

Features

- Universal AC input (85-264VAC)
- Long 7 year warranty
- Protections: SCP, OVP, OCP, OTP
- 100% full load burn-in test
- DC OK indicator LED with relay contacts
- Cooling by free air convection, 5000m operation
- UL, CSA & CE certified with CB report

DIN Rail Series

Description

This DIN-rail mounted power supply uses high reliability components to give a long, trouble-free life. The power supply can be end mounted to save space or side mounted for use in low-profile cabinets. Relay contacts simplify DC OK monitoring and the units can deliver 80W start-up power. The REDIN series is fully certified for industrial use and carries a 7-year warranty.

Selection Guide

| Part Number | Input Voltage Range [VAC] | Output Voltage [VDC] | Output Trimming Voltage [VDC] | Rated Current [A] | Efficiency typ. [%] | Max. Capacitive Load [μF] |
|-------------|---------------------------|----------------------|-------------------------------|-------------------|---------------------|---------------------------|
| REDIN60-12 | 85-264 | 12 | 12-15 | 5.0 | 85 | 18800 |
| REDIN60-24 | 85-264 | 24 | 24-28 | 2.5 | 86 | 4700 |

Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)

| BASIC CHARACTERISTICS | | | | |
|--|--|-------|--|-------------------------|
| Parameter | Condition | Min. | Typ. | Max. |
| Input Voltage Range | all operating conditions | 85VAC | | 264VAC |
| max. Input Voltage | max. 1 second | | | 300VAC 375VDC |
| Output Voltage Adjustment (Factory Setting) ⁽¹⁾ | REDIN60-12 REDIN60-24 | | 12-15VDC (12V±5%) 24-28VDC (24V±5%) | |
| Input Current | full load, 115VAC full load, 230VAC | | | 1.8A 1.0A |
| Inrush Current | cold start at 25°C, 115VAC cold start at 25°C, 230VAC | | | 40A 60A |
| No Load Power Consumption | standard (with Relay) /NR option (no Relay) | | | <1000mW <500mW |
| Start up time | cold start, 230VAC | | 500ms | 1000ms |
| Rise time | cold start, 230VAC | | 20ms | |
| Hold-up time | full load, 115VAC full load, 230VAC | | 20ms 50ms | |
| Input Frequency Range | | 47Hz | | 63Hz |
| Operating Frequency Range | | | 65kHz | |
| Output Ripple and Noise ⁽²⁾ | REDIN60-12 REDIN60-24 | | 60mVp-p 75mVp-p | |
| Over Load Capability | all operating conditions | | | 140% for 5 seconds max. |

Notes:

Note1: For more details refer to "Vadj. Derating" graph

Note2: Ripple and Noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1μF & 47μF parallel capacitor

