

# Features

## Regulated Converters

- Class B EMC Filter built-in
- Reverse Polarity Protected
- Inrush Current Limiting (Soft Start)
- Output Trim Potentiometer
- Output LED Indicator
- DIN Rail Mounting or Panel Mount Options

### Description

The Recom Power Module takes a standard 15W-60W converter and mounts it on a PCB with screw terminals, an EMC filter, input protection circuitry and a built-in heatsink to offer a complete power module that can be mounted on a bulkhead or on a standard DIN rail. The Power Module is primarily designed for transport applications such as a GPS vehicle tracking power supply or a radio communications power supply, but will also find many uses in industrial, communications or battery-powered applications.

How to use this datasheet:

1. Select the converter that suits your application from the converter series list below
2. Decide on DIN Mount (RPM) or bulkhead (RPM) version

Ordering example: 40W, 18-75 VDC in, single 12Vout, DIN Mount = RPMD40-4812SGW

xx = Output Voltage Options Single Outputs: 3.3S = 3.3V 05S = 5V 12S = 12V 15S = 15V

Dual Outputs: 12D =  $\pm 12V$  15D =  $\pm 15V$

Refer to converter series datasheets for detailed information.

### Selection Guide Single and Dual Outputs - Panel Mount Version

| Power Module Part Number (Bulkhead Version) | Input Range [VDC] | Output Power [W] | Internal Fuse (Replaceable) | Converter Series |
|---------------------------------------------|-------------------|------------------|-----------------------------|------------------|
| RPM15-24xxS_DFW <sup>(1,2)</sup>            | 9.5-36            | 15               | T6A                         | RP15-24xxS_DFW   |
| RPM15-48xxS_DFW <sup>(1,2)</sup>            | 18-75             | 15               | T4A                         | RP15-48xxS_DFW   |
| RPM20-24xxS_DFW <sup>(1,2)</sup>            | 9.5-36            | 20               | T6A                         | RP20-24xxS_DFW   |
| RPM20-48xxS_DFW <sup>(1,2)</sup>            | 18-75             | 20               | T4A                         | RP20-48xxS_DFW   |
| RPM30-12xxS_DE <sup>(2)</sup>               | 9.5-18            | 30               | T6A                         | RP30-12xxS_DE    |
| RPM30-24xxS_DE <sup>(2)</sup>               | 18-36             | 30               | T6A                         | RP30-24xxS_DE    |
| RPM30-24xxS_DEW <sup>(1,2)</sup>            | 10-40             | 30               | T6A                         | RP30-24xxS_DEW   |
| RPM30-48xxS_DE <sup>(2)</sup>               | 36-75             | 30               | T4A                         | RP30-48xxS_DE    |
| RPM30-48xxS_DEW <sup>(1,2)</sup>            | 18-75             | 30               | T4A                         | RP30-48xxS_DEW   |
| RPM40-12xxS_DG <sup>(2)</sup>               | 9.5-18            | 40               | T8A                         | RP40-12xxS_DG    |
| RPM40-24xxS_DG <sup>(2)</sup>               | 18-36             | 40               | T8A                         | RP40-24xxS_DG    |
| RPM40-24xxS_DGW <sup>(1,2)</sup>            | 9.5-36            | 40               | T8A                         | RP40-24xxS_DGW   |
| RPM40-48xxS_DG <sup>(2)</sup>               | 36-75             | 40               | T4A                         | RP40-48xxS_DG    |
| RPM40-48xxS_DGW <sup>(1,2)</sup>            | 18-75             | 40               | T4A                         | RP40-48xxS_DGW   |
| RPM60-24xxSG <sup>(1,2)</sup>               | 18-36             | 60               | T8A                         | RP60-24xxSG      |
| RPM60-48xxSG <sup>(1,2)</sup>               | 36-75             | 60               | T4A                         | RP60-48xxSG      |

