Technical Data Sheet

# RACM420-K Series ◊ AC/DC Power Supply

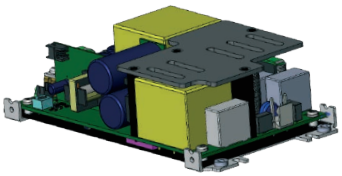
420W (550W/5s) ◊ Input: 100V-240VAC

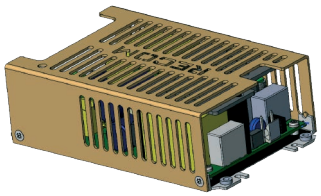
RECOM
AC/DC Converter

## FEATURES

- Nominal Input Voltage range: 100V-240VAC
- 250/400W low/high line still air convection ratings
- 550W boost power for up to 5s
- Conduction cooling support via baseplate
- Options: AC-fail; 5VSB out; CTRL ON/OFF; sensing
- 90% plus Efficiency, starting from 30W loads
- OVC III up to 3000m altitude; 5000m: OVC II
- 3”x5” footprint plus mounting flanges
- Open frame or enclosed construction
- 3 year warranty

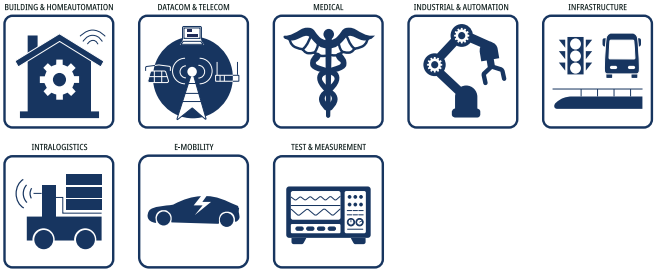
pictures for reference only!





Open frame: 145.8 x 83.6 x 39.0mm (5.74 x 3.29 x 1.54 inch)
Enclosed: 1145.8 x 85.6 x 43.5mm (5.74 x 3.37 x 1.71 inch)

## APPLICATIONS




## SAFETY & EMC

RoHS² compliant 10 from 10 | Reach compliant | CE | cULus E224736 | IECEE CB SCHEME | HOUSEHOLD CERTIFIED EN-60335-1

## DESCRIPTION

The RACM420-K series combines up to 550W peak power with advanced thermal management in a compact AC/DC power supply design. Its integrated thermally conductive baseplate enables efficient heat transfer to the application chassis, enhancing cooling performance particularly in fanless systems. Delivering 420W with forced-air cooling and up to 400W at high line or 250W at low line under natural convection, the series supports demanding industrial and medical applications. Based on a compact 3”×5” PCB footprint with additional mounting tabs, the series offers universal 85–264VAC input, -40°C to +80°C operation, OVC III rating, medical-grade 2MOPP isolation, and integrated EN55032 Class B filtering for easy system integration. Efficiency exceeding 90% from just 30W load and up to 300mW standby output power at less than 0.5W input consumption complete this versatile power solution.

## SELECTION GUIDE

| Part Number | Operating Input Range [VAC] | Output Voltage nom. [VDC] | max. Output Current (1) [A] | Efficiency (2) typ. [%] | rated Output Power [W] |
|---|---|---|---|---|---|
| RACM420-12SK (3,4) | 80-264 | 12 | 35 | 92 | 420W |
| RACM420-15SK (3,4) | 80-264 | 15 | 28 | 92 | 420W |
| RACM420-24SK (3,4) | 80-264 | 24 | 17.5 | 93 | 420W |
| RACM420-28SK (3,4) | 80-264 | 28 | 15 | 94 | 420W |
| RACM420-36SK (3,4) | 80-264 | 36 | 11.66 | 94 | 420W |
| RACM420-48SK (3,4) | 80-264 | 48 | 8.75 | 94 | 420W |
| RACM420-56SK (3,4) | 80-264 | 56 | 7.5 | 94 | 420W |

Note1: Refer to “**„Peak Load Capability“.**
Note2: Efficiency is tested at nominal input and rated load at +25°C ambient.

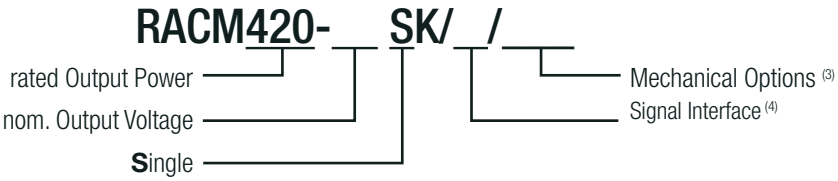
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# RACM420-K Series ◊ AC/DC Power Supply

## 420W (550W/5s) ◊ Input: 100V-240VAC

RECOM AC/DC Converter

## MODEL NUMBERING




Note3: "/OF"= 5.74" x 3.29" x 1.54" open frame version
"/ENC"= 5.74" x 3.37" x 1.71" enclosed version
"/ONB"= open naked board (no baseplate)
Note4: "/SI"= signal interface dau-board integrated

## ORDERING INFORMATION

| Model | Output Voltage | Package Type | | |
|---|---|---|---|---|
| | | "/OF" & "/SI/OF models | "/ENC" & "/SI/ENC models | "/ONB" & "/SI/ONB models |
| RACM420-12SK | 12VDC | y | y | on request |
| RACM420-15SK | 15VDC | y | y | on request |
| RACM420-24SK | 24VDC | y | y | on request |
| RACM420-28SK | 28VDC | y | y | on request |
| RACM420-36SK | 36VDC | y | y | on request |
| RACM420-48SK | 48VDC | y | y | on request |
| RACM420-56SK | 56VDC | y | y | on request |

y= standard portfolio; on request= MOQ may apply on project base

## BASIC CHARACTERISTICS (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

| Parameter | Condition | | | Min. | Typ. | Max. |
|---|---|---|---|---|---|---|
| Nominal Input Voltage | 50/60Hz | | | 100VAC | | 240VAC |
| Operating Range (5) | 47-63Hz | | | 80VAC | | 264VAC |
| Input Current | 12, 15, 24, 28Vout | | | | | 6A |
| | 36, 48 & 56Vout | | | | | 8A |
| Inrush Current | cold start at 25°C | 115VAC | 12, 15, 28, 36 & 48Vout | | | 35A |
| | | | 24 & 56Vout | | | 40A |
| | | 230VAC | 12, 15, 28, 36, 48 & 56Vout | | | 70A |
| | | | 24Vout | | | 80A |
| No Load Power Consumption | | | | | | 100mW |
| Ecodesign Standby Mode Use (Available output power for stated input power) | 115/230/277VAC | | $P_{IN}$= 0.5W | | 0.3W | |
| | | | $P_{IN}$= 1.0W | | 0.8W | |
| | | | $P_{IN}$= 2.0W | | 1.7W | |
| Input Frequency Range | AC input | | | 47Hz | | 63Hz |
| Minimum Load | | | | 0% | | |
| Power Factor | 230VAC | | | | 0.99 | |
| Start-up time | main & fan output | | @full load, 230VAC | | 350ms | |
| | 5VSB | | only for "/SI" models | | 55ms | |
| Rise time | main & fan output | | @full load, 230VAC | | 30ms | |
| | 5VSB | | only for "/SI" models | | 40ms | |
| Hold-up time | main & fan output | | @full load, 230VAC | 10ms | | |
| | 5VSB | | only for "/SI" models | | 1.35s | |
| Output Ripple and Noise (6) | 20MHz BW, $T_{AMB}$= +25°C | | 12, 15 & 28Vout | | | 120mVp-p |
| | | | 36, 48 & 56Vout | | | 200mVp-p |

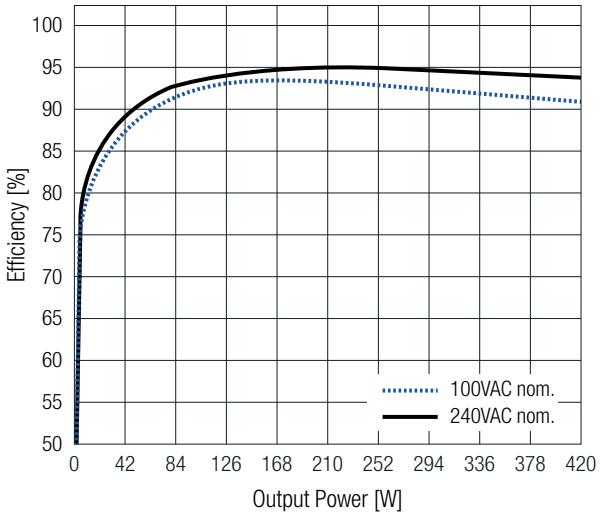
Note5: The products were submitted to all safety files at AC-operation (90V-305VAC)
Note6: Measurements are made with a 0.1µF MLCC & 10µF E-cap in parallel across output (low ESR).
The test setup can have an impact on ripple noise values (placement of scope probe, capacitors, it's specifications, wires, PCB tracks, distances, etc.)

