

Four-quadrant DUT Power Supply

MODEL 36020

The 36020 is a four-quadrant programmable DUT power supply in a single-slot 3U PXI module. Each 36020 features 4 channels with the ability to source voltage and measure current. There are two selectable voltage ranges, +5V/-2V and +10V/-2V, with 16-bit resolution for programming the voltage output. In order to provide better accuracy, 36020 provides six selectable current ranges including $\pm 5 \mu\text{A}$, $\pm 25 \mu\text{A}$, $\pm 250 \mu\text{A}$, $\pm 2.5\text{mA}$, $\pm 25\text{mA}$ and $\pm 250\text{mA}$ with 18-bit resolution for the current measurement functionality. Moreover, the board-to-board isolation design makes it possible to source the larger voltage than 10V by the series connection with multiple 36020 modules. The versatile supply rails and high accuracy make 36020 an excellent general-purpose, four-quadrant power supply for design validation and manufacturing test application. Especially, the extraordinary accuracy in the small current measurement makes the 36020 very suitable for semiconductor IC test.

Power Supply with Precision Source and Measurement Capability

The 36020 uses a combination of switching and linear regulation to provide the excellent voltage source and accuracy. It has the ability to source voltage from each of its four outputs. It can be programmed in $113 \mu\text{V}$ steps on the +5V/-2V range and $189 \mu\text{V}$ steps on the +10V/-2V channels. As a current measure unit, it can measure in minimum 47.6pA resolution on each channel in the $\pm 5 \mu\text{A}$ current range. You can use this impressive level of current resolution in many power supply applications.

Proprietary Software, CRISP

In addition to support the LabView and LabWindows environment, Chroma[®] provides the front panel tool of the 36020 for users to quickly troubleshoot or debug. Users can monitor or refer the setting of the 36020 through this front panel tool. Besides, Chroma[®] also provides the proprietary software option, CRISP, for the 36020 to meet the demands of users for various purposes. Based on Microsoft Windows XP[®] operation system and C++ programming language, CRISP provides the powerful, easy-to-use, intuitive, and fast-runtime GUI tools for users. For the test debugging and data analyzing purposes, CRISP provides users the abundant software modules for the 36020, including Datalog, SHMOO, Summary, Histogram, STDF and Test Condition Monitor.

Key Features

- 4 Channels in standard PXI 3U/PXIe-Hybrid compatible bus type
- +5V/-2V and +10V/-2V force ranges
- 16-bit voltage force resolution
- 18-bit current measurement resolution
- 6 selectable ranges from 5uA to 250mA for current measurement
- Programmable current clamp function
- Ganged function available for larger current
- Board-to-board isolation
- Windows 2000/XP operating system
- Support LabView and LabWindows
- Proprietary software tools for data analysis



Applications

- Logic and mixed signal validation and test
- Consumer IC and electronics test
- DUT Power Supply



SPECIFICATIONS

Model	36020	
Input	PXI Internal Power	
Channel Number	4	
Voltage Source		
Range	VR1: +10v/-2v VR2: +5v/-2v	
Resolution	16bits	
Accuracy	± 0.1%+4.64mV	
Noise	3mVrms	
Current Measurement		
Range	± 5 μA, ± 25 μA, ± 250 μA, ± 2.5mA, ± 25mA, ± 250mA	
Resolution	18bits	
Accuracy	250mA	± 0.2%+200 μA
	25mA	± 0.15%+20 μA
	2.5mA	± 0.15%+2 μA
	250 μA	± 0.15%+200nA+1nA/V
	25 μA	± 0.15%+150nA+1nA/V
5 μA range	± 0.15%+50nA+1nA/V	
Slew Rate	5v/25 μs	
Load Regulation	2mV	
Load Transient		
Time Response	100 μs	
Voltage Response	50mv	
Overshoot/Undershoot	<3%	
Clamp Flag Response	100 μs	
Clamp Resolution	10bits	
Protection Function / Alarm Flag	Short current limit Clamp alarm flag	
Max Stable Load Capacitance	100uF	

* The specifications are subject to change without notice.

ORDERING INFORMATION

36020 : Four-quadrant DUT Power Supply
CRISP System Software

Developed and Manufactured by :

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