

Technical data sheet

Power supply · 93 W

Primary switched power supplies, PFC, Single-phase, NEC Class 2 compliant

Input: wide-range input AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 3.8 A



Identification

Type DRAN120-24AL
Part No. [722757](#)

Product version

Datasheet version 02

Input

Number of phases 1
Rated voltage U_N AC 115 / 230 V (auto select)
Operation voltage range AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range 47 Hz – 63 Hz
Rated current I_N 1.65 A @ AC 115 V / 0.65 A @ AC 230 V
Inrush current 24 A @ AC 115 V / 48 A @ AC 230 V
Internal fuse T3, 15 A/AC 250 V
External protection Mini-circuit breaker: B 6 A
Power factor correction P.F.C. 0.7

Output

Output voltage/current DC 24 V/3.8 A
Rated voltage U_N DC 24 V
Rated current I_N 3.8 A
Power Dissipation 16 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$ 22.5–28.5 V
Accuracy $\pm 1\ %$
Load regulation Single $\pm 1\ %$, Parallel $\pm 5\ %$

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Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Parallel / redundant mode	Max. 2 devices each with 90 % load current / via external decoupling diodes
Efficiency	87 %
Over voltage protection	125–145 %
Rated over load protection	105–125 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	Normally open
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at 60 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	530000 h
Degree of protection	IP20
Protection class	I (SELV, PELV)
Weight/unit	0.92 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ² AWG 24 – AWG 10
Dimensions (w × h × d)	64.0 mm × 124.5 mm × 116.6 mm
PU (units)	1

General ambient conditions

Operation temperature range	-35 °C ... +71 °C (Derating)
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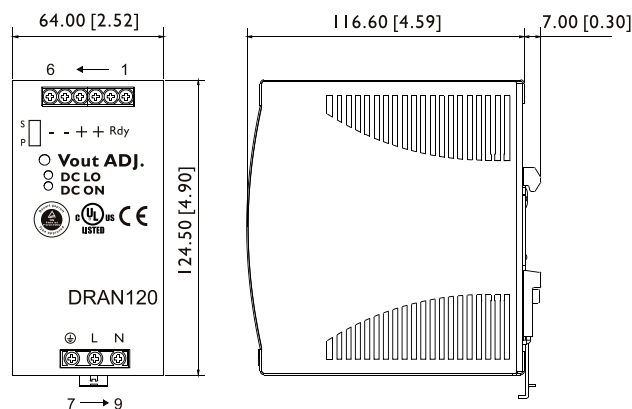
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Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

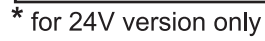
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

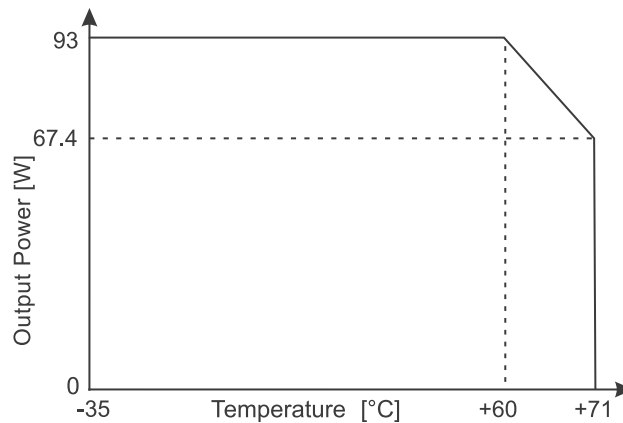
Dimensions



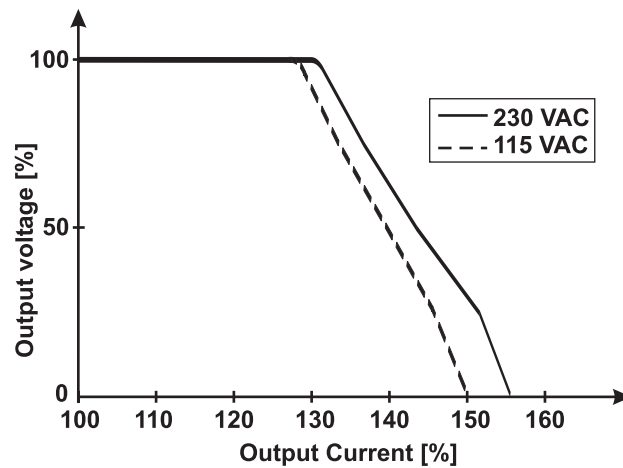
PIN assignment



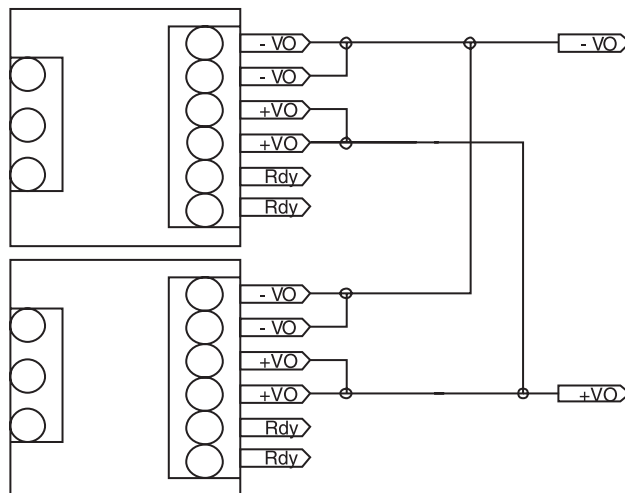
Derating



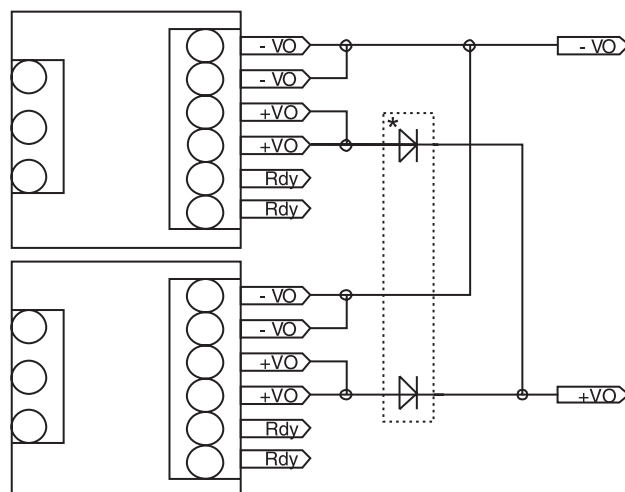
Short circuit characteristics



Parallel mode



Redundant operation



* Redundant Module 722987