

# Features

## Regulated Converters

- 1.6kVDC, 2kVDC, 4kVDC or 6kVDC isolation
- Industry standard 5W DIP24 or SMD package
- Feedback regulated output
- Continuous short circuit protection
- Wide 2:1 or 4:1 input
- 3 case styles
- CTRL pin option (A pinning only)

**RECOM**  
DC/DC Converter

## REC5-S(D)RW(Z)

**5 Watt**  
**DIP24 or**  
**SMD Case**  
**Single and Dual**



**CAL**®  
**US**  
**E358085**

IEC60950-1 certified  
UL60950-1 certified  
CAN/CSA-C22.2 No. 60950-1-03 certified  
EN55032 compliant

### PREFERRED ALTERNATIVES

For new medical applications:

**REM5E**



### Description

This series offers standard isolation of 2kVDC/1s with 4kVDC/1s (= „/H4“) or 6kVDC/1s (= „/H6“) options making it ideal for both industrial, medical and other sophisticated high end applications. Packaging can be either DIP24 non-conductive plastic or 5-side-shielded DIP24 metal case (= option „/M“) as well as DIP24-SMD case (= option „/SMD“). For all the above variants, 2 industry-standard pinouts (= option „/A“ or „/C“) are available. „B“ pinning is also available with „/H“ isolation of 1.6kVDC. Remote on/off control is possible with the /CTRL option („A“ pinning only). The converters can deliver 140% rated power for short periods of time to cope with applications with large capacitive loads or high start up currents.

### Selection Guide

| Part Number    | Input Voltage Range <sup>(1)</sup> [VDC] | Output Voltage [VDC] | Output Current [mA] | Efficiency typ. <sup>(2)</sup> [%] | max. Capacitive Load <sup>(3)</sup> [μF] |
|----------------|------------------------------------------|----------------------|---------------------|------------------------------------|------------------------------------------|
| REC5-xx3.3SRW  | 4.5-9, 9-18, 18-36, 36-72                | 3.3                  | 1000                | 75-77                              | 6800                                     |
| REC5-xx05SRW   | 9-18, 18-36, 36-72<br>4.5-9              | 5                    | 1000                | 79-81<br>75                        | 6800                                     |
| REC5-xx09SRW   | 9-18, 18-36, 36-72<br>4.5-9              | 9                    | 556                 | 82-83<br>73                        | 6800                                     |
| REC5-xx12SRW   | 9-18, 18-36, 36-72<br>4.5-9              | 12                   | 420                 | 84-85<br>74                        | 6800                                     |
| REC5-xx15SRW   | 9-18, 18-36, 36-72<br>4.5-9              | 15                   | 340                 | 85-86<br>75                        | 6800                                     |
| REC5-xx05DRW   | 9-18, 18-36, 36-72<br>4.5-9              | ±5                   | ±500                | 79-81<br>72                        | ±2200                                    |
| REC5-xx09DRW   | 9-18, 18-36, 36-72<br>4.5-9              | ±9                   | ±278                | 82-84<br>74                        | ±2200                                    |
| REC5-xx12DRW   | 9-18, 18-36, 36-72<br>4.5-9              | ±12                  | ±210                | 84-85<br>75                        | ±2200                                    |
| REC5-xx15DRW   | 9-18, 18-36, 36-72<br>4.5-9              | ±15                  | ±170                | 85-86<br>75                        | ±2200                                    |
| REC5-xx3.3SRWZ | 9-36, 18-72                              | 3.3                  | 1000                | 75-76                              | 6800                                     |
| REC5-xx05SRWZ  | 9-36, 18-72                              | 5                    | 1000                | 81-82                              | 6800                                     |
| REC5-xx09SRWZ  | 9-36, 18-72                              | 9                    | 556                 | 82-83                              | 6800                                     |
| REC5-xx12SRWZ  | 9-36, 18-72                              | 12                   | 420                 | 83-84                              | 6800                                     |
| REC5-xx15SRWZ  | 9-36, 18-72                              | 15                   | 340                 | 84-85                              | 6800                                     |
| REC5-xx05DRWZ  | 9-36, 18-72                              | ±5                   | ±500                | 81-82                              | ±2200                                    |
| REC5-xx09DRWZ  | 9-36, 18-72                              | ±9                   | ±278                | 82-84                              | ±2200                                    |
| REC5-xx12DRWZ  | 9-36, 18-72                              | ±12                  | ±210                | 82-83                              | ±2200                                    |
| REC5-xx15DRWZ  | 9-36, 18-72                              | ±15                  | ±170                | 84-85                              | ±2200                                    |

