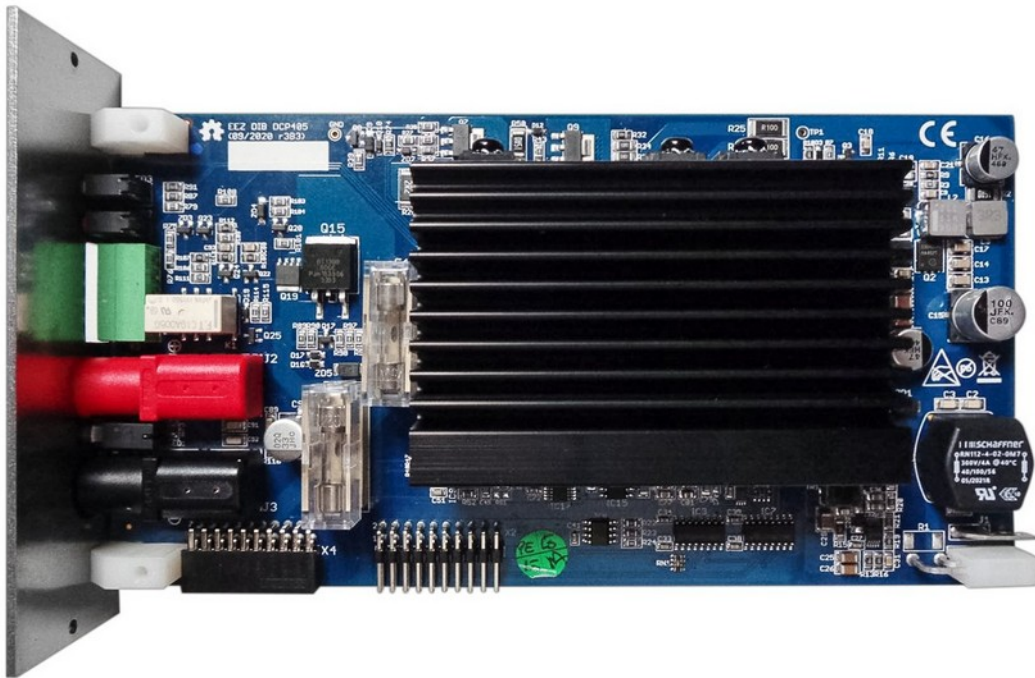


# EEZ DIB DCP405 Power module



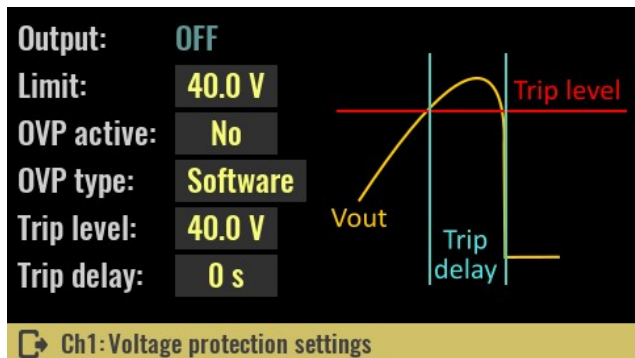
The DCP405 power module is programmable DC source for EEZ BB3 T&M chassis that can deliver up to 40 V and 5 A (max. 155 W) using the hybrid topology of switching pre-regulator and linear (series) post-regulator for improved power efficiency and precise voltage and current setting and fast transient response.

Coupled with another DCP405 module it is possible to provide up to 80 V (in series) or up to 10 A (in parallel). When uncoupled its output is fully isolated (“floating”).

It offers various advanced features such as remote sensing, remote voltage programming, current setup and measurement in two ranges (50 mA / 5 A), hardware Over Voltage Protection (OVP) and down-programmer (DP).

## Multiple protections

For better protection of the connected load and the module itself, various protections have been implemented: over-current, over-voltage (hardware and software), over-power and over-temperature.



Current range	Best
Remote voltage sensing (CV mode only)	OFF
Remote voltage programming using external signal source (+2.5 V for full scale)	OFF
Down-programmer (max. sinking power: 2 W)	ON

Ch1: Advanced options

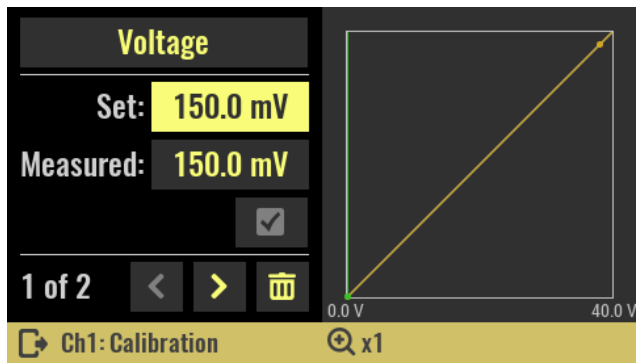
## Advanced features

The selection of current range, remote sensing, remote programming or down-programmer is a click away.

## Calibration wizard

(Re)calibration of output voltage and current can be easily done directly on the device or remotely using SCPI commands.

The calibration parameters are stored on the module itself so there is no need to worry about whether it will be lost if the module is moved to another slot or another BB3 chassis.