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RECOM
AC/DC Converter

REDIN60

60 Watt
DIN-Rail
Power Supply



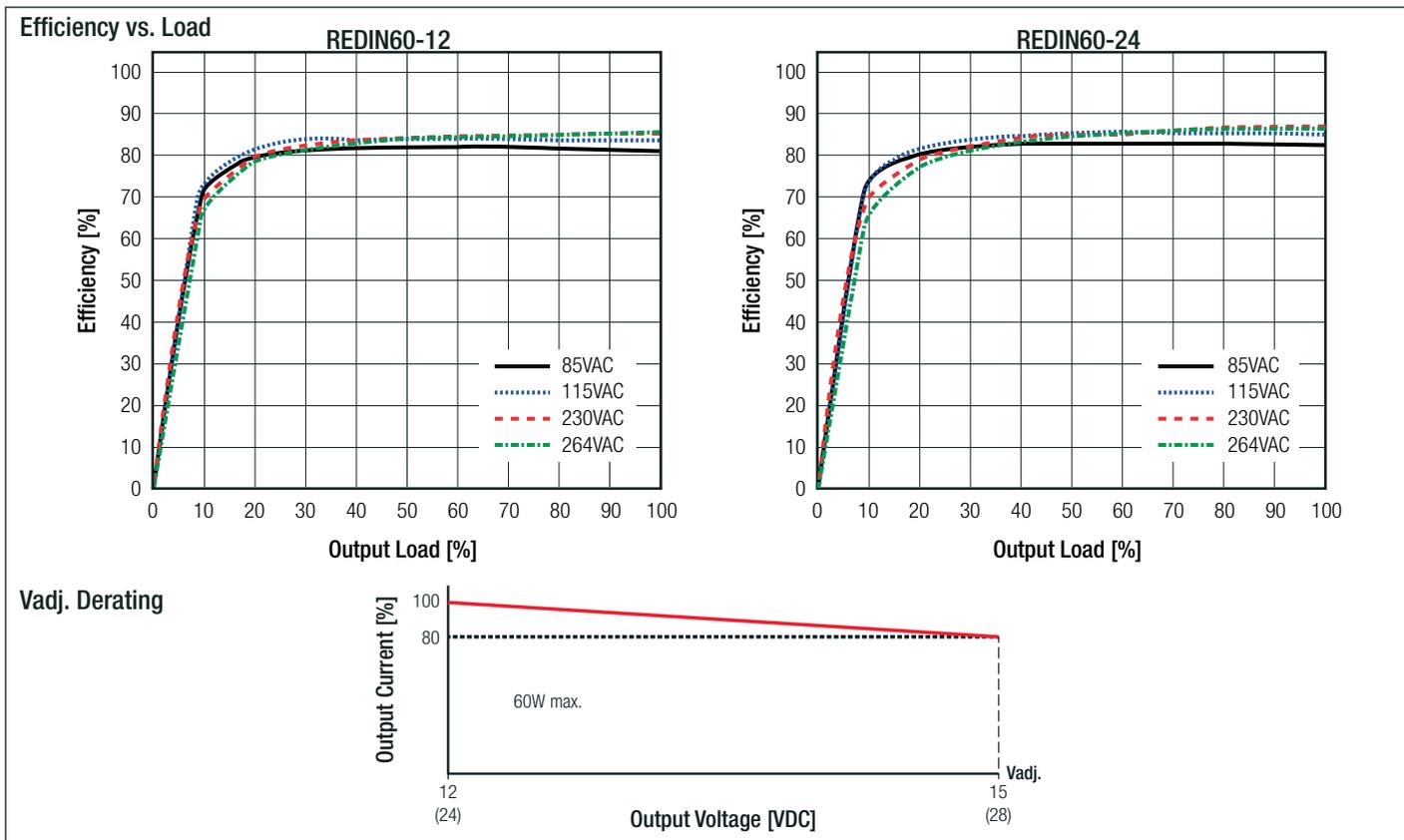
CB-Report
UL60950-1 certified
IEC/EN60950-1 certified
CSA C22.2 No. 60950-1-07 certified
UL508 certified
CAN/CSA-C22.2 No. 107.1-01 certified
EN55024 certified
EN55032 certified

SEARCHING FOR
ALTERNATIVES?

Contact RECOM

<https://recom-power.com/contact.html>

Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)



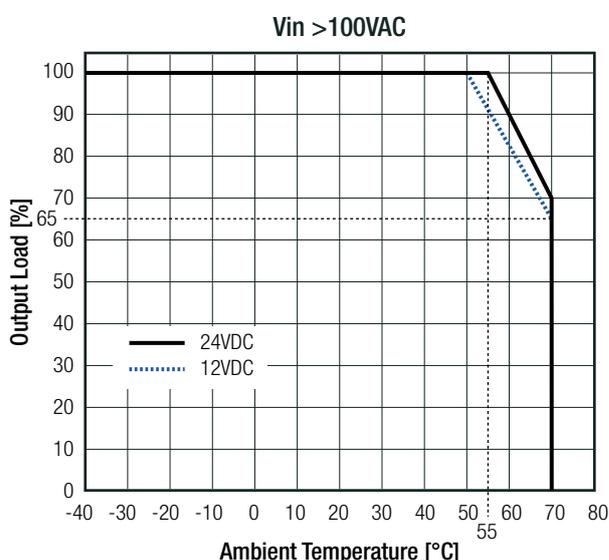
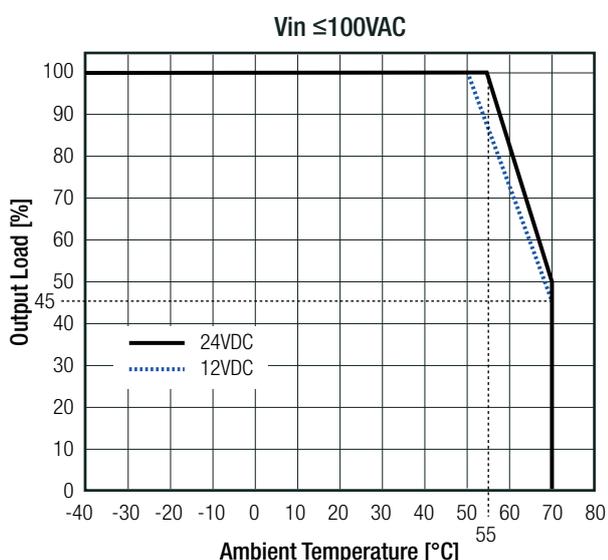
| REGULATION | | |
|--|---|-----------------------|
| Parameter | Condition | Value |
| Line Regulation | | ±0.1% typ. / ±1% max. |
| Load Regulation | | 0.1% typ. / 1% max. |
| Transient Response ⁽³⁾ | REDIN60-12 (step load change: 2.5A - 5.0A) REDIN60-24 (step load change: 1.25A - 2.5A) | ±5% typ. ±5% typ. |
| Dwell Time | | 100Hz & 1kHz 50% duty |
| Slew Rate | | 0.5A / µs |
| Notes: | | |
| Note3: Transient Response + E-CAP loading 3300µF. Other specs with resistive load only | | |

