Digital Power
Powering Your Technologies

US Series

50 Watt Flexible Power Supply Platform

Product Description

The US Series of Switching power supplies offer flexible input and output options to satisfy a wide range of applications. The options include Universal AC / 48 VDC Input / 24 VDC Input ranges and up to four output voltages that can be set from 2.0 - 48 VDC depending upon the customer requirement. Features include:

- 50W with up to 4 outputs
- Ruggedized U-channel construction
- Universal AC Input
- RoHS compliant
- 24V and 48V DC Input models available
- International regulatory approvals
- Medical versions available

Input

Input - AC Models (US50)	90-264VAC, 47-63 Hz
Hold-Up Time	8msec minimum (Full Load)
Inrush Current	25 Amp Maximum
Input - 48 Vin Models (DP50)	36-72 VDC Input Range
Input - 24Vin Models (DM50)	18-36 VDC Input Range

Output

Line Regulation	± 0.2% for Vin (min.) to Vin (max.)
Transient Response	< 5% and recovers in 0.5msec
Over-Voltage Protection	130% Typical (Latched Shut-down)
Overload Protection	130% Total Power Limited
Load Regulation	V1 = ± 3% Max V2, V3 & V4 = ± 5% Max
Min. Load Requirement	None
Turn-On Delay	2 Sec. Max.
Initial Setting Accuracy	± 1%
Ripple (pk-pk max)	± 1%

Electromagnetic Compatibility

Electrostatic Discharge	EN61000-4-2, ±4KV Contact / ±8KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, ±2KV
Surges	EN61000-4-5, ±2KV Line-Earth, ±1KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15-800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-11, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% Reduction, 5s
Fluctuations & Flicker	EN61000-3-3

Electromagnetic compatibility specs apply to AC-DC Models only, please consult Digital Power for DC-DC specs.

Safety & Emissions

Safety Approvals	UL/cUL60950, TUV EN60950 & CE Marking
Emissions	EN55022 Level A

Environmental

Operation Temperature	-0 ~ +50C. De-rate 2.5%/C up to +71C
Storage Temperature	-40C to +85C
Cooling	28 CFM for full load (40W Convection)
Humidity	Up to 95% RH Non-condensing
Shock & Vibration	0.75G Peak 5Hz - 500Hz
MTBF	>280,000 Hours per Belcore 332 issue 6

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Single Output Model Selection Guide

AC Model	48VDC Model	24VDC Model	Output Power	Output Voltage	Output Current
US50-105	DP50-105	DM50-105	50 Watts	5V	10A
US50-112	DP50-112	DM50-112	50 Watts	12V	4.2A
US50-124	DP50-124	DM50-124	50 Watts	24V	2A

Multiple Output Model Selection Guide

Model	Input	Output Power	V1 Output	V2 Output	V3 Output	V4 Output
US50-201	90-264VAC	50 Watts	+5V/5A	+12V/2A	-	-
US50-301	90-264VAC	50 Watts	+5V/5A	+12V/2A	-12V/1A	-
US50-303	90-264VAC	50 Watts	+5V/5A	+15V/3A	-15V/2A	-
US50-401	90-264VAC	50 Watts	+5V/4A	+12V/2A	-12V/1A	-5V/0.5A

J1 CONNECTOR = MOLEX INC., 41671 SERIES, P/N: 26-48-1055.
(MATING CONNECTOR = MOLEX INC., 6442 SERIES (OR 41695 SERIES), P/N: 26-03-4050 (OR 09-50-8051))
J2 CONNECTOR = MOLEX INC., 41671 SERIES, P /N: 26-48 -1085.
(MATING CONNECTOR = MOLEX INC., 6442 SERIES (OR 41695 SERIES), P/N: 26-03-4081 (OR 09-50 -8081))
(MATING CRIMP TERMINALS = MOLEX INC., 6838 SERIES, P/N: 08-52-0113 OR 08-52-0112)

J1 Connector Pinout

Connector	AC-DC	DC-DC
1	Ground	Ground
2	Neutral	+Input
3	Line	-Input

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Revision A: 11/14/06 All specifications subject to change. Please consult Digitial Power for latest specifications.