

US-70 Series

70 Watt Flexible Input / Output Power Supply



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:

- 70W 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 (US100) | 90-264VAC, 47-63 Hz |
| Hold-Up Time | 6msec minimum (Full Load) |
| Inrush Current | 25 Amp Maximum (cold start) |
| Input - 48 Vin Models (DP100) | 36-72 VDC Input Range |
| Input - 24Vin Models (DM100) | 18-36 VDC Input Range |

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 |

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

ENVIRONMENTAL

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

OUTPUT

| | |
|--------------------------|---|
| Line Regulation | ± 0.2% for Vin (min.) to Vin (max.) |
| Transient Response | < 5% and recovers in 0.5msec, 25~75% Step lo change |
| 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 | 20% I _{max} (V1,V2,V3,V4) |
| Turn-On Delay | 2 Sec. Max. |
| Initial Setting Accuracy | ± 1% |
| Ripple (pk-pk max) | ± 1% |

SAFETY & EMISSIONS

| | |
|------------------|---|
| Safety Approvals | UL1950 CSA 22.2 No. 60950-1 VDE EN60950-1 CE Marking |
| Emissions | EN55022 Level A |



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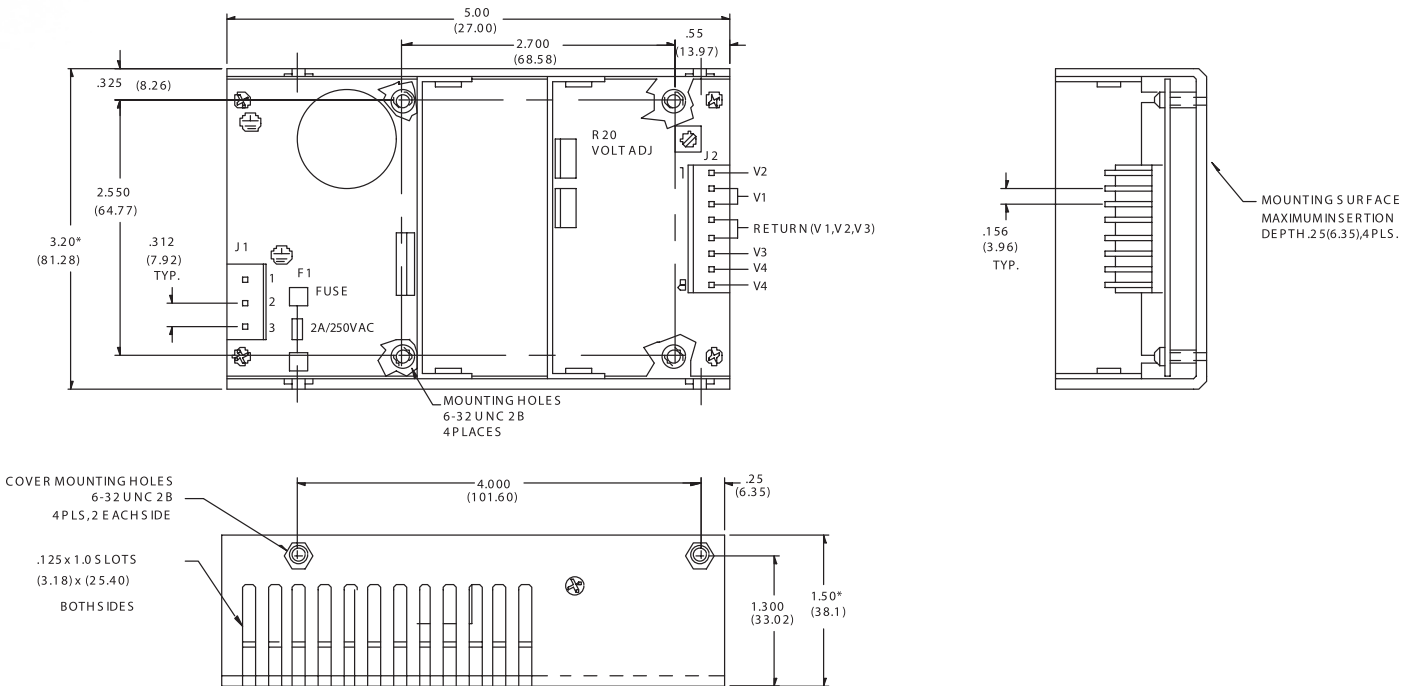
Single Output Model Selection Guide

| AC Model | 48VDC Model | 24VDC Model | Output Power | Output Voltage | Output Current |
|----------|-------------|-------------|--------------|----------------|----------------|
| US70-105 | DP70-105 | DM70-105 | 70 Watts | 5V | 10.0A |
| US70-112 | DP70-112 | DM70-112 | 70 Watts | 12V | 5.0A |
| US70-124 | DP70-124 | DM70-124 | 70 Watts | 24V | 2.7A |

Multiple Output Model Selection Guide

| Model | Output Power | V1 Output | V2 Output | V3 Output | V4 Output |
|-----------------|--------------|-----------|-----------|-----------|-----------|
| US/DP/DM 70-201 | 70 Watts | +5V/7A | +12V/4A | - | - |
| US/DP/DM 70-301 | 70 Watts | +5V/8A | +12V/4A | -12V/2A | - |
| US/DP/DM 70-303 | 70 Watts | +5V/5A | +15V/4A | -15V/1A | - |
| US/DP/DM 70-401 | 70 Watts | +5V/7A | +12V/4A | -12V/2A | -5V/2A |

Consult Digital power for DC input options, unique output voltages and other power levels.



* -O OPTIONAL COVER ADDS .30(7.62) TO WIDTH AND .05(1.27) TO HEIGHT.

J1 Connector Pinout

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

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: 26-48-1145.
(MATING CONNECTOR = MOLEX INC., 6442 SERIES (OR 41695 SERIES), P/N: 26-03-4141 (OR 09-50-8081))
(MATING CRIMP TERMINALS = MOLEX INC., 6838 SERIES, P/N: 08-52-0113 OR 08-52-0112)
* OPTIONAL COVER ADDS 0.035 (.89) TO HEIGHT.

Revision A: 03/23/09 All specifications subject to change. Please consult Digital Power for latest specifications.