| PROTECTION | | |
|-----------------------------------|--|--|
| Parameter | Condition | Value |
| Input Fuse | | T2.5A, slow blow type |
| Short Circuit Protection (SCP) | | auto-recovery after fault condition, Hiccup Mode |
| Over Voltage Protection (OVP) | REDIN60-12 REDIN60-24 | 18VDC max., shut-down latch-off o/p voltage, re-power on to recover 35VDC max., shut-down latch-off o/p voltage, re-power on to recover |
| Over Voltage Category | | OVCII |
| Over Current Protection (OCP) | | 150% typ., auto-recovery after fault condition is removed |
| Over Temperature Protection (OTP) | detect on inside ambient | 105°C±5%, shut-down latch-off o/p voltage, re-power on to recover |
| Isolation Voltage | tested for 1 minute | I/P to O/P: 3.75kVAC I/P to FG: 1.88kVAC O/P to FG: 0.5kVAC |
| Isolation Resistance | 500VDC, 70% RH, I/P to O/P; I/P to FG; O/P to FG | 100MΩ min. |
| Leakage Current | 240VAC | >1mA |
| Power OK LED | Relay Contacts LED/Relay | 1A, 30VDC / 120VAC ON if Vout = 11-16V (12V) / 22-30V (24V) |

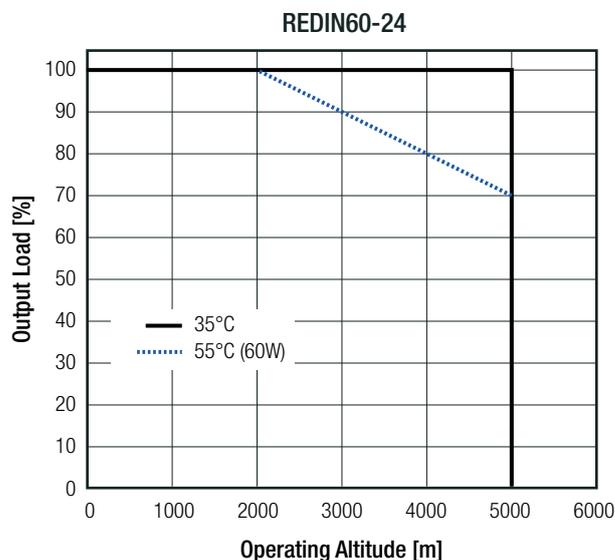
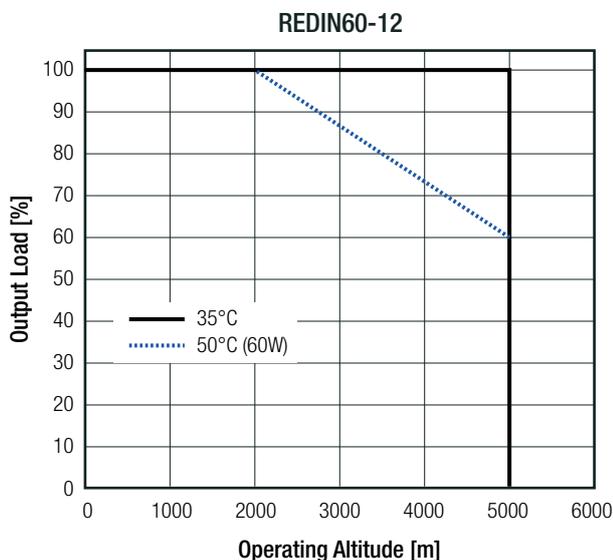
Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)