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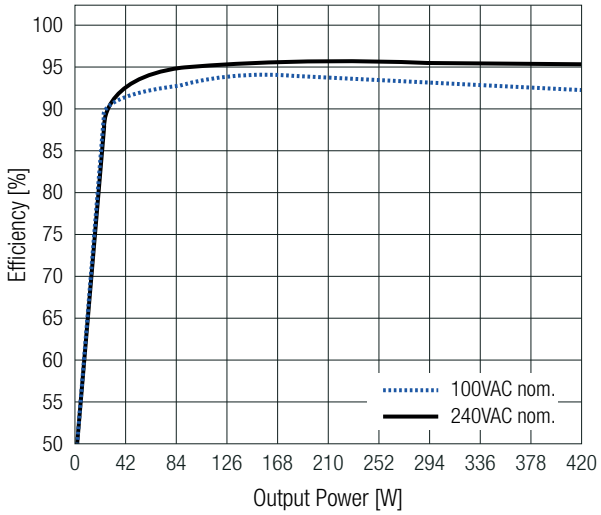
## BASIC CHARACTERISTICS (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

### Efficiency vs Output Power

12Vout & 15Vout Versions




others




## ADDITIONAL FEATURES (ONLY VALID FOR "/SI" VERSIONS)

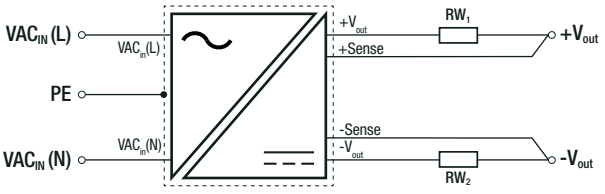
| Parameter | Condition | | Min. | Typ. | Max. |
|---|---|---|---|---|---|
| Output Voltage Adjustability (7) | | | | ±5% | |
| Standby Power | only for "/SI" models | 230VAC, 5VSB un-loaded | | | 1W |
| Soft Start Time | | start with ON/OFF CTRL | | 55ms | |
| Input Current of CTRL Pin | | $V_{ON/OFF}$= 3V | | 1mA | |
| ON/OFF CTRL | | mains and fan output ON | | | open or 2.0V < $V_{ON/OFF}$ < 5V |
| | | mains and fan output OFF | | | short to SGND or 0V < $V_{ON/OFF}$ <1V |
| AC_Fail | | | | | refer to **„AC_Fail"** |
| DC ON LED | | LED = green | | | normal working mode |
| | | LED = off | | | no operation or failure |
| Remote Sense | | stay unconnected when not used | | | refer to **„Remote Sense"** |

Note7: By trimming up, decrease output current to avoid exceeding rated output power. By trimming down, do not exceed maximum continuous output current. If enclosed version is used, please remove cover, to use trim function.

### AC_Fail

The AC FAIL signal is referenced to SGND. A 10 kΩ pull-up resistor connected to the +5 V output of CON4 is recommended.
When the AC input voltage exceeds typically 85 VAC RMS, a square-wave signal can be measured between the AC FAIL pin and SGND using an oscilloscope.
When the AC input voltage falls below typically 70 VAC RMS, no signal is present at the AC FAIL pin.

### Remote Sense




## FAN OUTPUT (MEASURED @ TAMB= 25°C, NOM. VIN, FULL LOAD AND AFTER WARM-UP UNLESS OTHERWISE STATED)

| Parameter | Condition | Min. | Typ. | Max. |
|---|---|---|---|---|
| Fan Output Voltage | | | | 12VDC |
| Fan Output Current (8) | | | | 0.5A |
| Fan Output Accuracy | | | | ±11.0% |
| Short Circuit Protection (SCP) | | | | none |
| Over Current Protection (OCP) | | | | none |

Note8: For the normal operation of fan output, mains output needs minimum load 30W. Fan output is not allowed to be loaded if mains output has no load.

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## 5VSB OUTPUT [9] (MEASURED @ TAMB= 25°C, NOM. VIN, FULL LOAD AND AFTER WARM-UP UNLESS OTHERWISE STATED)

| Parameter | Condition | Min. | Typ. | Max. |
|---|---|---|---|---|
| Standby Output Voltage | always on | | 5VDC | |
| Standby Output Current | | | | 1A |
| Max. Output Power | | | | 5W |
| Short Circuit Protection (SCP) | below 100mΩ | | | hiccup mode, auto recovery |
| Over Voltage Protection (OVP) | | | | <8VDC, hiccup mode, auto recovery |
| Over Current Protection (OCP) | | | | <2A, hiccup mode, auto recovery |
| Over Temperature Protection (OTP) | | | | restart after cooling down |

Note9: There is no galvanic isolation between AUX GND and Main Output GND. Regulations for 5VSB Output are stated under „Regulations“

## REGULATIONS (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

| Parameter | Condition | | Value |
|---|---|---|---|
| Output Accuracy | 12, 15, 24 & 28Vout | | ±2.5% max. |
| | 36Vout | | ±3.0% max. |
| | 48 & 56Vout | | ±2% max. |
| Line Regulation | 12, 15, 24 & 28Vout | | ±1.0% max. |
| | 36, 48 & 56Vout | | ±0.5% max. |
| Load Regulation [10] | 12, 15, 24 & 28Vout | | 2.0% max. |
| | 36, 48 & 56Vout | | 1.0% max. |
| Transient Response | 10%-100%-10% load change steps | 12 & 15Vout | 500mV max. |
| | | 24 & 28Vout | 1000mV max. |
| | | 36, 48 & 56Vout | 1200mV max. |
| | recovery time | 12, 15 & 24Vout | 3ms typ. |
| | | 28 & 36Vout | 2ms typ. |
| | | 48 & 56Vout | 1ms typ. |

Note10: Operation below 10% load will not harm the converter, but specifications may not be met.

## PROTECTIONS (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

| Parameter | Type | | | Value |
|---|---|---|---|---|
| Internal Input Fuse | dual-fusing (line & neutral) | | | slow blow type |
| Short Circuit Protection (SCP) | below 100mΩ | | | hiccup mode, auto recovery |
| Over Voltage Protection (OVP) | | | | 110%-140% of nom. $V_{OUT}$, hiccup mode, auto recovery |
| Over Voltage Category (OVC) | according to 62368-1, 60335-1, 61558 | | | OVC II (5000m) |
| | according to 60601-1 | | | OVC II (4000m) |
| | according to 62368-1, 60335-1, 61558 | | | OVC III (2000m) |
| Over Current Protection (OCP) | | | | <160% of max. rated $I_{OUT}$, hiccup mode, auto recovery |
| Over Temperature Protection (OTP) | | | | restart after cooling down |
| Class of Equipment | | | | Class I and Class II |
| Isolation Voltage [11] | I/P to O/P | 1 minute | according to 61558 | 3k95VAC |
| | | | according to 60335-1 | 3kVAC |
| | | | according to 62368-1 | 6kVDC |
| Isolation Resistance | I/P to O/P, $V_{ISO}$=500VDC | | | 1GΩ min. |
| Isolation Capacitance | | | | 100pF max. |
| Insulation Grade | | | | reinforced |
| Means of Protection | | | | 2 MOPP |
| Leakage Current | Input to output 4KVAC , 1min | | | <5mA |
| | Output to GND, 1,5KVAC, 1,min | | | <3mA |
| | Output to GND, 1,5KVAC, 1,min | | | <3mA |

Note11: For repeat Hi-Pot testing, reduce the time and/or the test voltage.

