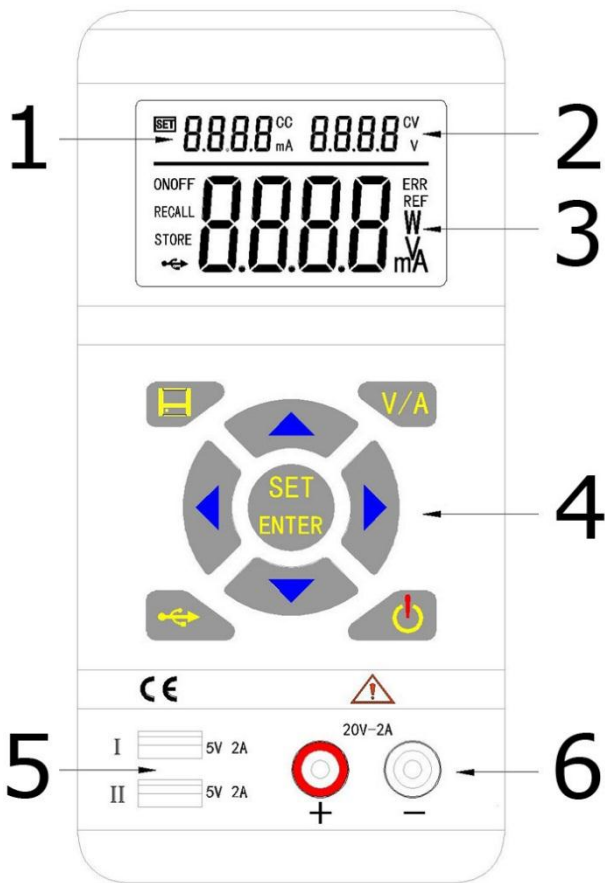
LABPSHH01

EN - HANDHELD SWITCHING MODE LAB POWER SUPPLY
NL - DRAAGBARE SCHAKELENDE LABVOEDING
FR - ALIMENTATION DE LABORATOIRE PORTABLE À DÉCOUPAGE
ES - FUENTE DE ALIMENTACIÓN CONMUTADA PARA LABORATORIO
DE - TRAGBARES LABORNETZGERÄT
PL - RĘCZNY ZASILACZ IMPULSOWY
PT - FONTE DE ALIMENTAÇÃO COMUTÁVEL PORTÁTIL



USER MANUAL	3
HANDLEIDING	10
MODE D'EMPLOI	17
MANUAL DEL USUARIO	24
BEDIENUNGSANLEITUNG	31
INSTRUKCJA OBSŁUGI	38
MANUAL DO UTILIZADOR	45





USER MANUAL

1. Introduction

To all residents of the European Union

Important environmental information about this product



This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules.

If in doubt, contact your local waste disposal authorities.

Thank you for choosing Velleman! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

2. Safety Instructions

	Keep this device away from children and unauthorized users.
	Indoor use only. Keep this device away from rain, moisture, splashing and dripping liquids. Never put objects filled with liquids on top of or close to the device.
	DO NOT disassemble or open the cover under any circumstances. Touching live wires can cause life-threatening electroshocks. There are no user-serviceable parts inside the device. Refer to an authorized dealer for service and/or spare parts.
	Always disconnect mains power when device not in use or when servicing or maintenance activities are performed. Handle the power cord by the plug only.
	Keep this device away from dust and extreme temperatures.
	Protect this device from shocks and abuse. Avoid brute force when operating the device.
	Do not use the device when damage to housing or cables is noticed. Do not attempt to service the device yourself but contact an authorised dealer.

3. General Guidelines

Refer to the **Velleman® Service and Quality Warranty** on the last pages of this manual.

- Familiarise yourself with the functions of the device before actually using it.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorised way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Keep this manual for future reference.

4. Features

- handheld DC switching power supply
- large LCD display for voltage and current
- compact and lightweight design
- adjustable from 0.3-30 V, up to 3.75 A with maximum continuous power of 50 W
- works in constant voltage and current mode
- 2 built-in USB ports (2 x 2 A)
- short-circuit protection
- fuse-protected
- test leads not included

5. Quick Start

5.1 Overview

Refer to the illustrations on page 2 of this manual.








1	current setting
2	voltage setting
3	measured value

4	keypad
5	USB ports
6	DC outputs

5.2 Preparation





Connect the device to the mains to switch it on. The device will start the self-check process.

5.3 Keypad

key	description
	Press the STORE/RECALL button to store/recall a pre-set value to/from the memory bank.
V/A	Press V/A to switch between the current and voltage measurements.
	Press the USB button to enter the USB power-charging mode. Adjust the voltage to 5.2 V and the current to 3 A. Press the OUT button to use the device as power charger. Press the USB button again to exit the function.
	Press the OUT button to put the power supply in output status and read the current and voltage values on the display. Press again to exit the function.
	Press the UP button to activate the backlight.
	Press the DOWN button to deactivate the backlight.
	Press the LEFT button to decrease the display contrast.
	Press the RIGHT button to increase the display contrast.
SET	Press SET and adjust the values with the arrow keys. Press V/A to switch between current and voltage.