| ENVIRONMENTAL | | |
|-----------------------------|--|-----------------------------------|
| Parameter | Condition | Value |
| Operating Temperature Range | with derating | -20°C to +70°C (see graph) |
| Operating Humidity | non-condensing | 20% - 90%RH |
| Vibration | | 10-500Hz 2G, 60min. |
| Shock | 3 times each axis | 10G / 11ms, along X, Y and Z axis |
| Altitude | see derating graph | 5000m |
| MTBF (+25°C) | according to MIL-HDBK-217F, 115VAC, 60Hz, 75% load | 200 x 10 ³ hours |
| Design Lifetime (+40°C) | | 87.6 x 10 ³ hours |

Derating Graph



Typical Characteristics



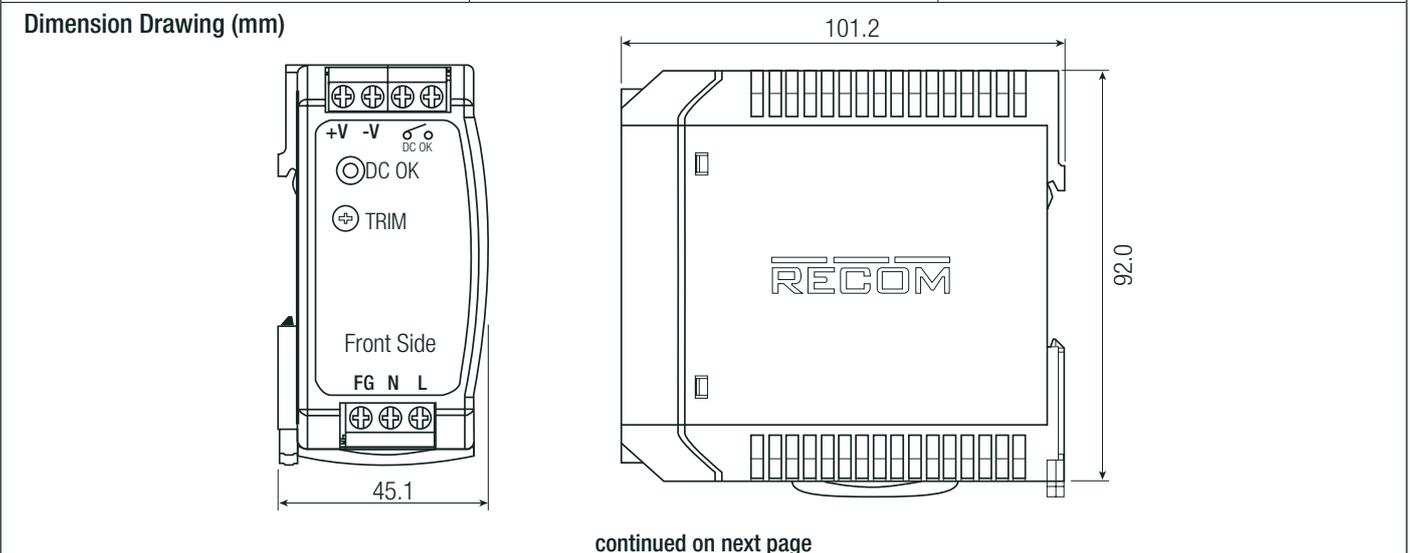
Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)

| SAFETY AND CERTIFICATIONS | | |
|---|----------------------|---|
| Certificate Type (Safety) | Report / File Number | Standard |
| Information Technology Equipment - General Requirments for Safety | E224736-A23 | UL60950-1 2nd Edition 2011 CAN/CSA-C22.2 No. 60950-1-07 2nd Edition 2011 |
| Industrial Control Equipment | E470721 | CAN/CSA-C22.2 No. 107.1-01, 3rd Edition 2011 UL508, 17th Edition 2013 |
| Information Technology Equipment - General Requirments for Safety | E224736-A23 | EN60950-1:2006 + A2:2013 IEC60950-1:2005 2nd Edition + A1:2009 |
| EAC | RU-AT.37.02367 | TP TC 004/2011 |
| RoHS2 | | RoHS 2011/65/EU |