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# RACM420-K Series ◊ AC/DC Power Supply

## 420W (550W/5s) ◊ Input: 100V-240VAC

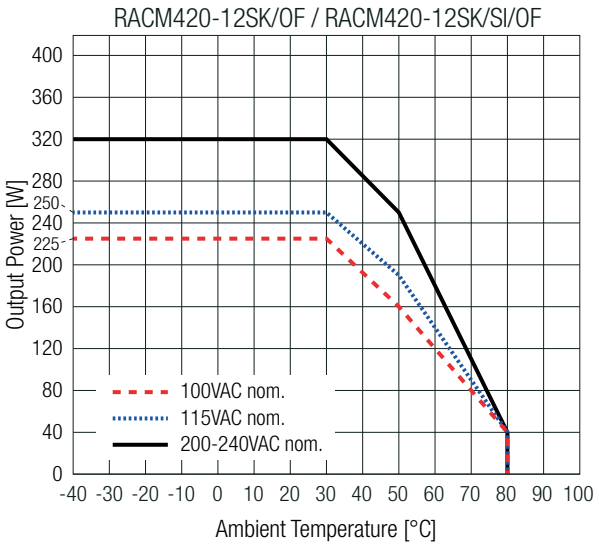
RECOM AC/DC Converter

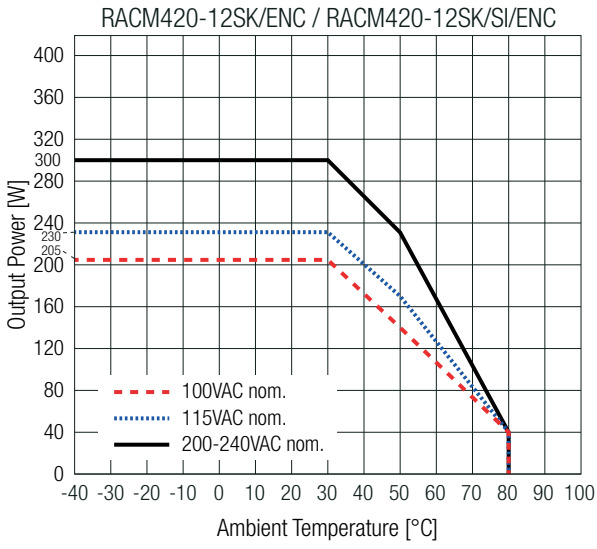
**ENVIRONMENTAL (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)**

| Parameter | Condition | | Value |
|---|---|---|---|
| Operating Ambient Temperature Range | 15Vout | | -30°C to +75°C |
| | others | | -30°C to +80°C |
| Operating Altitude (12) | according to 62368-1, 60335-1, 61558 | | 5000m (OVC II) |
| | according to 60601-1 | | 4000m (OVC II) |
| | according to 62368-1, 60335-1, 61558 | | 2000m (OVC III) |
| Operating Humidity | non-condensing | | 90% RH typ. |
| Pollution Degree | | | PD2 |
| Vibration | | | half Sine 100m/s², 11ms duration, 100 pulse per direction |
| Shock | | | 5-500Hz, 20m/s² 15 min for each axis |
| MTBF | | | TBD |
| Design Lifetime | 12Vout | | TBD |
| | | | |
| | 15Vout | | |
| | | | |
| | 24 & 28Vout | | |
| | | | |
| | 36 & 56Vout | | |
| | | | |
| | 48Vout | | |
| | | | |

Note12: Recognized by safety agency for safe operation up to 5000m. High altitude operation may impact the performance and lifetime. Please contact RECOM tech support for advice.

### Convection cooled rating @ still air <0.1m/s



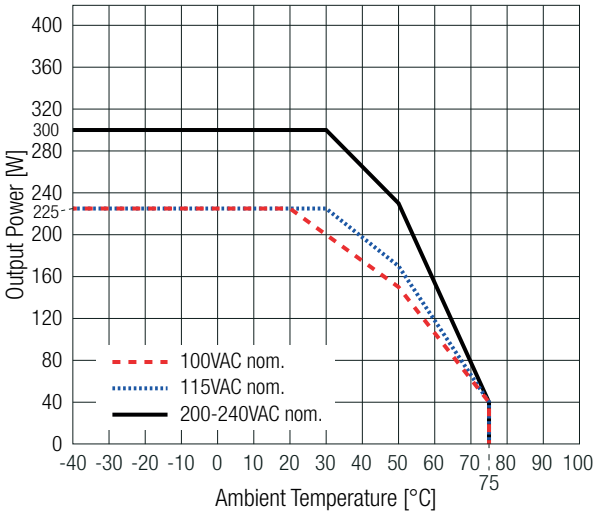




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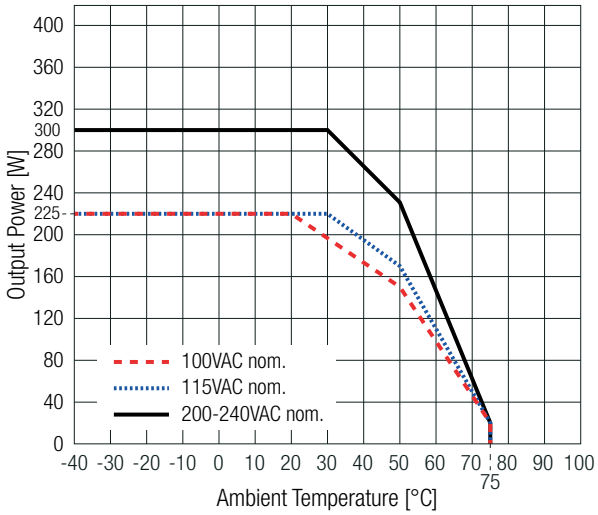
## ENVIRONMENTAL (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