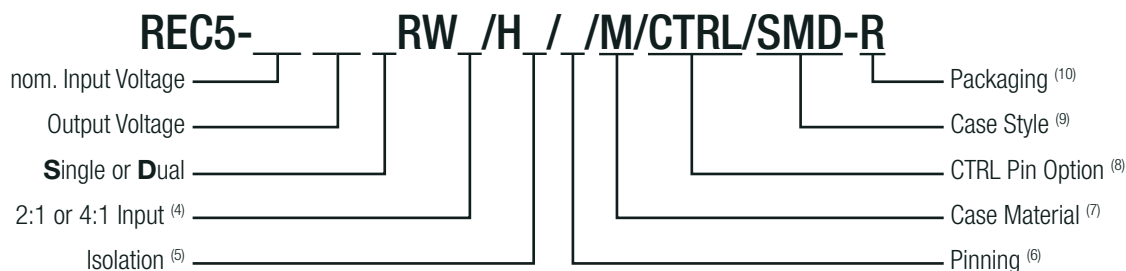
#### Notes:

Note1: Refer to “Input Voltage Range”

Note2: Efficiency is tested at nominal input and full load at +25°C ambient

Note3: Max Cap Load is tested at nominal input and full resistive load

### Model Numbering



#### Notes:

- Note4: add "Z" for 4:1 Input Voltage (24= 9-36VDC or 48= 18-72VDC), without suffix= standard 2:1 input voltage range
- Note5: "H" = 1.6kVDC/1s isolation (B pinning only)  
 "H2" = 2kVDC/1s isolation (A, A/X2 or C pinning available only)  
 "H4" = 4kVDC/1s isolation (A, A/X2 or C pinning available only)  
 "H6" = 6kVDC/1s isolation (A, A/X2 or C pinning available only)
- Note6: "A" = A pinning; "B" = B pinning or "C" for C pinning. For more details please refer to "DIMENSION AND PHYSICAL CHARACTERISTICS"  
 "B" Pinning is restricted to 1.6kV isolation due to the closeness of the input and output pins.
- Note7: add suffix "M" for 5-side-shielded metal case, without suffix = 5-side-shielded non-conductive plastic case.
- Note8: add "CTRL" for control function. If CTRL is not used, pin 1 is omitted for THT version. (option for "A"-pinning only)
- Note9: add suffix "SMD" for SMD package, without suffix = standard DIP24 THT package. (If the options "M" and "SMD" are combined, the maximum allowed isolation voltage is 2kVDC/1s because of the shorter distance between pins and the metal case; DIP24 THT case and SMD plastic case are not affected and offer the full isolation barriers of 2kVDC/1s through to 6kVDC)
- Note10: add suffix "R" for tape and reel packaging, without suffix standard tube packaging. (tape and reel option only available for SMD case style)