| EMC Compliance | Report / Condition | Standard / Criterion |
|--|--|--|
| Electromagnetic compatibility of multimedia equipment – Emission Requirements | | EN55032:2015 |
| Information technology equipment - Immunity characteristics - Limits and methods of measurement | | EN55024:2010 + A1:2015 |
| ESD Electrostatic discharge immunity test | Air +/-2, 4, 8kV, Contact +/-2, 4kV | IEC61000-4-2:2008; Criteria A |
| Radiated, radio-frequency, electromagnetic field immunity test | 3V/m | IEC61000-4-3:2006 + A1:2007 + A2:2010; Criteria A |
| Fast Transient and Burst Immunity | AC Power Port: +/-1.0kV | IEC61000-4-4:2012; Criteria A |
| Surge Immunity | AC Power Port: L-N +/-0.5, 1, 2kV L-PE, N-PE +/-0.5, 1, 2, 4kV | IEC61000-4-5:2014; Criteria A |
| Immunity to conducted disturbances, induced by radio-frequency fields | AC Power Port 3V | IEC61000-4-6:2013; Criteria A |
| Power Magnetic Field Immunity | 50Hz, 1A/m | IEC61000-4-8:2009; Criteria A |
| Voltage Dips and Interruptions | Voltage Dips >95% Voltage Dips 30% Voltage Interruptions > 95% | IEC61000-4-11:2004; Criteria A IEC61000-4-11:2004; Criteria A IEC61000-4-11:2004; Criteria B |
| Limits of Harmonic Current Emissions | | EN61000-3-2:2014, Class A |
| Limits of Voltage Fluctuations & Flicker | | EN61000-3-3:2013 |
| Limitations on the amount of electromagnetic intererence allowed from digital and electronic devices | | 47 CFR FCC Part 15 Subpart B 2010-01-07, Class B |

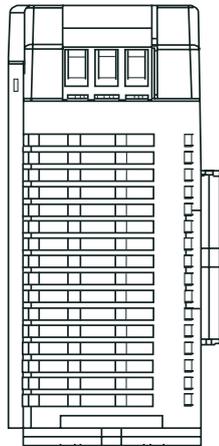
DIMENSION and PHYSICAL CHARACTERISTICS

| Parameter | Type | Value |
|-------------------|------|-----------------------|
| Material | case | plastic, (UL94V-0) |
| Dimension (WxHxD) | | 45.1 x 92.0 x 101.2mm |
| Weight | | 332g |

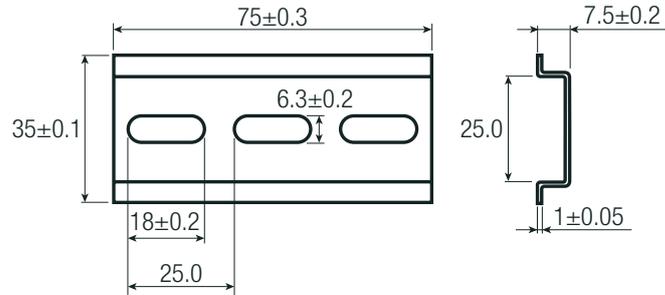


Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)

Dimension Drawing (mm)