### Convection cooled rating @ still air <0.1m/s

RACM420-15SK/OF / RACM420-15SK/SI/OF

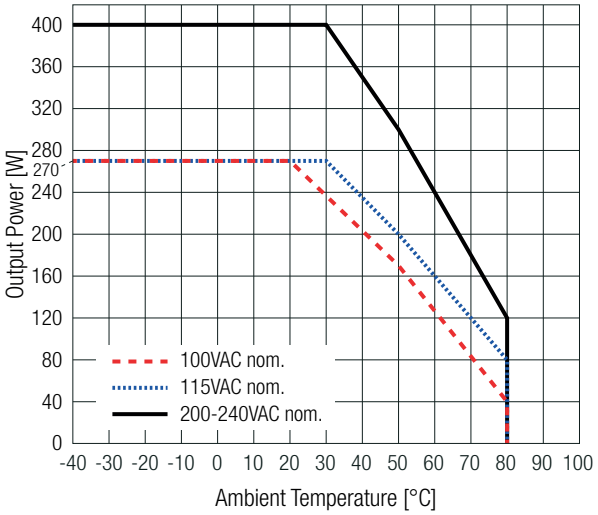



RACM420-15SK/ENC / RACM420-15SK/SI/ENC

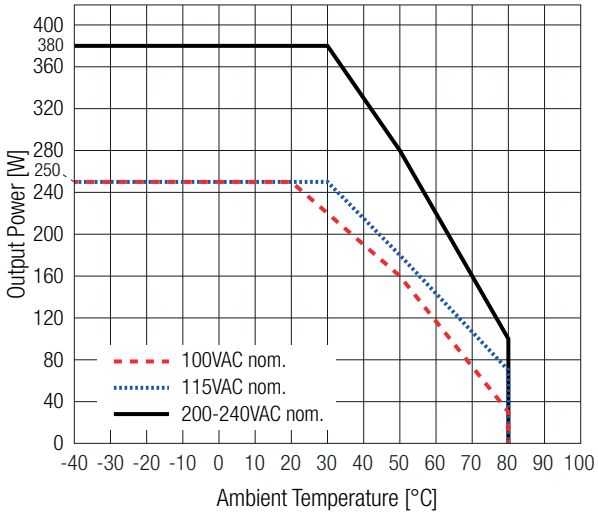



### Convection cooled rating @ still air <0.1m/s

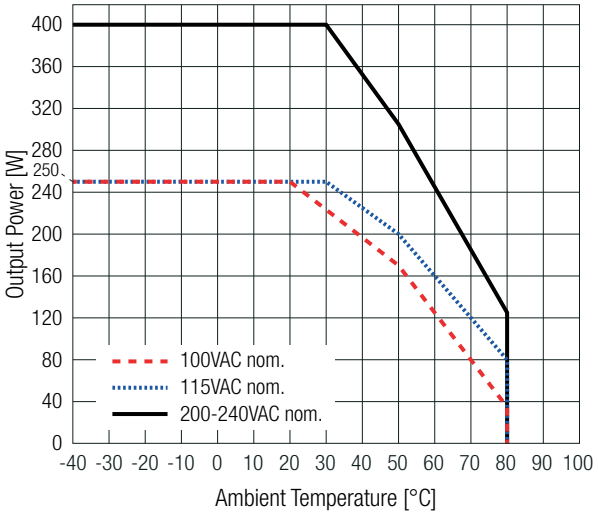
RACM420-24SK/OF, RACM420-24SK/SI/OF
RACM420-28SK/OF, RACM420-28SK/SI/OF



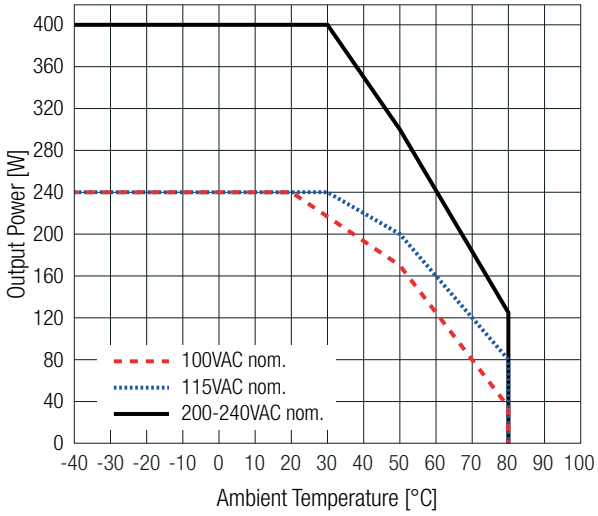

RACM420-24SK/ENC, RACM420-24SK/SI/ENC
RACM420-28SK/ENC, RACM420-28SK/SI/ENC




RACM420-36,48,56SK/OF
RACM420-36,48,56SK/SI/OF
RACM420-36,48,56SK/ENC




RACM420-36,48,56SK/ENC

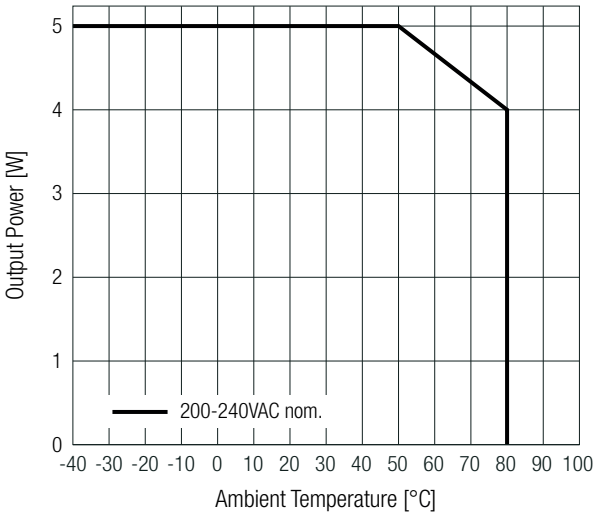



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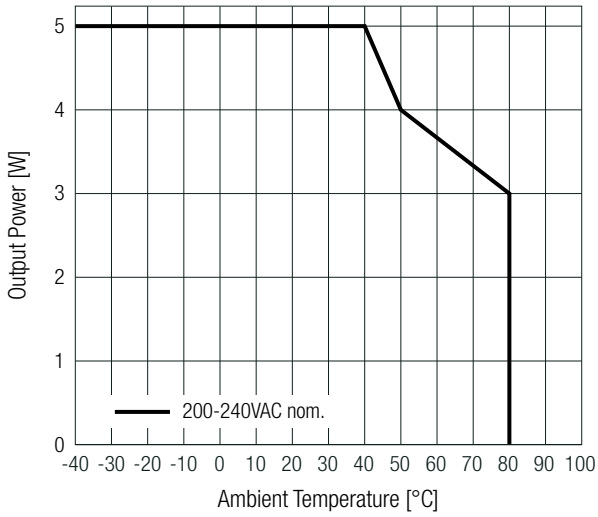
## ENVIRONMENTAL (measured @ $T_{AMB}$= 25°C, nom. $V_{IN}$, full load and after warm-up unless otherwise stated)

### Convection cooled rating @ still air <0.1m/s for 5VSB Output

RACM420-K/SI/OF

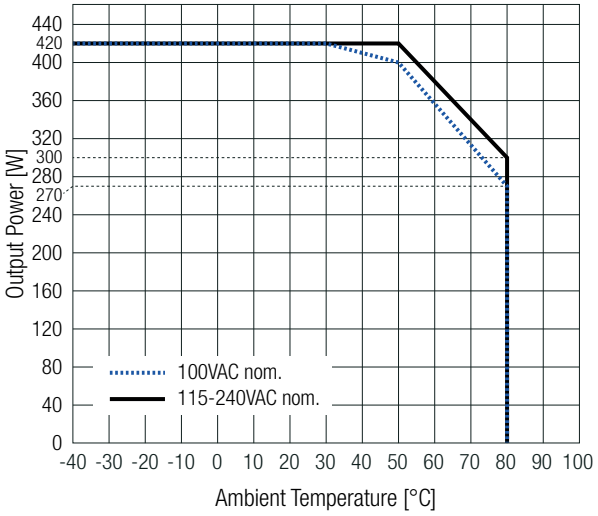



RACM420-K/SI/ENC

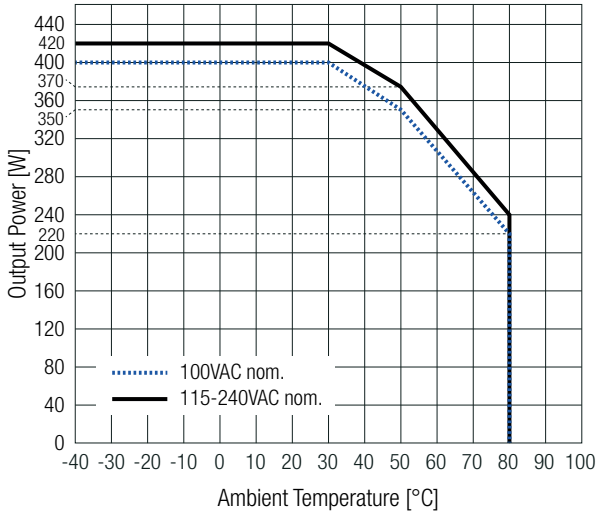



### Air flow rating @ 2.5m/s

RACM420-K/OF / RACM420-K/SI/OF




RACM420-K/ENC / RACM420-K/SI/ENC



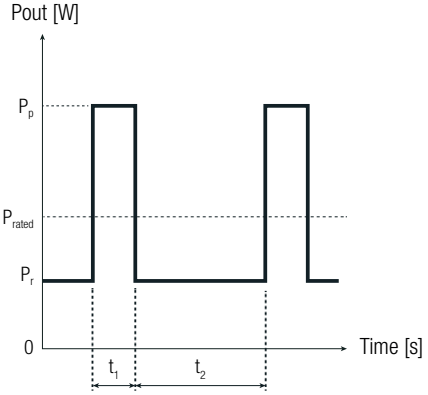

## PEAK LOAD CAPABILITY

### Peak Load calculation for recurrent dynamic loading (at natural convection 0.1m/s)

| Parameters | Units | RACM420-12SK | all others |
|---|---|---|---|
| $P_{rated}$= rated output power | [W] | refer to Graphs above | |
| $P_P$= peak output power | [W] | 500W max. | 550W max. |
| $P_r$= recovery output power | [W] | use calculation | |
| $t_1$= peak time set | [s] | 5s max. | |
| $t_2$= recovery time | [s] | min. 11 x $t_1$ | |

### Calculation:

$$P_r = \frac{P_{rated} \times (t_1 + t_2) - (P_P \times t_1)}{t_2}$$




**Practical Example (RACM420-24SK for still air convection):**

Take the RACM420-24SK at 240VAC input voltage and $T_{AMB}$= 50°C, with still air convection.

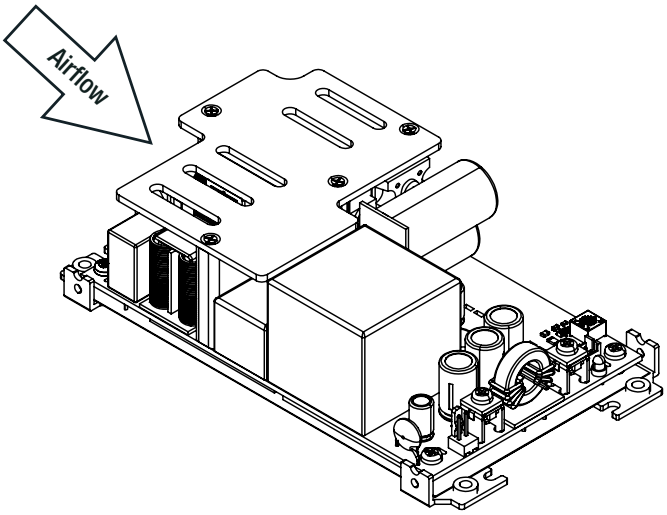
$P_P$ = 550W
$P_{rated}$ = 300W
$t_1$ = 4s
$t_2$ = 11 x $t_1$

$$P_r = \frac{300 \times (4 + 44) - (550 \times 4)}{44} = \underline{277W}$$

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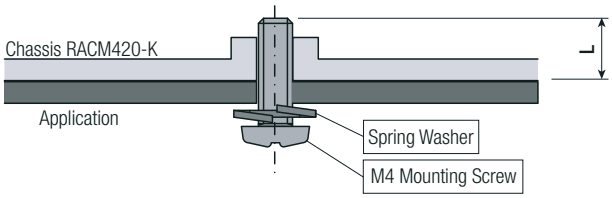
## INSTALLATION & APPLICATION

**Preferred airflow direction**
valid for "/OF" and /ENC"



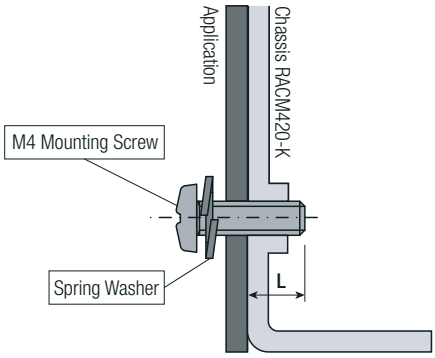

### Mounting Equipment

Baseplate Mounting




Recommended mounting tightening torque= 1.1Nm.
L= 4mm min. / 8mm max.

