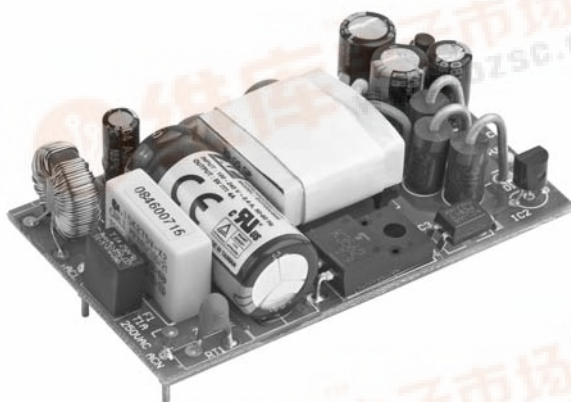


## ECP 20 Series



- Low Profile, 0.73"
- Class II Construction
- PCB Mounting
- Single Outputs from 3.3 to 48 V
- Dual Outputs from 12 to 24 V
- <0.3 W No Load Input Power
- Peak Load Capability

## Specification

## Input

|                     |                                    |
|---------------------|------------------------------------|
| Input Voltage       | • 85-264 VAC                       |
| Input Frequency     | • 47-63 Hz                         |
| Input Current       | • 0.5 A max at 115 VAC             |
| Inrush Current      | • 40 A max at 230 VAC              |
| Power Factor        | • Conforms to EN61000-3-2, Class A |
| No Load Input Power | • <0.3 W                           |

## Output

|                          |                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------|
| Output Voltage           | • See table                                                                                                |
| Initial Set Accuracy     | • $\pm 1\%$ at 60% load                                                                                    |
| Minimum Load             | • No minimum load required                                                                                 |
| Start Up Delay           | • 1.3 s max                                                                                                |
| Start Up Rise Time       | • 15 ms typical                                                                                            |
| Hold Up Time             | • 10 ms min at full load & 115 VAC                                                                         |
| Line Regulation          | • $\pm 0.5\%$ max                                                                                          |
| Load Regulation          | • $\pm 1.0\%$ max                                                                                          |
| Transient Response       | • 4% max deviation, recovering to less than 1% within 500 $\mu$ s for 50% step load change at 1 A/ $\mu$ s |
| Ripple & Noise           | • 3.3 & 5 V versions: 50 mV, 1% for others measured with 20 MHz BW                                         |
| Overvoltage Protection   | • 110-140% of nominal output voltage                                                                       |
| Overload Protection      | • 150-180% of full load current                                                                            |
| Short Circuit Protection | • Trip and restart (Hiccup mode)                                                                           |
| Temperature Coefficient  | • 0.02%/°C max                                                                                             |

## General

|                     |                            |
|---------------------|----------------------------|
| Efficiency          | • See tables               |
| Isolation           | • 3000 VAC Input to Output |
| Switching Frequency | • 65 kHz typical           |

## Environmental

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Operating Temperature | • 0 °C to +70 °C, derate from 100% load at 50 °C to 50% load at 70 °C |
| Cooling               | • Natural convection                                                  |
| Operating Humidity    | • 5% to 95% RH, non condensing                                        |
| Storage Temperature   | • -40 °C to +85 °C                                                    |
| Shock                 | • 30g, half sine, 6 axis                                              |
| Vibration             | • 5-50 Hz, 2g 15 mins/sweep, 30 mins for each of 3 axes               |

## EMC &amp; Safety

|                      |                                                                                          |
|----------------------|------------------------------------------------------------------------------------------|
| Emissions            | • EN55022, level B conducted & radiated                                                  |
| Harmonic Currents    | • EN61000-3-2, class A                                                                   |
| Voltage Flicker      | • EN61000-3-3                                                                            |
| ESD Immunity         | • EN61000-4-2, $\pm 4$ kV indirect contact, Perf Criteria A                              |
| Radiated Immunity    | • EN61000-4-3, 3 V/m, Perf Criteria A                                                    |
| EFT / Burst          | • EN61000-4-4, level 2 Perf Criteria A                                                   |
| Surge                | • EN61000-4-5, level 2 Perf Criteria A                                                   |
| Conducted Immunity   | • EN61000-4-6, 3 V Perf Criteria A                                                       |
| Dips & Interruptions | • EN61000-4-11, 70% $U_T$ 10ms, 40% $U_T$ 100ms, <5% $U_T$ 5000ms, Perf Criteria A, B, B |
| Safety Approvals     | • EN60950, cUL60950, IEC60950-1                                                          |