#### Notes:

Note1: add „/N“ for Negative CTRL Logic

Note2: no suffix for Positive CTRL Logic

## RECOM DC/DC Converter Power Module

### Power Modules

15-60 Watt  
Single,  
Dual & Triple  
Outputs



IEC60950-1 Certified  
EN60950-1 Certified

## Selection Guide Single and Dual Outputs - DIN Rail Version

| Power Module Part Number (DIN rail Version) | Input Range [VDC] | Output Power [W] | Internal Fuse (Replaceable) | Converter Series |
|---------------------------------------------|-------------------|------------------|-----------------------------|------------------|
| RPMD15-24xxS_DFW <sup>(1,2)</sup>           | 9.5-36            | 15               | T6A                         | RP15-24xxS_DFW   |
| RPMD15-48xxS_DFW <sup>(1,2)</sup>           | 18-75             | 15               | T4A                         | RP15-48xxS_DFW   |
| RPMD20-24xxS_DFW <sup>(1,2)</sup>           | 9.5-36            | 20               | T6A                         | RP20-24xxS_DFW   |
| RPMD20-48xxS_DFW <sup>(1,2)</sup>           | 18-75             | 20               | T4A                         | RP20-48xxS_DFW   |
| RPMD30-12xxS_DE <sup>(2)</sup>              | 9.5-18            | 30               | T6A                         | RP30-12xxS_DE    |
| RPMD30-24xxS_DE <sup>(2)</sup>              | 18-36             | 30               | T6A                         | RP30-24xxS_DE    |
| RPMD30-48xxS_DE <sup>(2)</sup>              | 36-75             | 30               | T4A                         | RP30-48xxS_DE    |
| RPMD30-24xxS_DEW <sup>(1,2)</sup>           | 10-40             | 30               | T6A                         | RP30-24xxS_DEW   |
| RPMD30-48xxS_DEW <sup>(1,2)</sup>           | 18-75             | 30               | T4A                         | RP30-48xxS_DEW   |
| RPMD40-12xxS_DG <sup>(2)</sup>              | 9.5-18            | 40               | T8A                         | RP40-12xxS_DG    |
| RPMD40-24xxS_DG <sup>(2)</sup>              | 18-36             | 40               | T8A                         | RP40-24xxS_DG    |
| RPMD40-24xxS_DGW <sup>(1,2)</sup>           | 9.5-36            | 40               | T8A                         | RP40-24xxS_DGW   |
| RPMD40-48xxS_DG <sup>(2)</sup>              | 36-75             | 40               | T4A                         | RP40-48xxS_DG    |
| RPMD40-48xxS_DGW <sup>(1,2)</sup>           | 18-75             | 40               | T4A                         | RP40-48xxS_DGW   |
| RPMD60-24xxSG <sup>(1,2)</sup>              | 18-36             | 60               | T8A                         | RP60-24xxSG      |
| RPMD60-48xxSG <sup>(1,2)</sup>              | 36-75             | 60               | T4A                         | RP60-48xxSG      |

### Notes:

Note1: add „/N“ for Negative CTRL Logic

Note2: no suffix for Positive CTRL Logic

## Selection Guide Triple Outputs - Panel Mount Version

| Power Module Part Number (Bulkhead Version) | Input Range [VDC] | Output Power [W] | Internal Fuse (Replaceable) | Converter Series |
|---------------------------------------------|-------------------|------------------|-----------------------------|------------------|
| RPM40-120512TG <sup>(2)</sup>               | 9.5-18            | 40               | T8A                         | RP40-120512TG    |
| RPM40-120515TG <sup>(2)</sup>               | 9.5-18            | 40               | T8A                         | RP40-120515TG    |
| RPM40-240512TG <sup>(2)</sup>               | 18-36             | 40               | T8A                         | RP40-240512TG    |
| RPM40-240515TG <sup>(2)</sup>               | 18-36             | 40               | T8A                         | RP40-240515TG    |
| RPM40-480512TG <sup>(2)</sup>               | 36-75             | 40               | T4A                         | RP40-480512TG    |
| RPM40-480515TG <sup>(2)</sup>               | 36-75             | 40               | T4A                         | RP40-480515TG    |