Side Mounting




Recommended mounting tightening torque= 1.1Nm.
L= 4mm min. / 8mm max.

## SAFETY & CERTIFICATIONS

| Certificate Type (Safety) | Report Number | Standard |
|---|---|---|
| Audio/Video, information and communication technology equipment - Part1: Safety requirements 4th Edition | pending | UL62368-1 4th Edition |
| | | CAN/CSA-C22.2 No. 62368-1 4th Edition |
| Audio/Video, information and communication technology equipment - Part1: Safety requirements 4th Edition | 25120800901 | IEC62368-1:2023 4th Edition |
| | | EN IEC 62368-1:2024 + A11:2024 |
| Medical electrical equipment Part 1: General requirements for basic safety and essential performance | E511305-D6009-UL | ANSI/AAMI ES60601-1:2005 + A2:2021 |
| | | CAN/CSA-C22.2 No. 60601-1:14 Edition 3.2 |
| Medical electrical equipment Part 1: General requirements for basic safety and essential performance | 25120800801 | IEC60601-1:2005 + AM2:2020 Edition 3.2 |
| Household and similar electrical appliances – Safety – Part 1: General requirements | 64110250870901 | IEC60335-1:2020 6th Edition |
| | | EN60335-1:2023 + A11:2023 |
| Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure | | EN62233:2008 |
| Safety of power transformers, power supplies, reactors and similar products for supply voltages up to 1100 V 3rd Edition | 085-250870801-000 | IEC61558-1:2017 3rd Edition |
| | | EN IEC 61558-1:2019 |
| Safety of power transformers, power supplies, reactors and similar products for supply voltages up to 1100 V Part 2: Particular requirements | | IEC61558-2-16:2021 2nd Edition |
| | | EN IEC 61558-2-16:2025 |
| RoHS2 | | RoHS-2011/65/EU + AM-2015/863 |

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## SAFETY & CERTIFICATIONS

| EMC Compliance according to EN55032 | Condition | Standard |
|---|---|---|
| Electromagnetic compatibility of multimedia equipment – Emission Requirements | | EN55032:2015 + A11:2020 |
| **EMC Compliance according to EN61204-3** | **Condition** | **Standard** |
| Low voltage power supplies, d.c. output Part 3: Electromagnetic compatibility (EMC) | | EN IEC 61204-3:2018 |
| ESD Electrostatic discharge immunity test | Contact: ±4kV | IEC61000-4-2:2008, Criteria A<br>EN61000-4-2:2009, Criteria A |
| Radiated, radio-frequency, electromagnetic field immunity test | 10V/m (80-1000MHz),<br>3V/m (1400-2000MHz),<br>1V/m (2000-2700MHz) | IEC/EN61000-4-3:2006 + A2:2010, Criteria A |
| Fast Transient and Burst Immunity | AC Port: L, N, L-N: ±2kV | IEC/EN61000-4-4:2012, Criteria A |
| Surge Immunity | AC Pot: L-N: ±0.5, 1, 2kV<br>L-PE, N-PE: ±1, 2, 4kV | IEC/EN61000-4-5:2014 + A1:2017, Criteria A |
| Immunity to conducted disturbances, induced by radio-frequency fields | 10Vrms (0.15-80MHz) | IEC61000-4-6:2013, Criteria A<br>EN61000-4-6:2014, Criteria A |
| Power Magnetic Field Immunity | 30A/m | IEC61000-4-8:2009, Criteria A<br>EN61000-4-8:2010, Criteria A |
| Voltage Dips | 100% (0.5P, 1.0P), 60%, 30%, 20% | EN61000-4-11:2004 + A1:2017, Criteria A |
| Voltage Interruptions | 100% | EN61000-4-11:2004 + A1:2017, Criteria B |
| Limits of Voltage Fluctuations & Flicker | | EN61000-3-3:2013 + A1:2019 |
| Limits of Harmonic Current Emissions | | EN IEC 61000-3-2:2019 |
| **EMC Compliance according to EN60601-1** | **Condition** | **Standard** |
| Medical electrical equipment Part 1-2: General requirements for basic safety and essential performance | | EN60601-1-2:2015 + A1:2021 |
| ESD Electrostatic discharge immunity test | Contact: ±4kV | IEC61000-4-2:2008 / EN61000-4-2:2009 |
| Radiated, radio-frequency, electromagnetic field immunity test | 10 V/m (80-2700MHz),<br>27V/m (385MHz),<br>28V/m (450MHz),<br>9V/m (710, 745, 780MHz),<br>28V/m (810, 870, 930MHz),<br>28V/m (1720, 1845, 1970MHz),<br>28V/m (2450MHz),<br>9V/m (5240, 5500, 5785MHz | IEC/EN61000-4-3:2006 + A2:2010 |
| Fast Transient and Burst Immunity | AC Port: L, N, L-N: ±2kV | IEC/EN61000-4-4:2012 |
| Surge Immunity | AC Pot: L-N: 0.5, 1, 2kV<br>L-PE, N-PE: ±1, 2, 4kV | IEC/EN61000-4-5:2014 + A1:2017 |
| Immunity to conducted disturbances, induced by radio-frequency fields | 3Vrms (0.15-80MHz),<br>6Vrms (ISM bands) | IEC61000-4-6:2013<br>EN61000-4-6:2014 |
| Power Magnetic Field Immunity | 30A/m | IEC61000-4-8:2009 / EN61000-4-8:2010 |
| Voltage Dips | 100% (0.5P, 1.0P), 30% | IEC/EN61000-4-11:2004 + A1:2017 |
| Voltage Interruptions | 100% | IEC/EN61000-4-11:2004 + A1:2017 |
| Limits of Voltage Fluctuations & Flicker | | EN61000-3-3:2013 |
| Limits of Harmonic Current Emissions | | EN IEC 61000-3-2:2019 |

## DIMENSION & PHYSICAL CHARACTERISTICS

| Parameter | Type | Value |
|---|---|---|
| Materials | PCB | FR4, (UL94 V-0) |
| | chassis | aluminum |
| Dimension (LxWxH) | "/OF" & "/SI/OF" | 145.8 x 83.6 x 39.0mm<br>5.74 x 3.29 x 1.54 inch |
| | "/ENC" & "/SI/ENC" | 145.8 x 85.6 x 43.5mm<br>5.74 x 3.37 x 1.71 inch |