#### Ordering Examples:

|                          |          |         |               |           |                   |           |              |                  |     |                         |
|--------------------------|----------|---------|---------------|-----------|-------------------|-----------|--------------|------------------|-----|-------------------------|
| REC5-0505SRW/H4/A/M/CTRL | 4.5-9Vin | 5Vout   | Single output | 2:1 input | 4kVDC isolation   | A pinning | metal case   | with CTRL Pin    | THT | tube packaging          |
| REC5-2412DRWZ/H2/C/SMD-R | 9-36Vin  | ±12Vout | Dual output   | 4:1 input | 2kVDC isolation   | C pinning | plastic case | no CTRL function | SMD | tape and reel packaging |
| REC5-1212SRWZ/H/B/M      | 9-36Vin  | 12Vout  | Single Output | 4:1 input | 6kVDC isolation   | B pinning | metal case   | no CTRL Pin      | THT | tube packaging          |
| REC5-1215DRW/H/B/M/SMD-R | 9-18Vin  | ±15Vout | Dual Output   | 2:1 input | 1.6kVDC isolation | B pinning | metal case   | no CTRL function | SMD | tape and reel packaging |

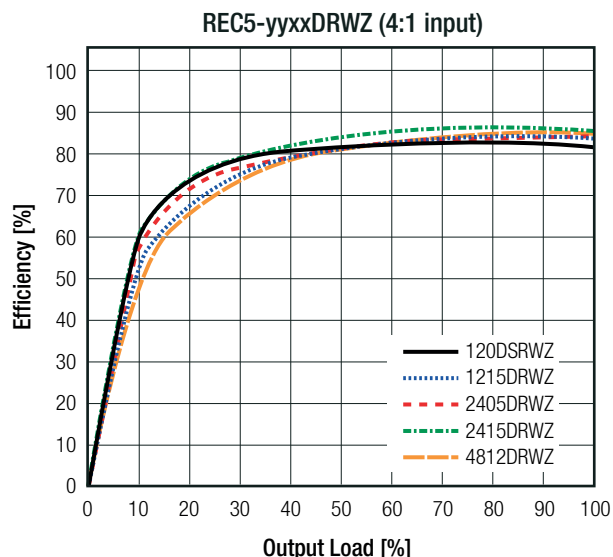
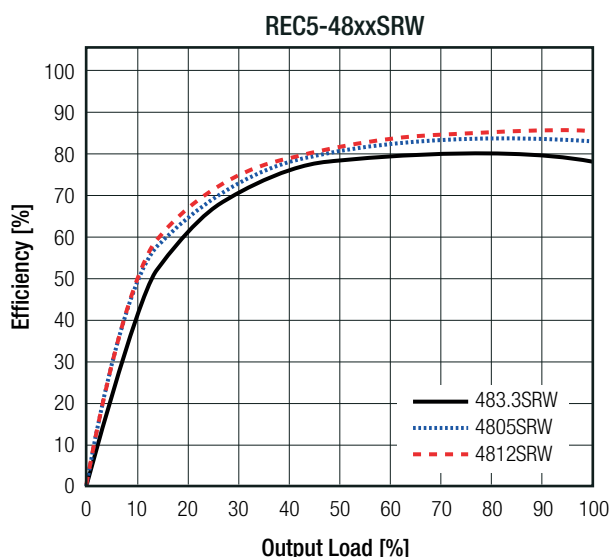
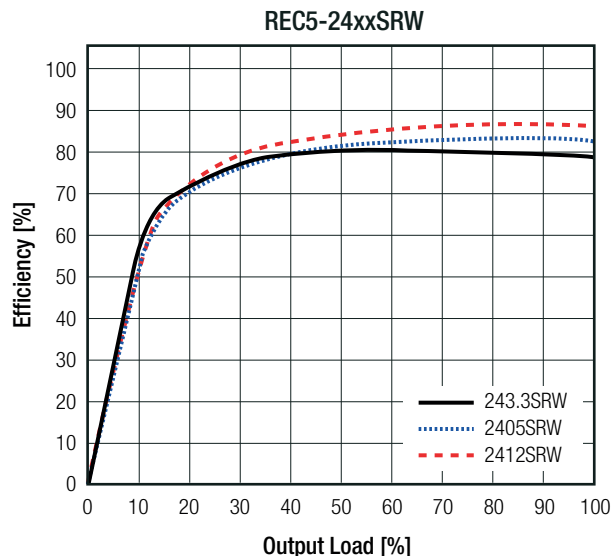
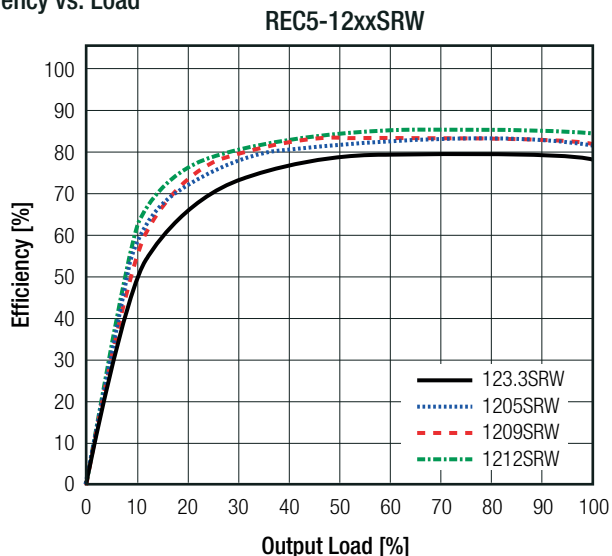
### Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

