

DPS3340 Discovery USB Programmable Power Supply

Product Overview

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Description

Digilent DPS3340 Discovery USB Programmable Power Supply is a 3-channel variable DC programmable power supply designed to control the power provided to external circuits. This power supply module provides constant voltage and current modes and features built-in readback sensors and optional tracking for the output channels. The DPS3340 Discovery USB programmable power supply module offers optional tracking between -15V to 15V outputs. This power supply module features overcurrent protection options provided through WaveForms software. The DPS3340 requires an auxiliary power supply and a host computer running the WaveForms software connected via USB. This power supply module operates within the 0°C to 40°C temperature range.



WaveForms is the free software application for the Discovery USB Programmable Power Supply (DPS3340) and enables three programmable DC outputs. The DPS3340 communicates with WaveForms via a USB connection to the computer, and this software helps control the power supply outputs and enables overcurrent protections.

Features

- Optional tracking between the -15V and 15V outputs
- Requires an auxiliary power supply
- Overcurrent protection options provided through WaveForms software
- Product compliance:
 - HTC: 8471809000
 - ECCN: 3A992.a

Kit Contents

- DPS3340
- One red and one black alligator clip to banana plug cable
- 19V, 3.4A power supply
- European and US IEC cables
- USB A to B cable



Specifications

- 1V to 5V / 10mA to 3A output
- -1V to -15V / -10mA to -500mA output
- 1V to 15V / 10mA to 500mA output
- 19V $\pm 5\%$ power supply voltage
- 3.2A maximum power supply current
- 10% to 80% RH non-condensing operating humidity
- 23.40cm x 19.40cm x 3.81cm dimensions
- 0°C to 40°C operating temperature range

Specification		Output 1	Output 2	Output 3
DC Output Rating	Voltage	1 V to 5 V	-1 V to -15 V	1 V to 15 V
	Current	10 mA to 3 A	-10 mA to -500 mA	10 mA to 500 mA
Maximum Power	30 W (all channels, shared)			
		15 W	7.5 W	7.5 W
Programming Resolution	Voltage	0.36 mV	0.97 mV	0.97 mV
	Current	0.19 mA	0.03 mA	0.03 mA
Programming Accuracy	Voltage	± 15 mV	± 15 mV	± 15 mV
	Current	15 mA	8 mA	5 mA
Readback Resolution	Voltage	7.8 mV	7.8 mV	7.8 mV
	Current	0.81 mA	0.15 mA	0.15 mA
Readback Accuracy	Voltage	± 30 mV	± 20 mV	± 20 mV
	Current	± 10 mA	± 5 mA	± 5 mA
Load Regulation	Voltage	\pm lout \cdot 0.06 V/A	\pm lout \cdot 0.15 V/A	\pm lout \cdot 0.15 V/A
Ripple and Noise	Voltage (20 MHz Bandwidth):	< 30 mV p-p	< 10 mV p-p	< 25 mV p-p
	Current (20 MHz Bandwidth):	< 7 mA p-p	< 5 mA p-p	< 3 mA p-p

Power Requirements

Power Supply Voltage	19 V +/- 5%
Power Supply Current	3.2 A maximum
Power Consumption	60 W maximum
Barrel Connector Size	5.5 mm x 1.65 mm

Environmental

Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Operating Humidity	10% to 80% RH non-condensing
Storage Humidity	5% to 95% RH non-condensing
Cooling	Convection-cooled. Ensure the ventilation holes are not obstructed. ^{1) 2)}
Pollution Degree	2
Maximum Altitude	2,000 m

Mouser Part Number

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To learn more, visit <https://www.mouser.com/new/diligent/diligent-dsp3340-discovery-usb-power-supply/>