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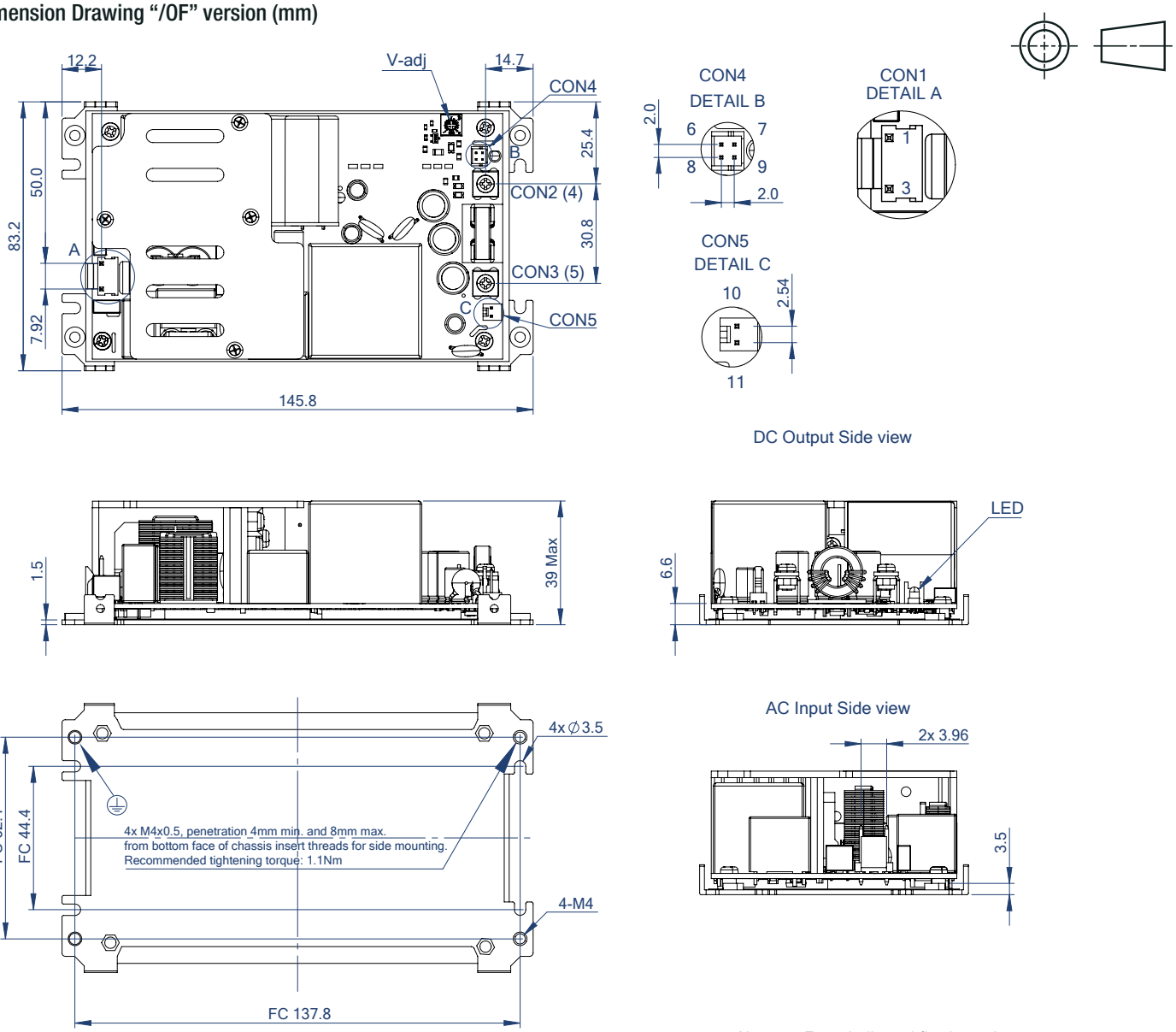
# RACM420-K Series ◊ AC/DC Power Supply

420W (550W/5s) ◊ Input: 100V-240VAC

RECOM AC/DC Converter

## DIMENSION & PHYSICAL CHARACTERISTICS

### Dimension Drawing "/OF" version (mm)




Note12: Every indicated fixation points can be used for PE connections.

| AC Input (CON1) | | |
|---|---|---|
| # | Function | Connector |
| 1 | VAC in (L) | MOLEX 26-62-4030 (Pin2 removed) |
| 3 | VAC in (N) | |

| SENSE (CON4) | | |
|---|---|---|
| # | Function | Connector |
| 6, 7 | Sense + | HRS DF11-4DP-2DSA(01) |
| 8, 9 | Sense - | |

| DC Output (CON2, CON3) | | |
|---|---|---|
| # | Function | Screw Terminal Block |
| 4 | +Vout | DEGSON K45-20Z(H) |
| 5 | -Vout | |
| Maximum tightening torque: 0.5Nm | | |

| FAN (CON5) | | |
|---|---|---|
| # | Function | Connector |
| 10 | FAN- | WF2541-WSH02T01 |
| 11 | FAN+ | |

### Compatible Connector

| Connector | Housing | Crimp Terminal |
|---|---|---|
| CON1 | Molex 41695 Series or equivalent | Molex 2478 Series or equivalent |
| CON4, CON6 | DF11-4DS-2C | DF11-22SC |
| CON5 | WF2541-HXXX01 | WF2541-TXSN01 |

Tolerance: x.x= ±0.5mm
x.xx= ±0.25mm

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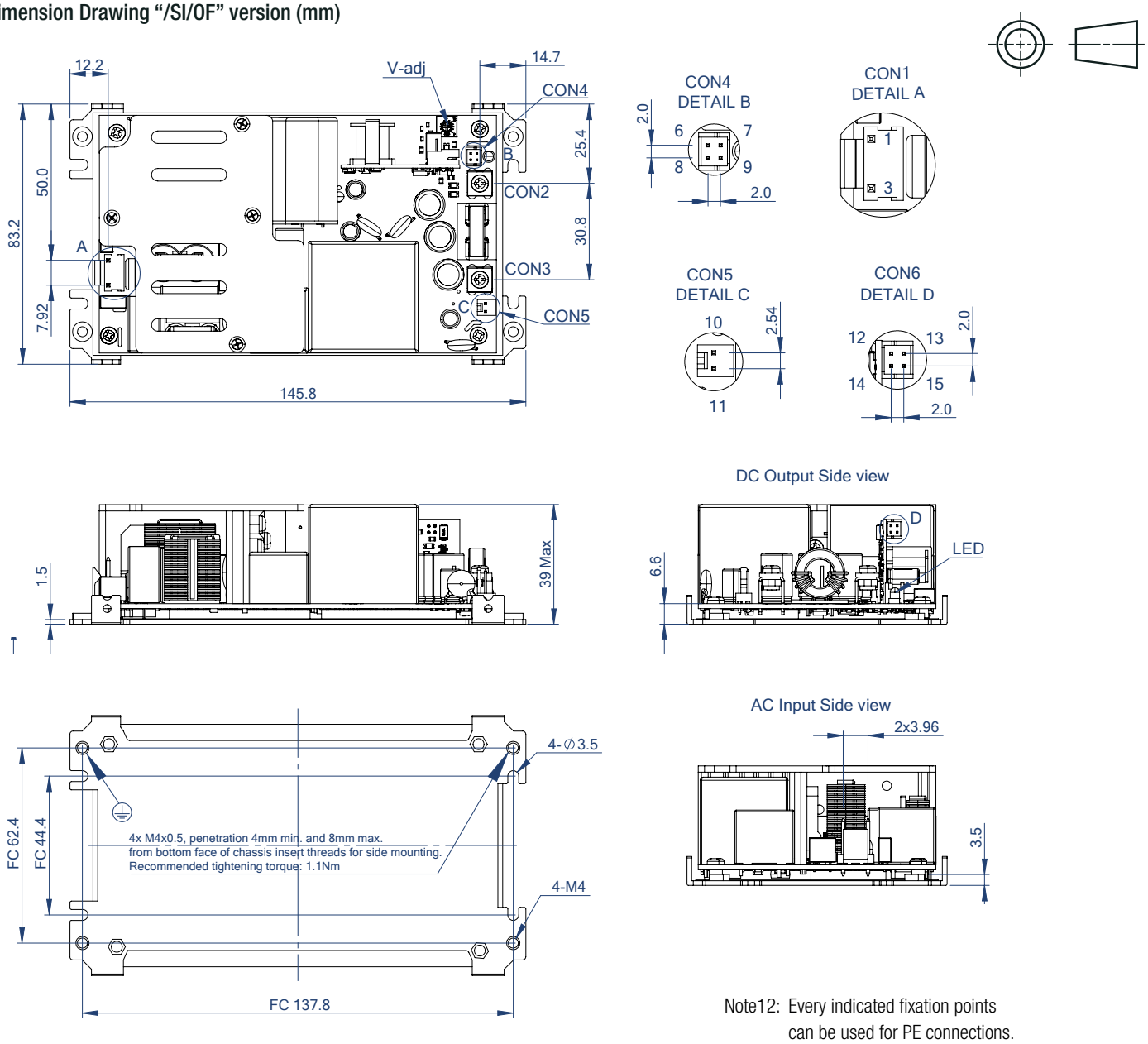
# RACM420-K Series ◊ AC/DC Power Supply

420W (550W/5s) ◊ Input: 100V-240VAC

RECOM AC/DC Converter

## DIMENSION & PHYSICAL CHARACTERISTICS

### Dimension Drawing "/SI/OF" version (mm)




Note12: Every indicated fixation points can be used for PE connections.

