

AC-DC CONVERTER

UNIVERSAL INPUT, 30 WATTS

SINGLE AND DUAL OUTPUT

UIL30 SERIES



FEATURES

- Universal Input 90-264Vac
- High Efficiency (up to 88%)
- Fully Encapsulated Plastic Case
- Dimensions: 3.5" × 2.5" × 1.25"
- Protection: Short Circuit/ Overload/ Over Voltage
- Internal Input Filter
- 2 Year Warranty
- RoHS Compliant

SELECTION GUIDE

All specifications are typical at 230Vac input, full load and 25°C, unless otherwise noted.

| Output Wattage W | Output Voltage Vdc | Output Current mA | Ripple & Noise ⁽¹⁾ mV (Max.) | Efficiency % | Model Number |
|---------------------|-----------------------|----------------------|--|-----------------|--------------|
| 26.4 | 3.3 | 8000 | 150 | 72 | UIL30-33S |
| 40 | 5 | 8000 | 150 | 75 | UIL30-5S |
| 40 | 6 | 6650 | 150 | 75 | UIL30-6S |
| 40 | 7 | 5700 | 150 | 80 | UIL30-7S |
| 40 | 8 | 5000 | 150 | 80 | UIL30-8S |
| 40 | 9 | 4400 | 150 | 82 | UIL30-9S |
| 40 | 10 | 4000 | 150 | 82 | UIL30-10S |
| 42 | 12 | 3500 | 150 | 84 | UIL30-12S |
| 42 | 13 | 3200 | 150 | 84 | UIL30-13S |
| 42 | 14 | 3000 | 150 | 84 | UIL30-14S |
| 42 | 15 | 2800 | 150 | 84 | UIL30-15S |
| 42 | 16 | 2625 | 150 | 85 | UIL30-16S |
| 42 | 18 | 2300 | 150 | 85 | UIL30-18S |
| 42 | 24 | 1750 | 240 | 86 | UIL30-24S |
| 42 | 27 | 1550 | 240 | 86 | UIL30-27S |
| 43.2 | 36 | 1200 | 240 | 86 | UIL30-36S |
| 48 | 48 | 1000 | 240 | 88 | UIL30-48S |
| 40 | ±5 | ±4000 | 150 | 75 | UIL30-05D |
| 42 | ±12 | ±1750 | 150 | 80 | UIL30-12D |
| 42 | ±15 | ±1400 | 150 | 80 | UIL30-15D |
| 42 | ±24 | ±875 | 240 | 80 | UIL30-24D |
| 26.5 | 3.3/5 | 5000/2000 | 150/240 | 72 | UIL30-33S5S |
| 40 | 5/12 | 5000/1250 | 150/240 | 75 | UIL30-5S12S |
| 40 | 5/15 | 5000/1000 | 150/240 | 75 | UIL30-5S15S |
| 40 | 5/24 | 5000/625 | 150/240 | 78 | UIL30-5S24S |

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| Input Specifications | | | Output Specifications | | |
|--------------------------|--|----------------------|---------------------------------------|--|---|
| Voltage range | 90Vac Min., 264Vac Max. | Vo, lo nom, AC input | Output voltage accuracy, % | ±3 Max. | Vi nom, lo nom, Single output, 3.3V-9V models |
| | 120Vdc Min., 370Vdc Max. | Vo, lo nom, DC input | | ±2 Max. | Vi nom, lo nom, Single output, 10V-48V models |
| Rated input voltage, Vac | 100 - 240 Typ. | Vo, lo nom | | ±5 Max. | Dual output |
| Line frequency, Hz | 47 Min., 50/60 Typ., 63 Max. | Vi nom, lo nom | Minimum load, % | 0 Min. | Vi nom, Single output models |
| | | | 20 Min. | Vi nom, Dual output models (each output) | |
| Inrush current, A | 12 Max. | lo nom, Vi: 115Vac | Line regulation, % | ±1 Typ. | lo nom, Vi min...Vi max |
| | | | 20 Max. | lo nom, Vi: 230Vac | |
| Input fuse | VDE/UL/CCC, Fuse 2.5A/250V (Slow blow) | | Load regulation, % | ±2 Typ. | Lo min- lo nom, Single output models |
| | | | ±5 Typ. | Lo min- lo nom, Dual output models | |
| | | | Transient recovery time, uS | 1,000 Typ. | Vi nom, lo nom = \longleftrightarrow 0.5 lo nom |
| | | | Overload protection | Above 110% rated output power Recovers automatically after fault condition is removed | |
| | | | Short circuit protection | Recovers automatically after fault condition is removed | |
| | | | Over voltage protection (Main output) | 120%-150% rated output voltage Zener diode clamp | |