#	Dwell	Voltage	Current
1	10 ms	0.0 V	0.0 A
2	20 ms	5.0 V	2.0 A
3	50 ms	12.0 V	—
4	100 ms	24.0 V	—
5	—	—	—

List count:  $\infty$   
 On list stop: **Output OFF**

## Program lists

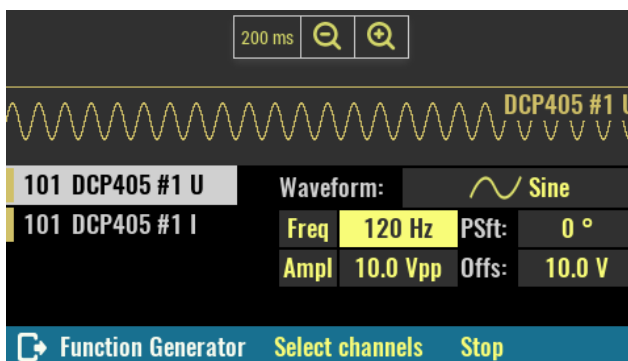
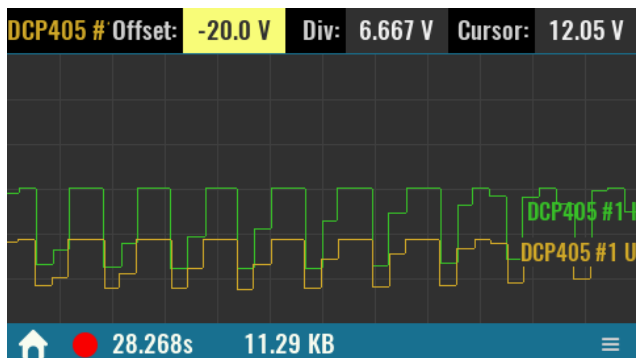
The list programming editor makes it easy to set multiple output voltages and currents that will be set in sequence.

A program list can have up to 256 steps with equal or varying duration or time intervals (dwell).

## Data logging

Logged data is stored on the SD card and can be viewed while the logging is in progress or upon completion or termination of logging.

Finally, it will be possible to transfer logged data to a computer using the EEZ Studio application or using similar applications using SCPI commands.



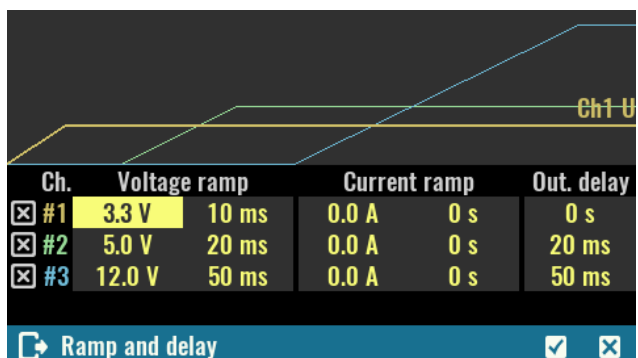
## Simple function generator

A simple function generator makes it easy to define some common waveforms such as sinewave, Half-rectified, Full-rectified, Triangle, Square, Pulse and Sawtooth.

It is possible to modulate both voltage and current on all installed DCP405 modules.

## Power output ramp and delay

Startup curve and delay for both output voltage and current can be set for all installed DCP405 modules.



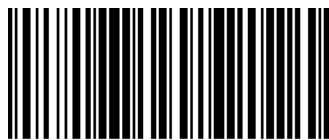
## Feature list

- Power input: 48 Vdc
- Max. output power: 200 W (limited to 155 W due to capacity of provided power input)
- Voltage regulation (CV), 0 – 40 V
- Voltage set and read resolution: 5 mV
- Current regulation (CC) with 2-range (50 mA, 5 A)
- Low range current set and read resolution: 5 uA
- High range current set and read resolution: 0.5 mA
- On-board power pre-regulator and bias power supply
- On-board OVP with triac/MOSFET crowbar and two fuses
- Down-programmer
- Output enable (OE) circuit with LED indicator combined with coupling indication
- On-board Ø4 mm safety sockets (19 mm/0.75" pitch)
- 20-pin pass-thru connector for output terminals coupling with other Power boards
- Remote voltage sense with LED indicator and inverse polarity protection
- Remote voltage programming with LED indicator
- Galvanically isolated SPI bus for communication with the MCU board
- EEPROM for storing board specific configuration and calibration parameters
- Temperature sensor
- Dimensions: 185 x 95 mm, 4-layer PCB
- Open source design

## Package content

- DCM405 module (calibrated)
- Mean Well AC/DC power module with PFC (115/230 Vac, 50/60 Hz)
- AC power cable
- PE (Protective Earth) cable
- DC power cable

Weight	0.65 kg
Package dimensions	22 × 15.5 × 8.5 cm
HS Code	85043180
Country of origin	Croatia (HR)
SKU	00015
EAN code	



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Web page	<a href="https://www.envox.eu/dc-power-modules/dcp405-power-module/">https://www.envox.eu/dc-power-modules/dcp405-power-module/</a>
GitHub repository	<a href="https://github.com/eez-open/modular-psu/tree/master/dcp405">https://github.com/eez-open/modular-psu/tree/master/dcp405</a>



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