| BASIC CHARACTERISTICS                                                                                       |                 |           |       |                                    |      |         |
|-------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|------------------------------------|------|---------|
| Parameter                                                                                                   | Condition       |           |       | Min.                               | Typ. | Max.    |
| Internal Input Filter                                                                                       |                 |           |       | Pi Network                         |      |         |
| Input Voltage Range                                                                                         | 2:1 Input       | nom. Vin= | 5VDC  | 4.5VDC                             |      | 9VDC    |
|                                                                                                             |                 |           | 12VDC | 9VDC                               |      | 18VDC   |
|                                                                                                             |                 |           | 24VDC | 18VDC                              |      | 36VDC   |
|                                                                                                             |                 |           | 48VDC | 36VDC                              |      | 72VDC   |
|                                                                                                             | 4:1 Input (“Z”) | nom. Vin= | 24VDC | 9VDC                               |      | 36VDC   |
|                                                                                                             |                 |           | 48VDC | 18VDC                              |      | 72VDC   |
| Input Surge Voltage                                                                                         | 100ms max.      | nom. Vin= | 5VDC  |                                    |      | 16VDC   |
|                                                                                                             |                 |           | 12VDC |                                    |      | 25VDC   |
|                                                                                                             |                 |           | 24VDC |                                    |      | 50VDC   |
|                                                                                                             |                 |           | 48VDC |                                    |      | 100VDC  |
| Minimum Load <sup>(11)</sup>                                                                                |                 |           |       | 10%                                |      |         |
| No Load Power Consumption                                                                                   |                 |           |       |                                    |      | 300mW   |
| ON/OFF CTRL <sup>(12)</sup>                                                                                 | DC-DC ON        |           |       | Open or 0V<V <sub>CTRL</sub> <1.2V |      |         |
|                                                                                                             | DC-DC OFF       |           |       | 2.2V<V <sub>CTRL</sub> <12VDC      |      |         |
| Internal Operating Frequency                                                                                | 2:1 Input       |           |       | 120kHz                             |      |         |
|                                                                                                             | 4:1 Input       |           |       | 200kHz                             |      |         |
| Output Ripple and Noise <sup>(13)</sup>                                                                     | 20MHz BW        |           |       |                                    |      | 50mVp-p |
| <b>Notes:</b>                                                                                               |                 |           |       |                                    |      |         |
| Note11: Operation below 10% load won't harm the converter, but specifications may not be met                |                 |           |       |                                    |      |         |
| Note12: “/A”-pinning only. Please refer to “ <b>ON/OFF CTRL (“/A” pinning only)</b> ” for CTRL pin circuit. |                 |           |       |                                    |      |         |
| Note13: Measurements are made with a 0.1µF MLCC across output. (low ESR)                                    |                 |           |       |                                    |      |         |
| continued on next page                                                                                      |                 |           |       |                                    |      |         |