| AC Input (CON1) | | |
|---|---|---|
| # | Function | Connector |
| 1 | VAC in (L) | MOLEX 26-62-4030 (Pin2 removed) |
| 3 | VAC in (N) | |

| SENSE (CON4) | | |
|---|---|---|
| # | Function | Connector |
| 6, 7 | Sense + | HRS DF11-4DP-2DSA(01) |
| 8, 9 | Sense - | |

| DC Output (CON2, CON3) | | |
|---|---|---|
| # | Function | Screw Terminal Block |
| 4 | +Vout | DEGSON K45-20Z(H) |
| 5 | -Vout | |
| Maximum tightening torque: 0.5Nm | | |

| FAN (CON5) | | |
|---|---|---|
| # | Function | Connector |
| 10 | FAN- | WF2541-WSH02T01 |
| 11 | FAN+ | |

| SIGNAL (CON6) | | |
|---|---|---|
| # | Function | Connector |
| 10 | CTRL ON/OFF | HRS DF11-4DP-2DS (24) |
| 11 | AC_Fail | |
| 12 | 5VSB | |
| 13 | SGND | |

### Compatible Connector

| Connector | Housing | Crimp Terminal |
|---|---|---|
| CON1 | Molex 41695 Series or equivalent | Molex 2478 Series or equivalent |
| CON4, CON6 | DF11-4DS-2C | DF11-22SC |
| CON5 | WF2541-HXXX01 | WF2541-TXSN01 |

Tolerance: x.x= ±0.5mm
x.xx= ±0.25mm

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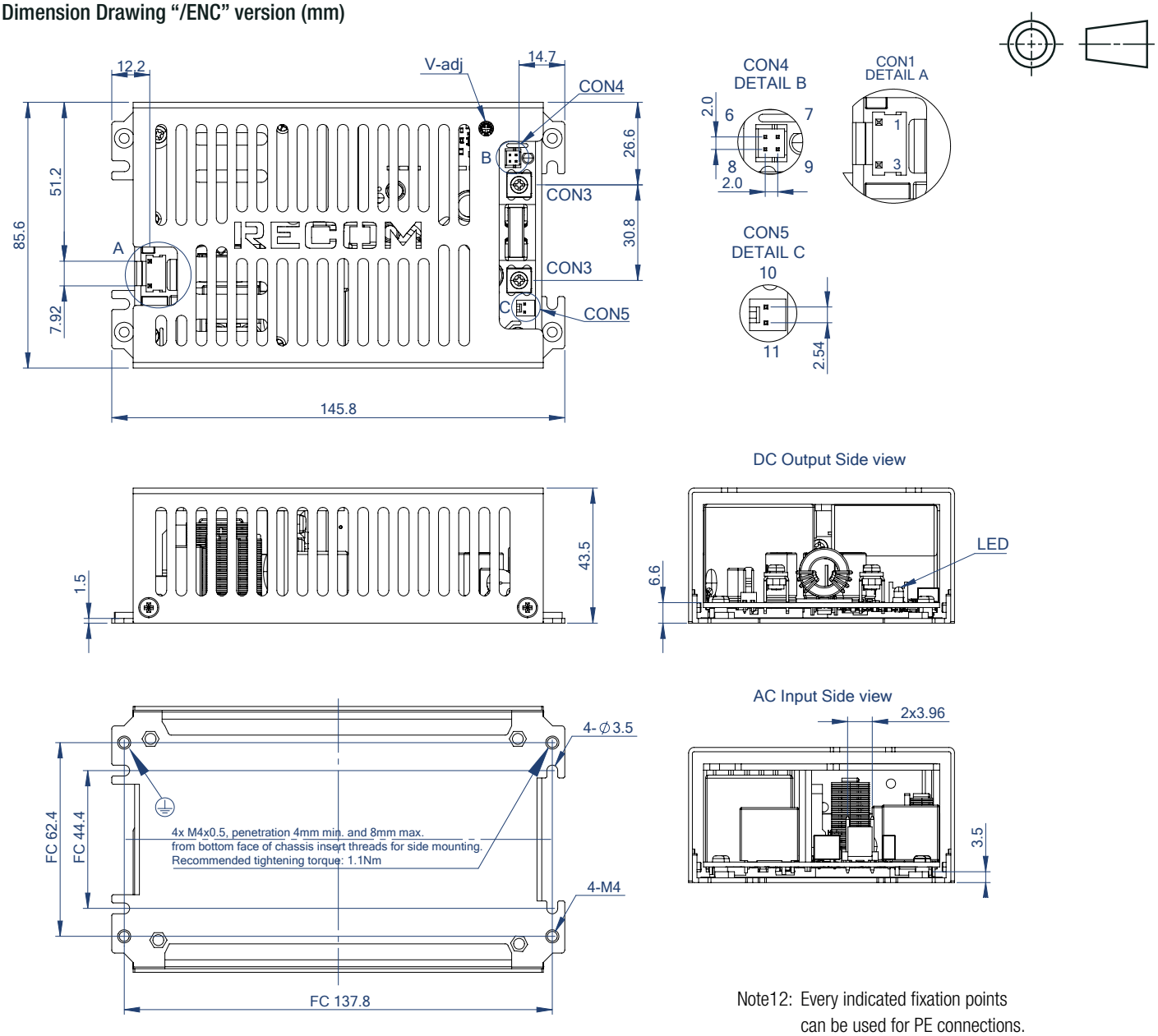
# RACM420-K Series ◊ AC/DC Power Supply

420W (550W/5s) ◊ Input: 100V-240VAC

AC/DC Converter

## DIMENSION & PHYSICAL CHARACTERISTICS

### Dimension Drawing "/ENC" version (mm)




Note12: Every indicated fixation points can be used for PE connections.

| AC Input (CON1) | | |
|---|---|---|
| # | Function | Connector |
| 1 | VAC in (L) | MOLEX 26-62-4030 (Pin2 removed) |
| 3 | VAC in (N) | |

| SENSE (CON4) | | |
|---|---|---|
| # | Function | Connector |
| 6, 7 | Sense + | HRS DF11-4DP-2DSA(01) |
| 8, 9 | Sense - | |

| DC Output (CON2, CON3) | | |
|---|---|---|
| # | Function | Screw Terminal Block |
| 4 | +Vout | DEGSON K45-20Z(H) |
| 5 | -Vout | |
| Maximum tightening torque: 0.5Nm | | |

| FAN (CON5) | | |
|---|---|---|
| # | Function | Connector |
| 10 | FAN- | WF2541-WSH02T01 |
| 11 | FAN+ | |

### Compatible Connector

| Connector | Housing | Crimp Terminal |
|---|---|---|
| CON1 | Molex 41695 Series or equivalent | Molex 2478 Series or equivalent |
| CON4, CON6 | DF11-4DS-2C | DF11-22SC |
| CON5 | WF2541-HXXX01 | WF2541-TXSN01 |