### Notes:

Note2: no suffix for Positive CTRL Logic

## Selection Guide Triple Outputs - DIN Rail Version

| Power Module Part Number (Bulkhead Version) | Input Range [VDC] | Output Power [W] | Internal Fuse (Replaceable) | Converter Series |
|---------------------------------------------|-------------------|------------------|-----------------------------|------------------|
| RPMD40-120512TG <sup>(2)</sup>              | 9.5-18            | 40               | T8A                         | RP40-120512TG    |
| RPMD40-120515TG <sup>(2)</sup>              | 9.5-18            | 40               | T8A                         | RP40-120515TG    |
| RPMD40-240512TG <sup>(2)</sup>              | 18-36             | 40               | T8A                         | RP40-240512TG    |
| RPMD40-240515TG <sup>(2)</sup>              | 18-36             | 40               | T8A                         | RP40-240515TG    |
| RPMD40-480512TG <sup>(2)</sup>              | 36-75             | 40               | T4A                         | RP40-480512TG    |
| RPMD40-480515TG <sup>(2)</sup>              | 36-75             | 40               | T4A                         | RP40-480515TG    |

### Notes:

Note2: no suffix for Positive CTRL Logic

**Specifications** measured at  $T_a = 25^\circ\text{C}$ , nominal input voltage, full load otherwise noted

Specifications are as in individual converter datasheets with the following exceptions:

## Bulkhead Version

### BASIC CHARACTERISTICS

| Parameter      | Condition                      | Min. | Typ.          | Max.       |
|----------------|--------------------------------|------|---------------|------------|
| Inrush current | nominal $V_{in}$ and full load |      |               | soft start |
| Start-up time  | Power up<br>CTRL Pin           |      | 100ms<br>20ms |            |

### ENVIRONMENTAL

| Parameter         | Condition | Value                    |
|-------------------|-----------|--------------------------|
| Thermal Impedance |           | $8.5^\circ\text{C/Watt}$ |

### SAFETY AND CERTIFICATIONS

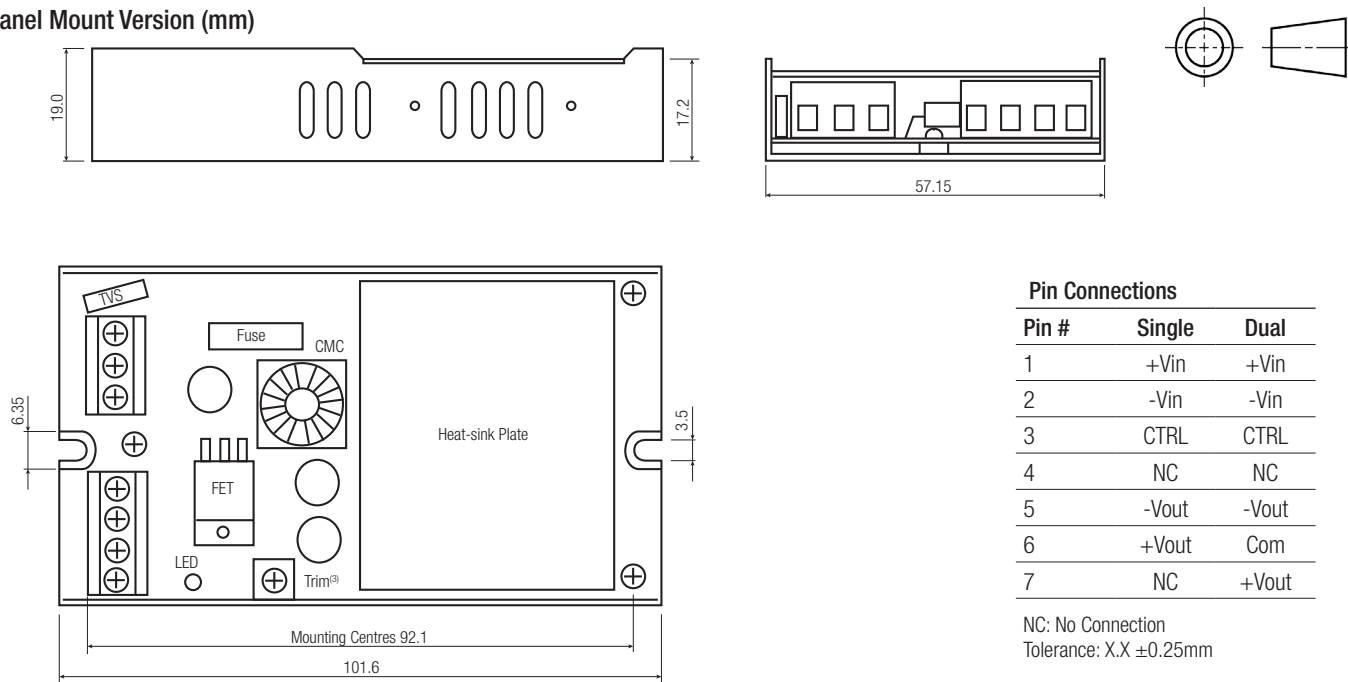
|                                         |             |                                                                                 |
|-----------------------------------------|-------------|---------------------------------------------------------------------------------|
| IEC General Safety<br>EN General Safety | LVD20110124 | IEC60950-1, 2nd Edition, 2005 + A1:2009<br>EN60950-1:2006 + A11:2009 + A1:2010; |
|-----------------------------------------|-------------|---------------------------------------------------------------------------------|