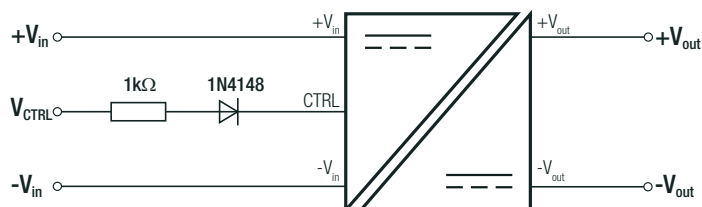
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**Specifications** (measured @  $T_a = 25^\circ\text{C}$ , nom.  $V_{in}$ , full load and after warm-up unless otherwise stated)

Efficiency vs. Load



## ON/OFF CTRL ("A" pinning only)



DC-DC ON: Open or  $0V < V_{CTRL} < 1.2V_{DC}$   
DC-DC OFF:  $2.2V < V_{CTRL} < 12V_{DC}$

## REGULATIONS

| Parameter       | Condition             | Value            |
|-----------------|-----------------------|------------------|
| Output Accuracy |                       | $\pm 2.0\%$ max. |
| Line Regulation | low line to high line | $\pm 0.3\%$ max. |
| Load Regulation | 20% to 100% load      | $\pm 0.6\%$ max. |

**Specifications** (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

### PROTECTIONS

| Parameter                                      | Type              |                     | Value                     |
|------------------------------------------------|-------------------|---------------------|---------------------------|
| Short Circuit Protection (SCP) <sup>(14)</sup> | below 100mΩ       |                     | continuous, auto recovery |
| Isolation Voltage <sup>(15)</sup>              | with suffix "/H"  | tested for 1 second | 1.6kVDC                   |
|                                                |                   | rated for 1 minute  | 500VAC/60Hz               |
|                                                | with suffix "/H2" | tested for 1 second | 2kVDC                     |
|                                                |                   | rated for 1 minute  | 1kVAC/60Hz                |
|                                                | with suffix "/H4" | tested for 1 second | 4kVDC                     |
|                                                |                   | rated for 1 minute  | 2kVAC/60Hz                |
|                                                | with suffix "/H6" | tested for 1 second | 6kVDC                     |
|                                                |                   | rated for 1 minute  | 3kVAC/60Hz                |
| Isolation Resistance                           |                   |                     | 1GΩ min.                  |
| Isolation Capacitance                          |                   |                     | 60pF typ.                 |
| Insulation Grade                               |                   |                     | functional                |

**Notes:**

Note14: Max. Temperature = +50°C during the short circuit conditions.

Note15: For repeat Hi-Pot testing, reduce the time and/or the test voltage

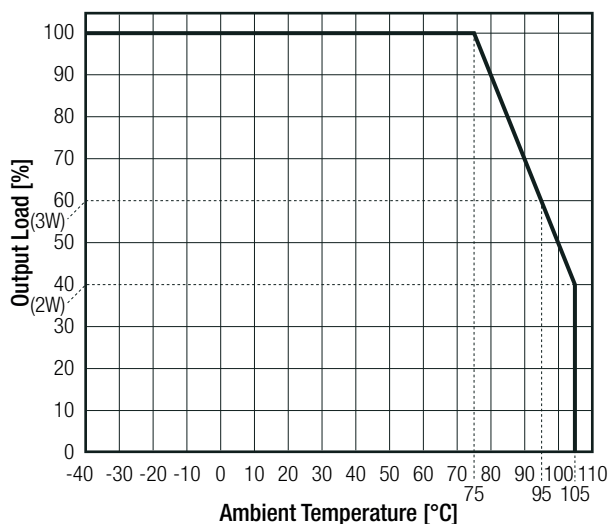
Note16: Refer to local safety regulations if input over-current protection is also required. Recommended fuse: slow blow type