## Models and Ratings

ECP20 XP

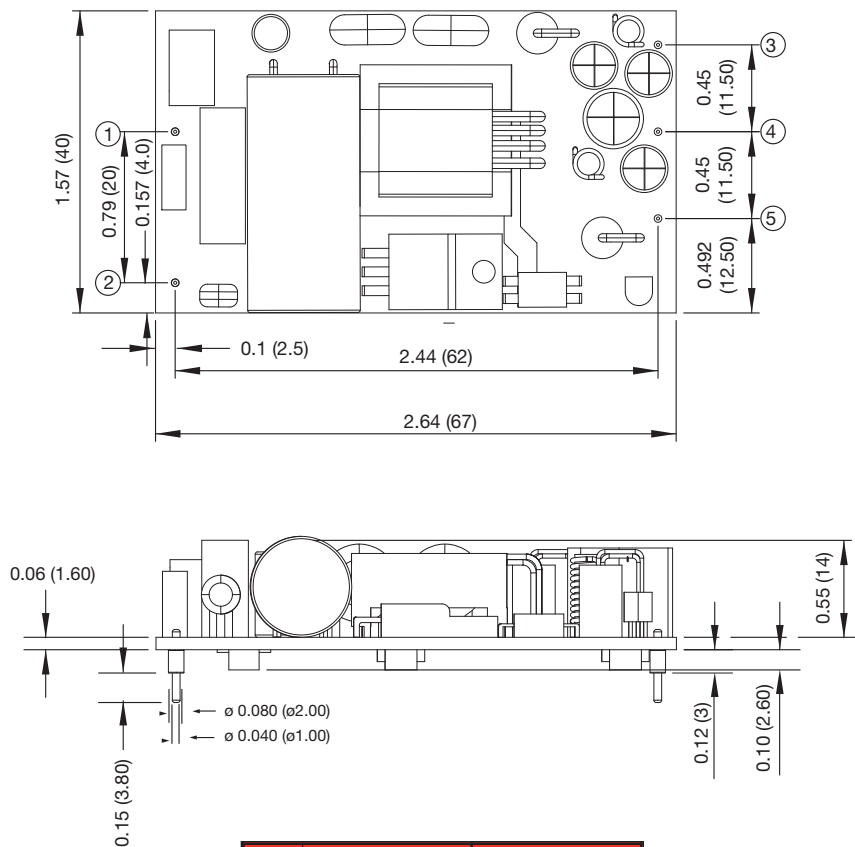
查询"ECP20US12"供应商

| Output Power | Output 1  |         |                     | Output 2  |         |                     | Efficiency | Model Number <sup>(2)</sup> |
|--------------|-----------|---------|---------------------|-----------|---------|---------------------|------------|-----------------------------|
|              | Voltage   | Current | Peak <sup>(1)</sup> | Voltage   | Current | Peak <sup>(1)</sup> |            |                             |
| 13.2 W       | 3.3 VDC   | 4.0 A   | 5.20 A              |           |         |                     | 75%        | ECP20US03                   |
| 20 W         | 5.0 VDC   | 4.0 A   | 5.20 A              |           |         |                     | 80%        | ECP20US05                   |
| 20 W         | 9.0 VDC   | 2.23 A  | 2.90 A              |           |         |                     | 82%        | ECP20US09                   |
| 20 W         | 12.0 VDC  | 1.67 A  | 2.17 A              |           |         |                     | 84%        | ECP20US12                   |
| 20 W         | 15.0 VDC  | 1.34 A  | 1.74 A              |           |         |                     | 84%        | ECP20US15                   |
| 20 W         | 24.0 VDC  | 0.84 A  | 1.09 A              |           |         |                     | 85%        | ECP20US24                   |
| 20 W         | 30.0 VDC  | 0.67 A  | 0.87 A              |           |         |                     | 86%        | ECP20US30                   |
| 20 W         | 48.0 VDC  | 0.42 A  | 0.55 A              |           |         |                     | 87%        | ECP20US48                   |
| 20 W         | +12.0 VDC | 0.84 A  | 1.09 A              | -12.0 VDC | 0.84 A  | 1.09 A              | 83%        | ECP20UD12                   |
| 20 W         | +15.0 VDC | 0.67 A  | 0.87 A              | -15.0 VDC | 0.67 A  | 0.97 A              | 84%        | ECP20UD15                   |
| 20 W         | +24.0 VDC | 0.42 A  | 0.55 A              | -24.0 VDC | 0.42 A  | 0.55 A              | 84%        | ECP20UD24                   |

## Notes

1. Peak load lasting <30 s with a maximum duty cycle of 10%, average output power not to exceed nominal.

## Mechanical Details



| Pin | ECP20US       | ECP20UD    |
|-----|---------------|------------|
| 1   | Line          | Line       |
| 2   | Neutral       | Neutral    |
| 3   | Output -VE    | Output -VE |
| 4   | Not Connected | Common     |
| 5   | Output +VE    | Output +VE |

## Notes

1. All measurements are in inches (mm).  
 2. Weight: 40g approx.