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Find the *TDK-Lambda DRP60-1* at our website: *Click HERE*

The DRP - 60



Features

- Single Phase 230/115VAC Switchable
- Output 24V/2.5A
- High Overload Current
- Conforms to EN50081-1,2 Class B EN55011, EN55022, EN61000-4-2,4,5,11, VDE0160/W2

SPECIFICATIONS

Input

Input Voltage: AC110-120/220-240V (switchable), 47-63Hz (85-132VAC/176-264VAC, 160-375VDC, see also 'Output: Continuous Loading').

Quasi-Wide-Range Input: With the switch in the 230V position the power supply unit operates at low and moderate load at any input voltage between 95 and 275VAC (cf. 'Output' below).
Note: At DC input, always leave the switch in the 230V position.

Input Current: <1.3A (switch in 115V position)
<0.7A (switch in 230V position)

DC input current at open output: typ. 5.3mA at 110VDC, 3.9mA at 300VDC (preserves battery sources)

Inrush Current: typ.25A@264VAC and cold start

To be fused with 10A, B-type. 'Thermomagnetic circuit-breaker'. In addition, the unit contains an internal fuse (not accessible).

Transient Handling Transient resistance acc. to VDE0160/W2 (750V/1.3ms), for *all* load conditions.

Hold up time >20ms at 196VAC, 24V/2.5A (see diagram overleaf)

Output

Output Voltage: 24VDC +5% -1%

Noise suppresion: Output filter against common-mode noise. radiated EMI values below EN50081, Annex 1, even when using long, unscreened cables.

Continuous loading (Convection Cooling), see also diagram overleaf

Switch	AC/DC in		Iout
230V	176-264V	Acin	2.5A
	95-176V	Acin	1.5A
	160-375V	DCin	2.5A
	120-160V	DCin	2.0A
	80*-120V	DCin	1.5A
115V	85-132V	ACin	2.5A

Voltage Requlation: Better than 1% Vout overall

Ripple/Noise: <25mVpp, (20 MHz bandw., 50Ω measurem.)

Overvolt. protection: typ. 32V

Parallel operation: yes, current sharing available on request.

Front Panel Indicator: Green LED, goes out at Vout<12V

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Efficiency/Losses:

Efficiency:	typ. 87.5% (230VAC, 24V/2.5A)
Losses:	typ. 8.6W (230VAC, 24V/2.5A)

Start/Overload Behaviour

Startup delay:	typ. 0.1 s
Rise-up time:	ca. 5-20ms, depending on load

Overload Behaviour: Special overload design (see diagram), so in case of overload.

- no disconnection, no hiccup
- High overload current (>1.5 INom), Vout is continuously reduced with increasing overload current.

Advantages:

- High short-circuit current, giving large 'start-up window': unit starts reliably even with awkward loads (capacitance, DC-DC converters, motors).
- No 'latching' such as can occur with fold-back characteristics.
- Secondary fuses operate reliably

Electromagnetic Compatibility (EMC)

Emissions: EN50081-1 (includes EN-50081-2) Class B (EN55011, EN55022) conducted and radiated noise, and EN50081, Ann. 1 (DC output)

Immunity: EN50082-2 (includes EN50082-1)

- Static Discharge (ESD): EN61000-4-2 (IEC 801-2), level 4 (withstands 8kV direct discharge, 15kV air discharge)
- Electromagnetic radiated fields: ENV 50140 (IEC801-3),Level 3(10V/m)

• Burst, asymm./unsymm: EN61000-4-4 (IEC801-4), coupled to:	
- ACin lines	Level 4 (4 kV)
- DCout lines	Level 3 (2 kV)
• Surge transients	EN61000-4-5,
- Differential (L→PE)	Isolation class 4 (4kV)
- Common mode (L→N)	Isolation class 4 (2kV)
• Conducted noise Immunity	ENV 50141 (Draft version of Immunity IEC801-6), Level 3 (10V, 150kHz-80 Mhz)
• Mains breaks:	EN61000-4-11 (see 'Input')
• Transient Immunity	Transient resistance acc. to VDE0160/W2 over entire load range.

Connections

Input Output Large robust screw terminals, connector size range:

- solid: 1.5-6mm²
- flexible: 1.5-4mm²
- Output: 2 connectors per output, current handling capacity: 30A each.

Design Advantages:

- All connection blocks are easy to reach as mounted at the front panel.
- Input and output are strictly apart from each other and so cannot

Reliability, Duration of Life, Tests

MTBF: 740,000h acc. to Siemens Norm SN 29500 (24V/2.5A, 230VAC, Tamb=+40°C)

Electrolytics: Input electrolytics 3,000hrs min. at +105°C
Output electrolytics 6,000hrs min. at +105°C

Tests(for *each* unit):

- Functional test (100%, Test certificate enclosed)
- In-Circuit Test
- Run-in/burn-in (full load, Tamb = +60°C, On/Off cycle)

Mechanics

Dimensions and Weight

• W x H x D	50mm x 125mm x 103mm (+DIN rail)
• Free space for ventilation	above/below 25mm recommended right 10mm recommended (front view)
• Weight	460g

