

225 Watts

- Low 1.18" Profile U Channel Construction
- High Power Density
- 3.12" by 5.0" Footprint
- 150 W Convection/ 225 W Forced Cooled Ratings
- Optional 5 V Standby and Remote On/Off
- 12 V Fan Output
- Medical and ITE Approvals
- High Efficiency, up to 95%
- Less than 0.5 W No Load Input Power



The UCP225 series is designed to minimize the no load power consumption and maximize efficiency to facilitate equipment design to meet the latest environmental legislation. Approved for medical and ITE applications, this range of single output AC/DC power supplies are packaged in an ultra-low profile 1.18" height with a foot print of just 3.12" by 5.0". The UCP225 provides up to 225 W force-cooled or 150 W convection-cooled leading to very high power densities of 12.2 W/in³ or 8.1 W/in³ respectively. A 12 V, 500 mA fan supply is included in the design which can also be delivered with an optional 5 V/2 A standby output. The power supply contains two fuses and low leakage currents as required by medical applications and is safety approved to operate in a 70 °C ambient. The low profile and safety approvals covering ITE and medical standards along with conducted emissions to EN55011/22 level B allow the versatile UCP225 series to be used in a vast range of applications.

Dimensions:

UCP225:
5.00 x 3.12 x 1.18" (127.0 x 79.2 x 29.2 mm)

Models & Ratings

| Output Voltage | Output Current | | Optional Standby Output | | Fan Output | Efficiency ⁽²⁾ | Model Number ^(3, 4, 5, 6) |
|----------------|-------------------|------------------------------|-------------------------|------------------------------|------------|---------------------------|--------------------------------------|
| | Convection-cooled | Forced-cooled ⁽¹⁾ | Convection-cooled | Forced-cooled ⁽¹⁾ | | | |
| 12.0 V | 12.50 A | 18.75 A | 5 V/1.0 A | 5 V/2.0 A | 12 V/0.5 A | 92% | UCP225PS12 |
| 15.0 V | 10.00 A | 15.00 A | 5 V/1.0 A | 5 V/2.0 A | 12 V/0.5 A | 92% | UCP225PS15 |
| 24.0 V | 6.25 A | 9.38 A | 5 V/1.0 A | 5 V/2.0 A | 12 V/0.5 A | 92% | UCP225PS24 |
| 28.0 V | 5.36 A | 8.04 A | 5 V/1.0 A | 5 V/2.0 A | 12 V/0.5 A | 92% | UCP225PS28 |
| 48.0 V | 3.10 A | 4.69 A | 5 V/1.0 A | 5 V/2.0 A | 12 V/0.5 A | 92% | UCP225PS48 |

Notes

1. Requires 10 CFM or optional top fan cover, -TF
2. Minimum average efficiencies measured at 25%, 50%, 75% & 100% of 225 W load and 230 VAC input
3. Add suffix -T for input and output screw terminals e.g. UCP225PS24-T
4. Add suffix -TF for fan cover version e.g. UCP225PS24-TF
5. Add suffix -C for vented cover version e.g. UCP225PS24-C
6. Add suffix -A for optional 5 V, 2 A standby and remote on/off e.g. UCP225PS24-A

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|---------------------------|---|---------|---------|-------|--|
| Input Voltage - Operating | 85 | 115/230 | 264 | VAC | Derate output from 100% at 90 VAC to 90% at 85 VAC |
| Input Frequency | 47 | 50/60 | 63 | Hz | |
| Power Factor | | >0.9 | | | 230 VAC, 100% load. EN61000-3-2 class A, class C >145W |
| Input Current - Full Load | | 2.2/1.1 | | A | 115/230 VAC |
| Inrush Current | | 120 | | A | 230 VAC cold start, 25 °C |
| Earth Leakage Current | | 80/140 | 230 | µA | 115/230 VAC/50 Hz (Typ), 264 VAC/60 Hz (Max) |
| No load Input Power | | | 0.5 | W | When main output is Inhibited |
| Input Protection | F3.15 A/250 V Internal fuse fitted in line and neutral. | | | | |

Output - Main Output

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|------------------------------|---------|---------|---------|---------|--|
| Output Voltage - V1 | 12 | | 48 | VDC | See Models and Ratings table |
| Initial Set Accuracy | | | ±1 | % | 50% load, 115/230 VAC |
| Output Voltage Adjustment-V1 | 5 | | | % | V1 only via potentiometer. See Mech. Details, Vfan will track |
| Minimum Load | 0 | | | A | No minimum load required |
| Start Up Delay | | | 2 | s | 115/230 VAC full load. |
| Hold Up Time | 10 | 20/13 | | ms | Min at full load, 115 VAC. Typical at 150W/ 225W |
| Drift | | | ±0.02 | % | After 20 min warm up |
| Line Regulation | | | ±0.5 | % | 90-264 VAC |
| Load Regulation | | | ±0.5 | % | 0-100% load. |
| Transient Response | | | 4 | % | Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step |
| Over/Undershoot | | | 7 | % | Full load |
| Ripple & Noise | | | 1 | % pk-pk | 20 MHz bandwidth and 10 µF electrolytic capacitor in parallel with 0.1 µF ceramic capacitor. |
| Overvoltage Protection | 110 | | 140 | % | Vnom, recycle input to reset |
| Overload Protection | 110 | | 170 | % I nom | |
| Short Circuit Protection | | | | | Trip & Restart |
| Temperature Coefficient | | | 0.02 | %/°C | |
| Overtemperature Protection | | | | | Measured internally, Auto Resetting |

Output - Optional 5 V Standby Output

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|--------------------------|---|---------|---------|---------|---|
| Output Voltage | | 5.0 | | VDC | |
| Initial Set Accuracy | | | ±1 | % | 50% load, 115/230 VAC |
| Minimum Load | 0 | | | A | |
| Start Up Delay | | | 0.5 | s | 115/230 VAC full load. |
| Hold Up Time | 300 | | | ms | Min at full load, 115 VAC. |
| Drift | | | ±0.02 | % | After 20 min warm up |
| Line Regulation | | | ±0.5 | % | 90-264 VAC |
| Load Regulation | | | ±0.5 | % | 0-100% load. |
| Transient Response | | | 4 | % | Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step |
| Over/Undershoot | | | 5 | % | Full load |
| Ripple & Noise | | | 1 | % pk-pk | 20 MHz bandwidth and 10 µF electrolytic capacitor in parallel with 0.1 µF ceramic capacitor |
| Overload Protection | | 3.0 | 4.0 | A | |
| Short Circuit Protection | | | | | Trip & Restart |
| Temperature Coefficient | | | 0.02 | %/°C | |
| Remote On/Off | Connect pin 3 of CN2 to pin 1 to turn main output off. Connect to pin 2 or leave open to turn main output on. | | | | |