5.4 Basic Operations

Voltage and Current Setting

1. Connect the device to the mains.
2. Press the **OUT** button to deactivate the output mode.
3. Press **V/A** to select the voltage or current mode.
4. Press the **SET** button to enter the setting mode.
5. Press  or  to select the digit, adjust the selected value with  or .
6. Press **SET** to confirm your setting.

REMARK



It is possible to set the voltage or current once the outputs are valid. However, for the protection of the load, it is recommended to stop the output before voltage or current setting.
Due to the total power limit, current settings might be decreased automatically once the voltage setting is increased.



5.5 Checking the Output

Output Voltage Regulation

1. Connect the device to the mains.
2. Press **V/A** to switch to voltage mode.
3. Adjust to the desired value (from 1 to max. 30 V).
4. Press the **OUT** button to put the device in output mode.

Output Constant Current Mode

1. Connect the device to the mains.
2. Adjust the voltage to 30 V.
3. Connect the resistance (3 Ω /50 W) between the output terminals.
4. Press **V/A** to switch to current mode and adjust the various current values.
5. Press the **OUT** button to put the device in output mode and check the displayed current values.

Output Short-Circuit Protection

1. Connect the device to the mains.
2. Adjust the voltage to > 5 V and the current to > 1 A.
3. Press the **OUT** button to put the device in output mode.
4. Connect the output terminals

USB Charging Function

1. Connect the device to the mains.
2. Adjust the current to > 2.5 A.
3. Press **V/A** to switch to voltage mode.
4. Press the **USB** button to activate the USB output.
5. Press the **OUT** button to put the device in output mode.

5.6 Other Functions

Data Saving

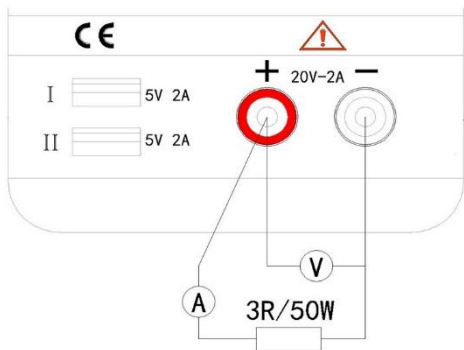
1. Connect the device to the mains.
2. In setting mode, press the **STORE/RECALL** button to open the memory banks.
3. Select your memory bank with **▲** or **▼**.
4. Press **SET** to save the set values into the selected memory bank.

Recall Saved Data

1. In normal operating mode, press the **STORE/RECALL** button to open the memory banks.
2. Select your memory bank with ▲ or ▼.
3. Press **SET** to load the selected memory bank.

5.7 Voltage and Current Calibration

Connect the output terminals to a 5-digit voltage meter, current meter or 10 Ω /100 W resistance.



1. Connect the output terminal to an external reference voltage or current meter.
2. Press **V/A** to switch to voltage or current mode.
3. Use the keys to adjust the displayed value to correspond with the reference voltage or current.
4. Press **SET** to confirm.

5.8 Backlight

In normal operating mode, press ▲ to activate the backlight; press ▼ to deactivate.

6. Cleaning and Maintenance

- Disconnect the device from the mains prior to maintenance activities.
- The power supply cables must not show any damage. Have a qualified technician maintain the device.
- Wipe the device regularly with a moist, lint-free cloth. Do not use alcohol or solvents.
- There are no user-serviceable parts, apart from the fuse. Contact your dealer for spare parts if necessary.
- Store the device in a dry, well-ventilated, dust-free room and keep it clean. Remove the power plug if the device is to be stored for a prolonged period of time.

7. Technical Specifications

input

voltage	220-240 V~, 50/60 Hz
current	1 A

output

max. voltage	0.3-30 V
max. current.....	0-3.75 A
max. continuous power	50 W

line regulation (\pm % of output + offset)

voltage	CV \leq 0.01 % + 3 mV
current	CC \leq 0.01 % + 3 mA

load regulation (\pm % of output + offset)

voltage	CV \leq 0.02 % + 3 mV
current	CC \leq 0.02 % + 3 mA

measurement accuracy

voltage	10 mV
current	1 mA

measured value accuracy @ 25 °C (\pm % of output + offset)

voltage	\leq 0.05 % + 5 mV
current	\leq 0.05 % + 5 mA

measurement speed

voltage	100 ms/s
current	100 ms/s

setting value accuracy @ 25 °C (\pm % of output + offset)

voltage	\leq 0.05 % + 5 mV
current	\leq 0.05 % + 5 mA

ripple and noise (20 Hz-20 MHz)	
voltage	≤ 10 mV rms/150 mV p-p
current	≤ 10 mV rms/150 mV p-p
temperature coefficient @ 0-40 °C (± % of output + offset)	
voltage	≤ 0.05 %
current	≤ 0.1 %
dimensions.....	185 x 88 x 38 mm
weight	370 g
power cable.....	CEE 7/16 Euro plug type C to C7 connector
power cable length	1.20 m

Use this device with original accessories only. Velleman nv cannot be held responsible in the event of damage or injury resulting from (incorrect) use of this device. For more info concerning this product and the latest version of this manual, please visit our website www.velleman.eu. The information in this manual is subject to change without prior notice.

© COPYRIGHT NOTICE

The copyright to this manual is owned by Velleman nv. All worldwide rights reserved. No part of this manual may be copied, reproduced, translated or reduced to any electronic medium or otherwise without the prior written consent of the copyright holder.