### ENVIRONMENTAL

| Parameter                   | Condition                                                       |       | Value                       |
|-----------------------------|-----------------------------------------------------------------|-------|-----------------------------|
| Operating Temperature Range | with derating @ free air convection (refer to "Derating Graph") |       | -40°C to +105°C             |
| Thermal Impedance           | plastic case                                                    |       | 20K/W                       |
|                             | metal case                                                      |       | 12K/W                       |
| Operating Altitude          |                                                                 |       | 2000m                       |
| Operating Humidity          | non-condensing                                                  |       | 95% RH max.                 |
| Pollution Degree            |                                                                 |       | PD2                         |
| MTBF                        | according to MIL-HDBK-217F, G.B.                                | +25°C | 850 x 10 <sup>3</sup> hours |
|                             |                                                                 | +75°C | 206 x 10 <sup>3</sup> hours |

### Derating Graph

(@ Chamber and free air convection 0.1m/s)



**Specifications** (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

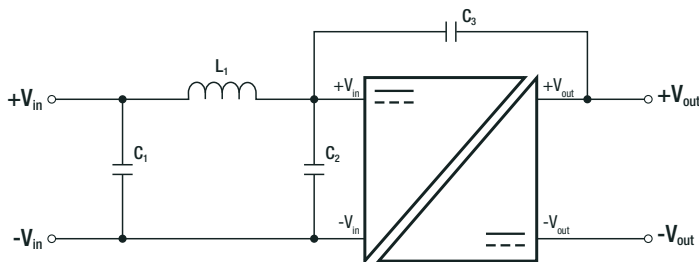
## SAFETY AND CERTIFICATIONS

| Certificate Type (Safety)                                                             | Report / File Number | Standard                                                                        |
|---------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------|
| Information Technology Equipment, General Requirements for Safety                     | E358085              | UL60950-1, 1st Edition, 2007<br>CAN/CSA-C22.2 No. 60950-1-03, 1st Edition, 2006 |
| Information Technology Equipment, General Requirements for Safety                     | LVD1605077-10        | IEC60950-1:2005, 2nd Edition + A2:2013                                          |
| Medical Electric Equipment, General Requirements for Safety and Essential Performance | SPC1006048           | IEC60601-1:1988 + A2:1995<br>EN60601-1:1990 + A13 :1996                         |
| RoHS2                                                                                 | TWNC00677039         | RoHS, 2011/65/EU + AM-2015/863                                                  |

## EMC Compliance

| Condition                                                                                     | Standard / Criterion                                  |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Electromagnetic compatibility of multimedia equipment - Emission requirements <sup>(17)</sup> | with external filter<br>(see filter suggestion below) |
|                                                                                               | EN55032, Class A/B                                    |

### EMC Filtering Suggestions according to EN55032



#### Component List Class A

| MODEL             | C1  | C2           | C3    | L1                           |
|-------------------|-----|--------------|-------|------------------------------|
| REC5-0505SRW/H4/A | N/A | 10μF<br>MLCC | 150pF | N/A                          |
| REC5-1205SRW/H4/A |     |              |       | <a href="#">12μH RLS-126</a> |
| REC5-2405SRW/H4/A |     |              | 330pF | <a href="#">22μH RLS-226</a> |
| REC5-4805SRW/H2/A |     |              |       |                              |

#### Component List Class B

| MODEL             | C1           | C2           | C3    | L1                            |
|-------------------|--------------|--------------|-------|-------------------------------|
| REC5-0505SRW/H4/A | 10µF<br>MLCC | 10µF<br>MLCC | 150pF | <a href="#">18µH RLS-186</a>  |
| REC5-1205SRW/H4/A |              |              |       | <a href="#">12µH RLS-126</a>  |
| REC5-2405SRW/H4/A |              |              | 1nF   | <a href="#">22µH RLS-226</a>  |
| REC5-4805SRW/H2/A |              |              |       | <a href="#">100µH RLS-105</a> |