| EMC Compliance     | Condition | Standard / Criterion    |
|--------------------|-----------|-------------------------|
| EMI Standard       |           | EN55022, Class B        |
| ESD                |           | EN61000-4-2, Criteria A |
| Radiated Immunity  |           | EN61000-4-3, Criteria A |
| Fast Transient     |           | EN61000-4-4, Criteria A |
| Surge              |           | EN61000-4-5, Criteria A |
| Conducted Immunity |           | EN61000-4-6, Criteria A |

### DIMENSIONS and PHYSICAL CHARACTERISTICS

| Parameter                  | Type    | Value                  |
|----------------------------|---------|------------------------|
| Material                   | Chassis | Aluminium              |
| Package Dimensions (LxWxH) |         | 101.6 x 57.15 x 19.0mm |
| Package Weight             |         | 134g                   |
| Connectors                 |         | Screw Terminal         |

#### Panel Mount Version (mm)



#### Notes:

Note3: Trim option depending on converter series, please check datasheet of the converter series

## Selection Guide typical at nominal input and 25°C unless otherwise noted

Specifications are as in individual converter datasheets with the following exceptions:

### PACKAGING INFORMATION

| Parameter            | Type          | Value           |
|----------------------|---------------|-----------------|
| Packaging Dimensions | Cardboard Box | 146 x 75 x 29mm |
| Packaging Quantity   |               | 1pc             |

### DIN-Rail Version

### BASIC CHARACTERISTICS

| Parameter      | Condition                 | Min. | Typ.          | Max. |
|----------------|---------------------------|------|---------------|------|
| Inrush current | nominal Vin and full load |      |               | 15A  |
| Start-up time  | Power up<br>CTRL Pin      |      | 100ms<br>20ms |      |

### ENVIRONMENTAL

| Parameter         | Condition | Value      |
|-------------------|-----------|------------|
| Thermal Impedance |           | 4.2°C/Watt |