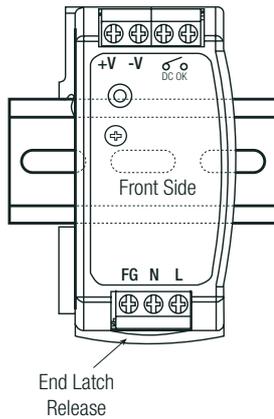


DIN-RAIL mounting bracket
(75mm) included

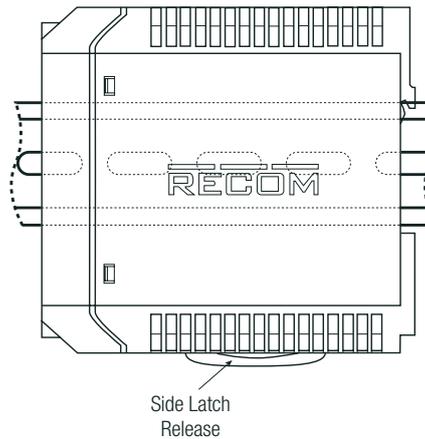


INSTALLATION

END MOUNTING



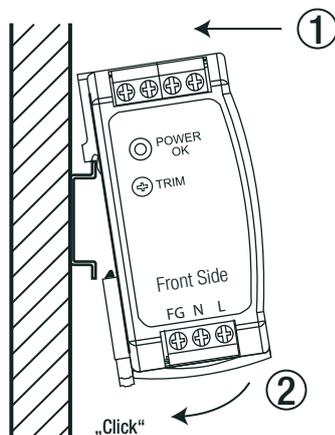
SIDE MOUNTING



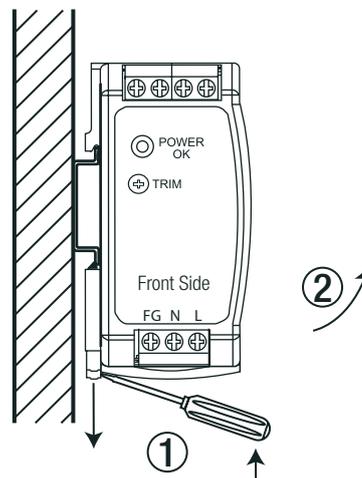
Tolerance: ±0.5mm

Mounting Instruction

Mounting



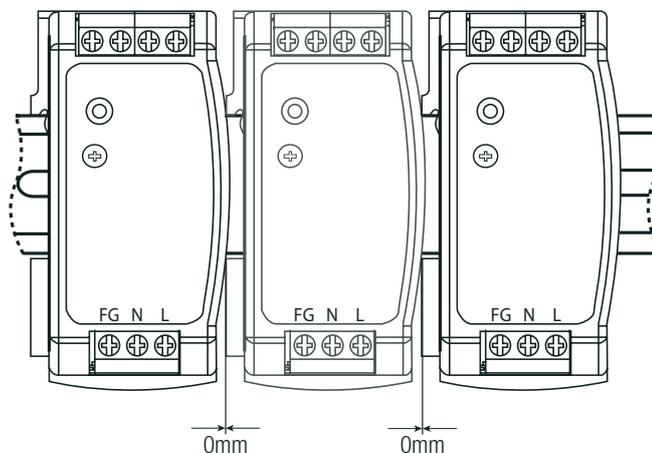
Releasing



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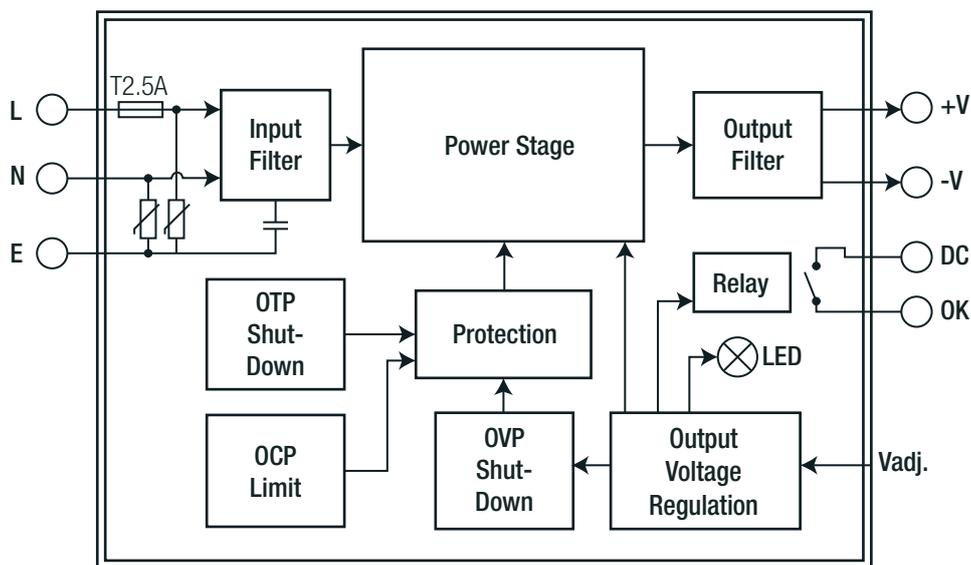
Specifications (measured at Ta= 25°C, 230VAC, full load and after warm up)

Mounting Multiple Power Supplies



no spacers between supplies required

BLOCK DIAGRAM



PACKAGING INFORMATION

| Parameter | Type | Value |
|-----------------------------|---------------|-----------------------|
| Packaging Dimension (LxWxH) | cardboard box | 116.0 x 97.0 x 54.0mm |
| Packaging Quantity | | 1pcs |
| Storage Temperature Range | | -30°C to +85°C |
| Storage Humidity | | 10% - 90% RH |

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.