

# 36146-PS

## Buck-Boost DC/DC Converter

Snap-in, 35W adjustable buck-boost converter power supply module with constant voltage and adjustable current limit.

Adjustable protection for:

Undervoltage (LVP), Overvoltage (OVP), Overcurrent (OCP)  
Over Power W (OPP), Over Capacity Ah, Over Power (OPH),  
Max Operating Time (OHP)

Dual 4 digit Backlit LCD Display

Input Voltage: DC 5V-30 V DC

(Recommend that the Input voltage is > 7 V)  
if < 7 V, the output power will decrease)

Output Current: 4A max (Power Limited ~35W/50W Fan cooled)

Accuracy:

Voltage: 5% + 1 LSD Resolution: 0.01 V

Current: 8% + 3 LSD Resolution: 0.001A

Operating Temperature: -20°C to 40°C(-4°F to 104°F)

Conversion efficiency: ~ 88%.

Undervoltage( LVP): Adj. 4.7-30VDC, (default 4.7 V)

Overvoltage (OVP): Adj. 4.8-30VDC, (default 31 V )

Overcurrent (OCP): Adj. 0.5A-4.2A range (default 4.2A)

Over Power W (OPP): Adj. 1W-50W (default: 50W)

Overtemperature (OTP): 100 °C)

Max Capacity (OAH): 4 range Adj. 9.999/99.99/999.9 & 9999 Ah

Max Energy (OPH): 4 range Adj. 9.999/99.99/999.9 & 9999 Wh

Max Run Time: (OHP): 00:00-99.99 (HH:mm)

**L:** 79mm **W:** 42mm **D:** 35mm **WT:** .2

**WARNING: DO NOT SHORT CIRCUIT INPUTS TO OUTPUTS**

### GENERAL

1: Short Press: Momentary (Press & Release)

2: Long Press: Press & Hold for >"listed" sec. OR Display Changes (Release after)

#: Normal default is Upper Display is Output Voltage. Lower is Current

NOTE: See Instructions Below to Set Up Power ON Defaults

1: Short Press the "ON" button: Turns Output ON/OFF (Alternate Action)

2: To Switch between "Input Voltage" or "Output Voltage" on Top Display line, Press & Hold the "ON" button until the Display changes. Display will show "IN" Upper Left for Input Voltage otherwise display shows "Output". (Alternate Action)

3: Short Press "DIGITAL POT/SWITCH" button to Scroll through Lower Display Measurements  
Starts Current "A", then Power "W"-Capacity "Ah"-Energy "Wh"- Discharge Time "h" (MM:ss) in corner.

4: Press & Hold "DIGITAL POT/SWITCH" button Until "CV" in Upper Right flashes "CC" (~3sec)

Rotate " DIGITAL POT" to set the Current Limit

Display will switch back after ~ 3 seconds if no adjustment made or after Setting is complete

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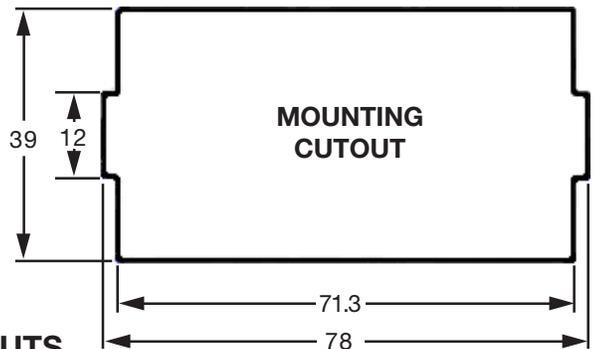
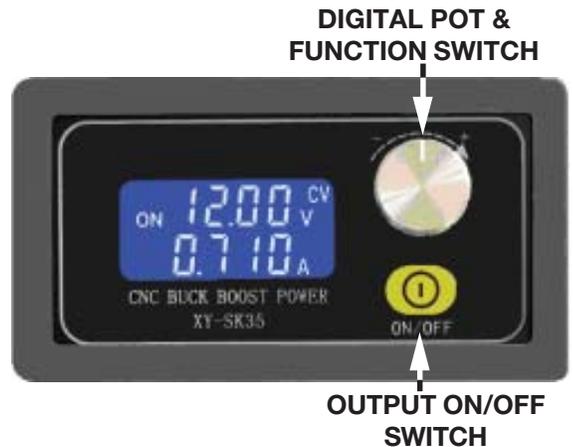


**MARLIN P. JONES & ASSOC., INC.**

P.O. Box 530400 Lake Park, FL 33403

800-652-6733 FAX 561-844-8764

WWW.MPJA.COM



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### SET PARAMETER LIMITS

1: Press & Hold “DIGITAL POT/SWITCH” button Until upper Display shows “LUP” (~5sec)

A: Lower Display is the present setting.

2: Short Press the “DIGITAL POT/SWITCH” button to scroll through the settings.

3: At each parameter the Lower Display will Flash the present setting

A: To change the value; Rotate the “DIGITAL POT/SWITCH” button Clockwise Increase/Counter Clockwise decrease value

B: Press “DIGITAL POT/SWITCH” to continue scrolling

4: Set the Maximum Capacity (OAH) / Maximum Energy (OPH) / Maximum Run Time (OHP) Modes

**Note:** When the functions of OAP, OPH and OHP are **Disabled**, the power supply will automatically **Record** the Capacity, Energy and Run Time. When the functions are **Enabled**, the output will automatically turn Off and the Function will Flash when the limit is reached.

When OHP is Enabled, the running time of the power supply is Countdown mode.

A: Press the “ON/OFF” button to Enable or Disable that function, when disabled, display shows “----”.

B: Set OAH: When display shows OAH; Press and Hold the “ON/OFF” button until decimal point shifts (~5sec) to change the Capacity range.

The Decimal Point will shift upon each Press-Hold-Release (9.999Ah / 99.99Ah / 999.9Ah / 9999Ah)

Rotate the “DIGITAL POT/SWITCH” to adjust the numeric value (Does Not Affect decimal point)

Short Press “DIGITAL POT/SWITCH” to go to next function

C: Set OPH: SAME AS “B” ABOVE

D: Set OHP: When display shows OAH; Short Press the “ON/OFF” button, Display will show present value setting or if disabled, shows “--:--”. In either case, Both Hour digits will flash. This action is alternating, Enable/Disable To adjust Hours; Rotate the “DIGITAL POT/SWITCH”

To adjust Minutes; Press the “DIGITAL POT/SWITCH”. The display will flash both Minute digits, Rotate the “DIGITAL POT/SWITCH” to adjust.

5: Set the Default Output (ON/OFF) status at power on.

A: Short Press the “DIGITAL POT/SWITCH” button to scroll through the settings until display shows “CV” in upper right corner and either “ON” or “OFF” Flashing

B: Rotate the “DIGITAL POT/SWITCH” to alternate between Output On or Off at power on.



6: When finished setting, Press & hold the “DIGITAL POT/SWITCH” button for 5 seconds to exit and save automatically.

**NOTE:** This can be done at anytime to Exit SET Mode.

7: This Power Supply has a Lock Mode. This prevents accidental adjustments.

A: Press & Hold the “DIGITAL POT/SWITCH” for 10sec. Display will Flash “LOC” and “ON” or OFF

This is Alternate action in setting, to change you must Press & Hold 10sec to change each time you want to Lock or Unlock.

B: Supply will automatically revert to Normal operating mode & display in ~3sec.



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