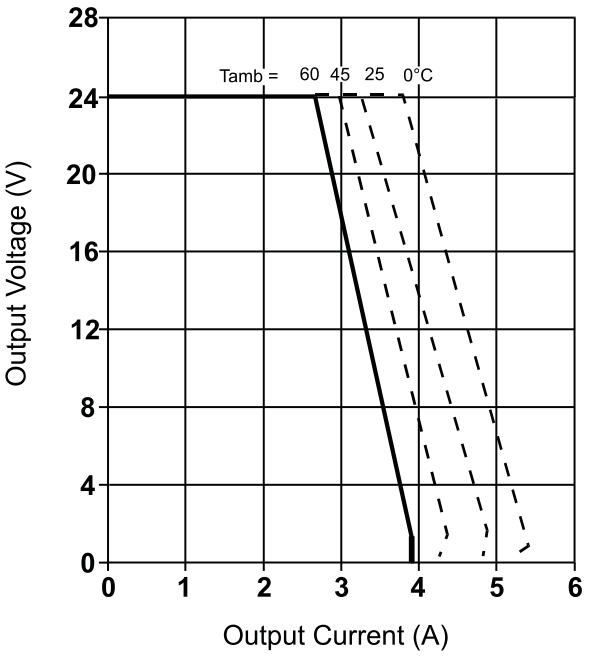
Case Robust metal casing with fine ventilating grid (IP20), to keep out small parts (e.g. screws)

Mounting DIN-Rail (TS35/7.5 or TS35/15)

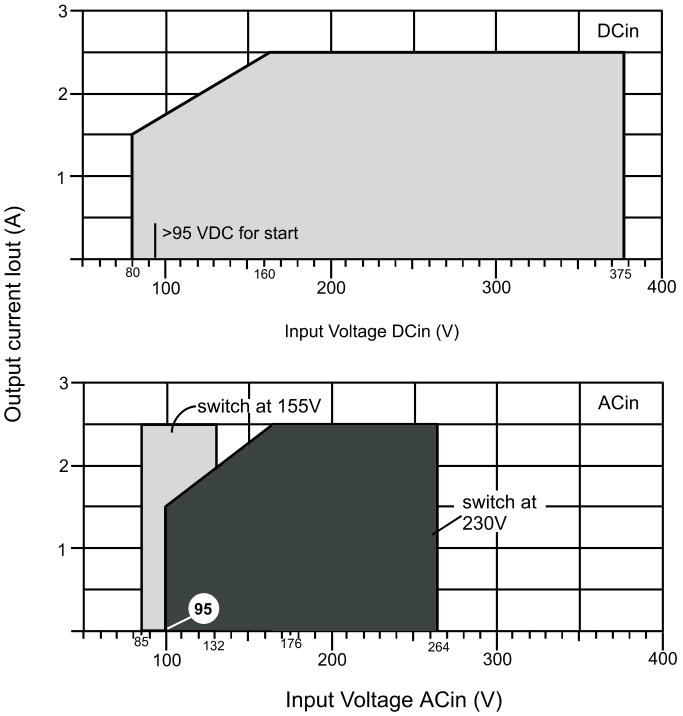
- Simple snap-on system
- Sits safely and firmly on the DIN-Rail
- No tools required to remove

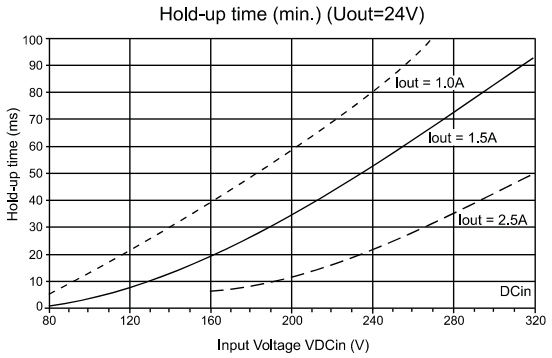
or backplane-mounted (two optional screw mounting sets required)

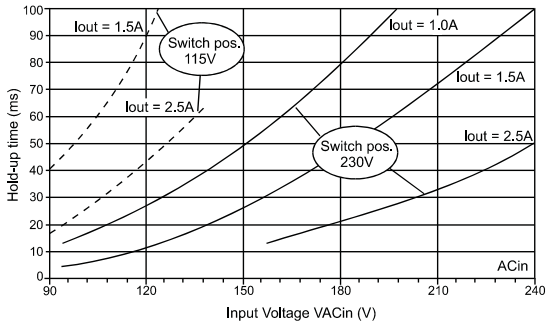
Output Characteristic (typ.)



Output Current over Input Voltage (min.)







The DRP Range.

Full specifications will be available on release of the products.

Please check with Sales Office for availability and delivery.

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POWER	MODEL NAME	COUTANT PART CODE	TYPE
40W	DRP-40-DC	N00060	24VDC input
60W	DRP-60-1	N00020	single phase, 110/230V
120W	DRP-120-1	N00030	single phase, 110/230V
240W	DRP-240-1	N00040	single phase, 110/230V
240W	DRP-240-3	N00041	3 phase, 400-500V
480W	DRP-480-1	N00011	single phase, 230V
480W	DRP-480-1S	N00013	single phase 230/110V
480W	DRP-480-3	N00010	3 phase, 400V
480W	DRP-480-3H	N00012	3 phase, 480V
720W	DRP-720-3	N00070	3 phase, 400-500V
960W	DRP-960-3	N00050	3 phase, 400-500V

In the interest of continued product development, Coutant Lambda Ltd reserves the right to alter the specification within this data sheet without notice.

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