| General Specifications | | | |
|--------------------------|----------------|-----------------|-------------------|
| Isolation voltage | | Input to Output | 3KVac/ 5mA/ 5Secs |
| Isolation resistance, MΩ | 500Vdc | Input to Output | 100 Min. |
| Switching frequency, kHz | Vi nom, lo nom | | 65 Typ. |

| Environmental Specifications | | | |
|------------------------------|-----------------------------|----------|---------|
| Operating temperature, °C | Operating at Vi nom, lo nom | -20 Min. | 70 Max. |
| Derating, %/°C | Vi nom, lo nom 51 to 71°C | | 2 Max. |
| Storage temperature, °C | Non-operational | -40 Min. | 85 Max. |
| Relatively humidity, % RH | Vi nom, lo nom | | 95 Max. |
| Cooling | Free air convection | | |

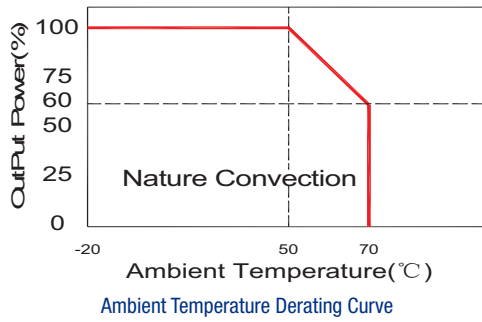
| Physical Specifications | | EMC Specifications | |
|-----------------------------|---|------------------------------|-----------------------|
| Design meet safety standard | EN60950-1 | EMI conduction and radiation | Compliance to EN55022 |
| Dimensions, inches (mm) | 3.5 × 2.5 × 1.25 (88.90 × 63.50 × 31.75) | EMS immunity | Compliance to EN55024 |

Note:

1. Ripple & noise is measured by using 20 MHz bandwidth, measured with a 47µF paralleled with a high-frequency 0.47µF capacitor across each output by full load.

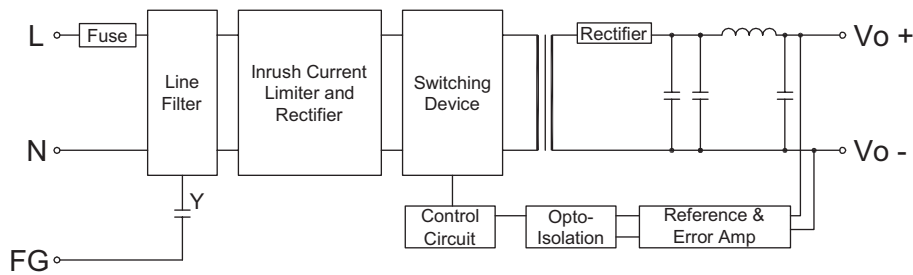
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Characteristic Curve