Tolerance: x.x= ±0.5mm
x.xx= ±0.25mm

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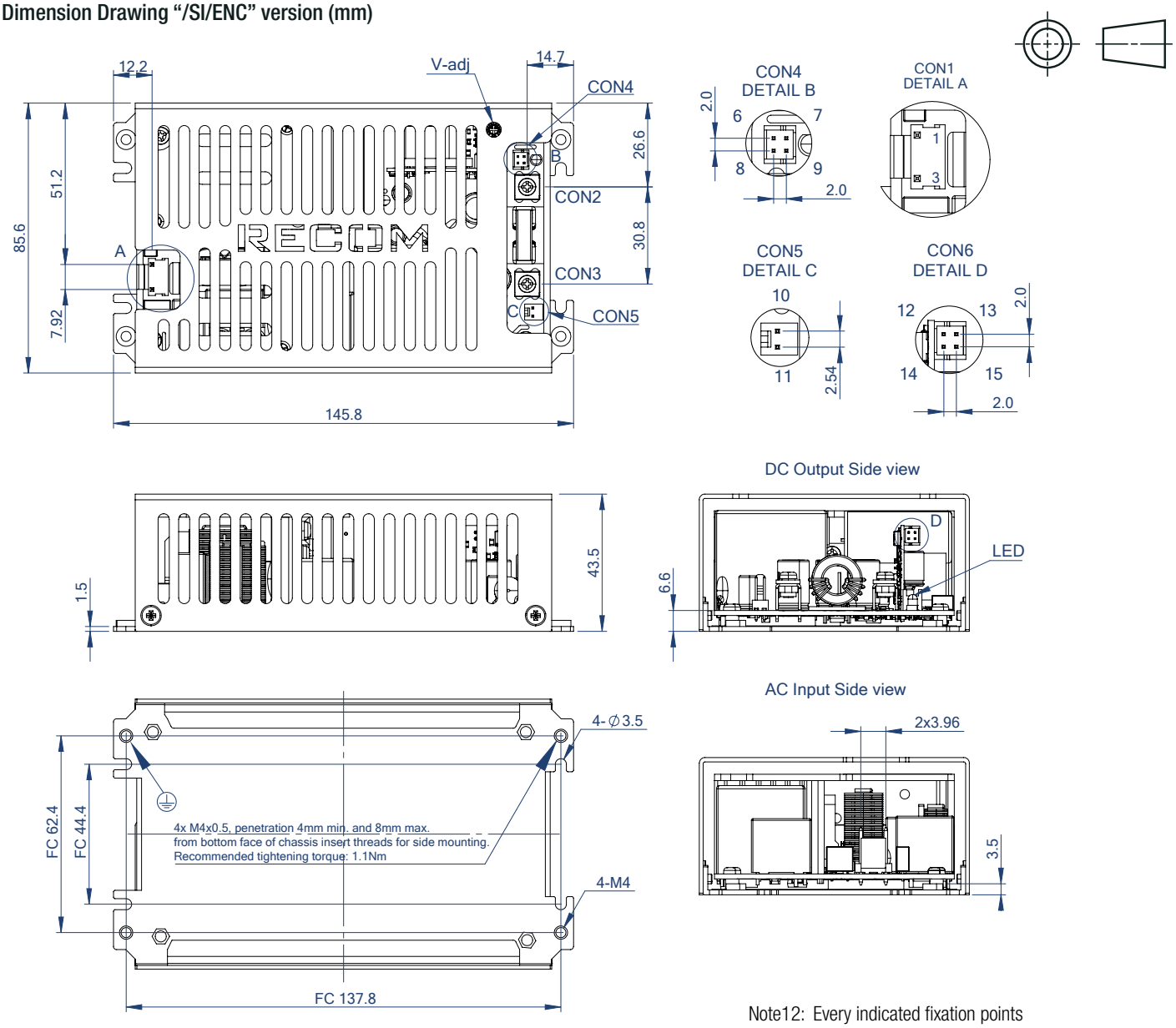
# RACM420-K Series ◊ AC/DC Power Supply

420W (550W/5s) ◊ Input: 100V-240VAC

AC/DC Converter

## DIMENSION & PHYSICAL CHARACTERISTICS

### Dimension Drawing "/SI/ENC" version (mm)




Note12: Every indicated fixation points can be used for PE connections.

| AC Input (CON1) | | |
|---|---|---|
| # | Function | Connector |
| 1 | VAC in (L) | MOLEX 26-62-4030 (Pin2 removed) |
| 3 | VAC in (N) | |

| SENSE (CON4) | | |
|---|---|---|
| # | Function | Connector |
| 6, 7 | Sense + | HRS DF11-4DP-2DSA(01) |
| 8, 9 | Sense - | |

| DC Output (CON2, CON3) | | |
|---|---|---|
| # | Function | Screw Terminal Block |
| 4 | +Vout | DEGSON K45-20Z(H) |
| 5 | -Vout | |
| Maximum tightening torque: 0.5Nm | | |

| FAN (CON5) | | |
|---|---|---|
| # | Function | Connector |
| 10 | FAN- | WF2541-WSH02T01 |
| 11 | FAN+ | |

| SIGNAL (CON6) | | |
|---|---|---|
| # | Function | Connector |
| 10 | CTRL ON/OFF | HRS DF11-4DP-2DS (24) |
| 11 | AC_Fail | |
| 12 | 5VSB | |
| 13 | SGND | |

### Compatible Connector

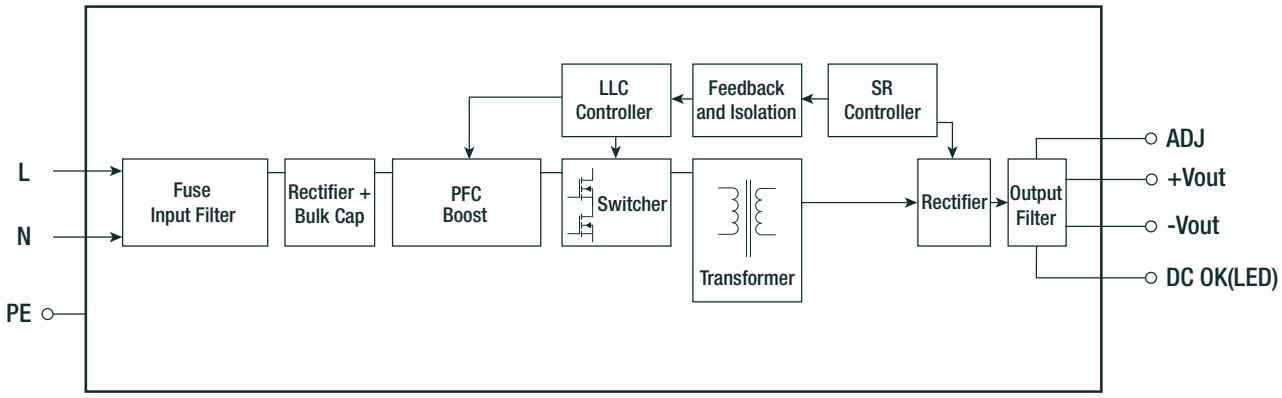
| Connector | Housing | Crimp Terminal |
|---|---|---|
| CON1 | Molex 41695 Series or equivalent | Molex 2478 Series or equivalent |
| CON4, CON6 | DF11-4DS-2C | DF11-22SC |
| CON5 | WF2541-HXXX01 | WF2541-TXSN01 |

Tolerance: x.x= ±0.5mm
x.xx= ±0.25mm

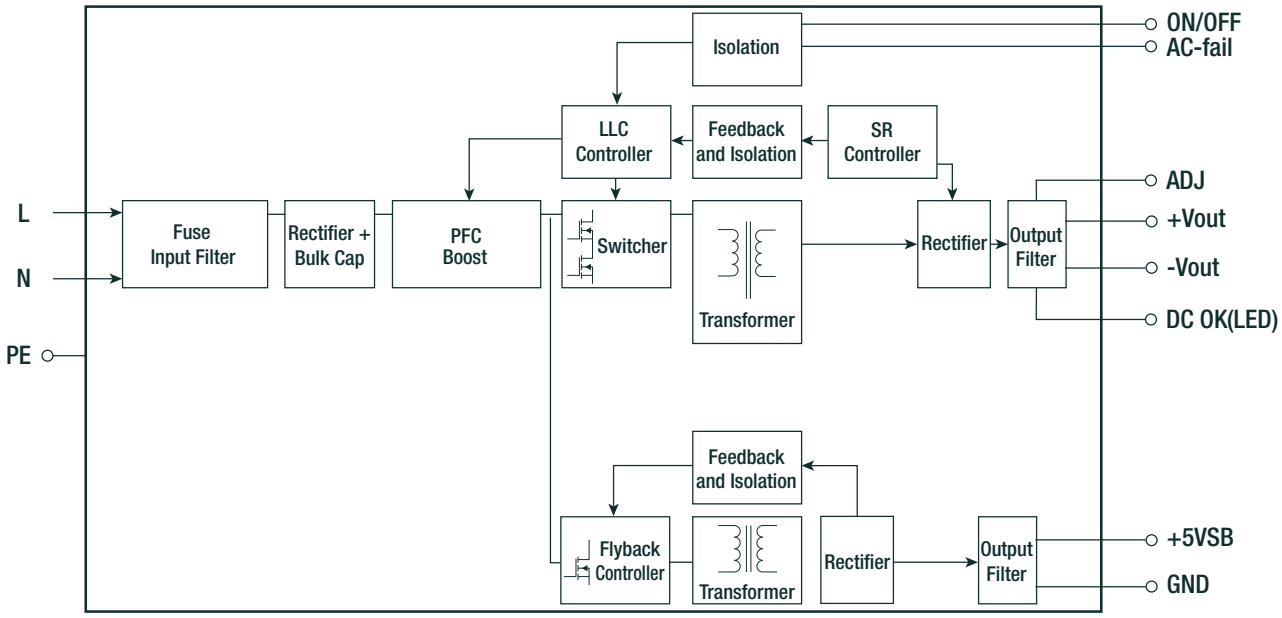
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## BLOCK DIAGRAM

valid for "/OF" & "/ENC" Versions




valid for "/SI" Versions




## PACKAGING INFORMATION

| Parameter | Type | Value |
|---|---|---|
| Packaging Dimension (LxWxH) | cardboard box | 380.0 x 375.0 x 73.0mm |
| Packaging Quantity | | 6pcs |
| Storage Temperature Range | | -40°C to +90°C |
| Storage Humidity | non-condensing | 95% RH max. |

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.

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