### SAFETY AND CERTIFICATIONS

|                                         |             |                                                                                 |
|-----------------------------------------|-------------|---------------------------------------------------------------------------------|
| IEC General Safety<br>EN General Safety | LVD20110124 | IEC60950-1, 2nd Edition, 2005 + A1:2009<br>EN60950-1:2006 + A11:2009 + A1:2010; |
|-----------------------------------------|-------------|---------------------------------------------------------------------------------|

| EMC Compliance     | Condition | Standard / Criterion    |
|--------------------|-----------|-------------------------|
| EMI Standard       |           | EN55022, Class B        |
| ESD                |           | EN61000-4-2, Criteria A |
| Radiated Immunity  |           | EN61000-4-3, Criteria A |
| Fast Transient     |           | EN61000-4-4, Criteria A |
| Surge              |           | EN61000-4-5, Criteria A |
| Conducted Immunity |           | EN61000-4-6, Criteria A |

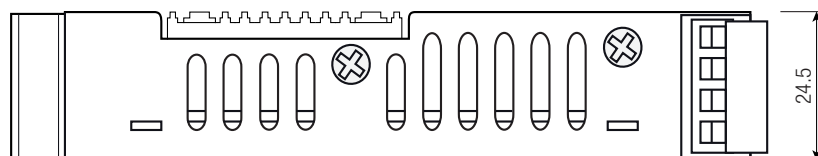
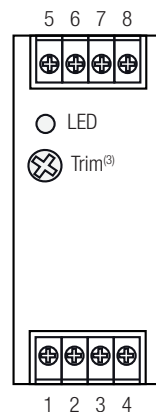
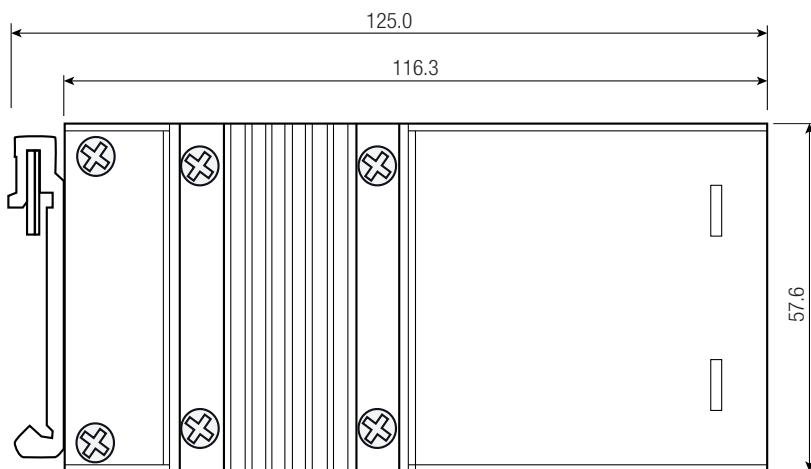
### DIMENSIONS and PHYSICAL CHARACTERISTICS

| Parameter                  | Type    | Value                 |
|----------------------------|---------|-----------------------|
| Material                   | Chassis | Aluminium             |
| Package Dimensions (LxWxH) |         | 125.0 x 57.6 x 24.5mm |
| Package Weight             |         | 182g                  |
| Connectors                 |         | Screw Terminal        |

continued on next page

**Specifications** measured at Ta = 25°C, nominal input voltage, full load otherwise noted

## DIN Rail Version (mm)



## Pin Connections

| Pin # | Single | Dual  | Triple |
|-------|--------|-------|--------|
| 1     | CTRL   | CTRL  | CTRL   |
| 2     | -Vin   | -Vin  | -Vin   |
| 3     | -Vin   | -Vin  | -Vin   |
| 4     | +Vin   | +Vin  | +Vin   |
| 5     | NC     | NC    | +Aux   |
| 6     | -Vout  | -Vout | Com    |
| 7     | +Vout  | Com   | -Aux   |
| 8     | NC     | +Vout | +Vout  |

NC: No Connection  
Tolerance: X.X ±0.5mm

## Notes:

Note3: Trim option depending on converter series, please check datasheet of the converter series

## PACKAGING INFORMATION

| Parameter            | Type          | Value           |
|----------------------|---------------|-----------------|
| Packaging Dimensions | Cardboard Box | 146 x 75 x 29mm |
| Packaging Quantity   |               | 1pc             |

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## RECOM:

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