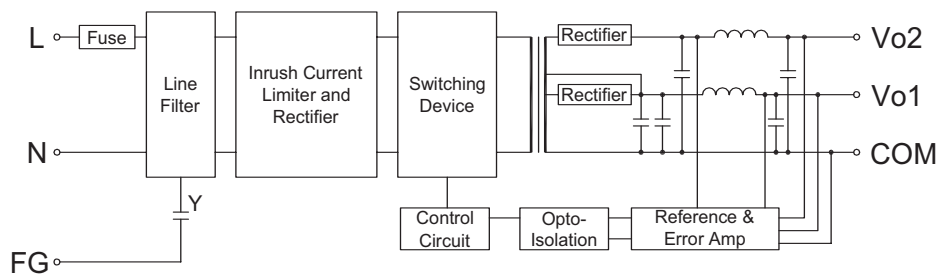
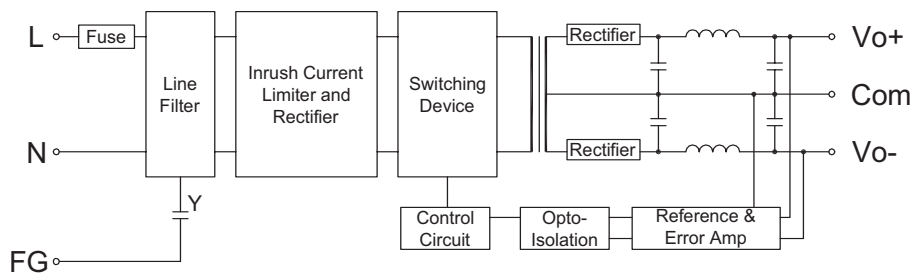


Circuit Schematic

Single Output

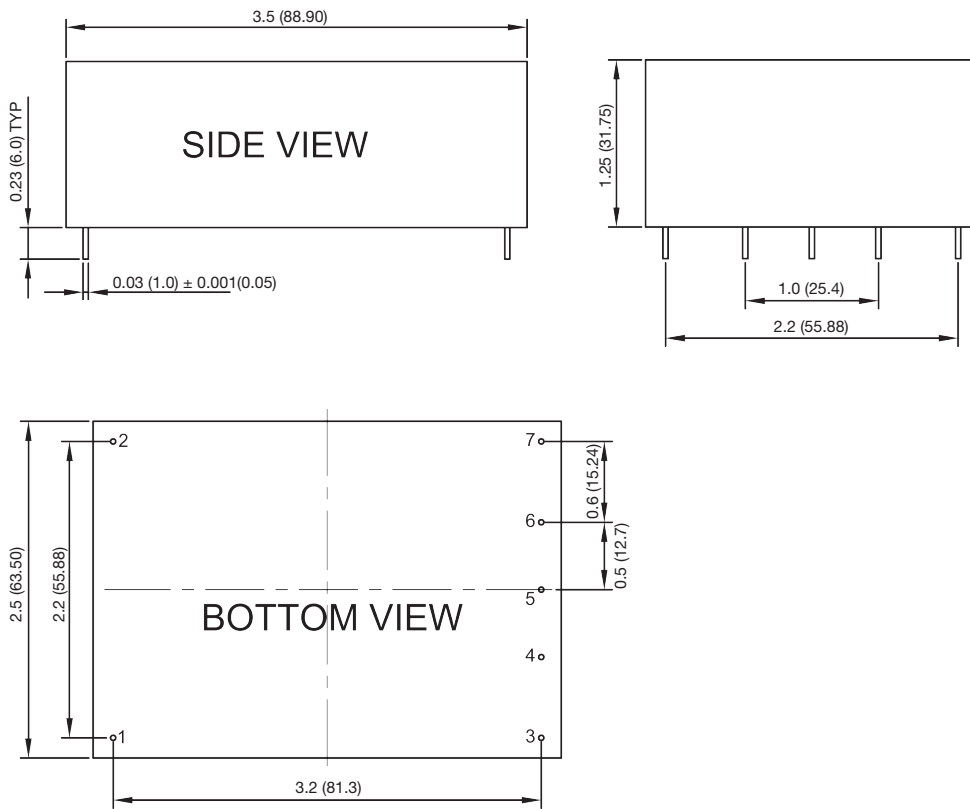


Dual Output



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Mechanical Drawing



PIN CONNECTION

| PIN | SINGLE | DUAL | DUAL |
|-----|--------|--------|--------|
| 1 | ACN | ACN | ACN |
| 2 | ACL | ACL | ACL |
| 3 | +Vo | +Vo | +Vo2 |
| 4 | NO PIN | NO PIN | +Vo1 |
| 5 | -Vo | Com | Com |
| 6 | NO PIN | NO PIN | Com |
| 7 | NC | -Vo | NO PIN |

1. All dimensions in inches (mm)
2. All tolerances are ±0.50