#### Notes:

Note17: Filter suggestions are valid for indicated part numbers only. For other part numbers, please contact Recom tech support advice

## DIMENSION AND PHYSICAL CHARACTERISTICS

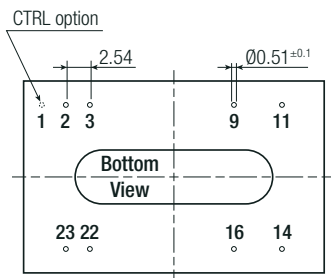
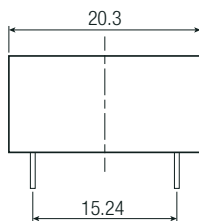
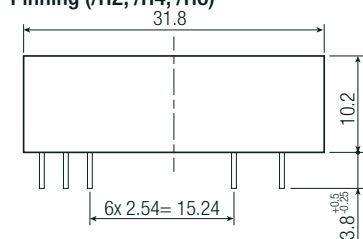
| Parameter         | Type                    |                         | Value                                    |
|-------------------|-------------------------|-------------------------|------------------------------------------|
| Material          | plastic case            |                         | non-conductive black plastic, (UL94 V-0) |
|                   | metal case ("M" option) |                         | nickel plated copper                     |
|                   | PCB                     |                         | FR4, (UL94 V-0)                          |
|                   | potting                 |                         | epoxy, (UL94 V-0)                        |
| Dimension (LxWxH) | DIP24                   | plastic case            | 31.8 x 20.3 x 10.2mm                     |
|                   |                         | metal case ("M" option) | 32.0 x 20.3 x 10.5mm                     |
|                   | SMD                     | plastic case            | 31.8 x 20.3 x 10.9mm                     |
|                   |                         | metal case ("M" option) | 32.0 x 20.3 x 10.9mm                     |
| Weight            |                         |                         | 13g typ.                                 |

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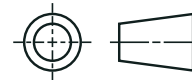
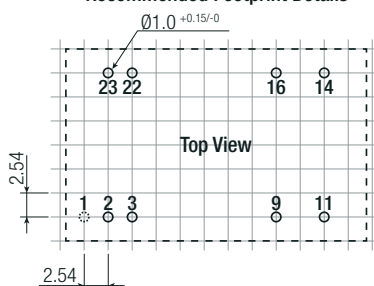
Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

## Dimension Drawing DIP24 plastic case (mm)

### „A“ Pinning (/H2, /H4, /H6)



### Recommended Footprint Details

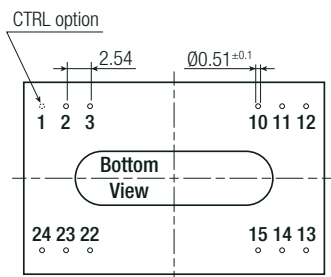
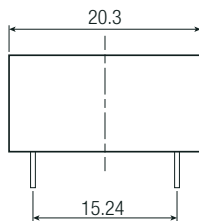
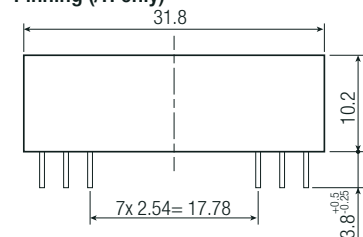


### „A“ Pinning (/H2,/H4,/H6)

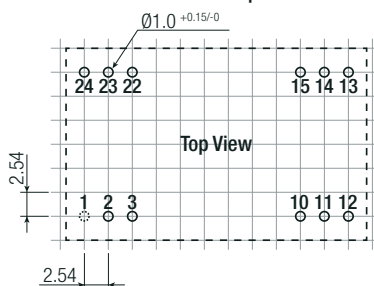
| Pin #     | Single | Single/X2 | Dual  |
|-----------|--------|-----------|-------|
| 1 „Note8“ | CTRL   | CTRL      | CTRL  |
| 2,3       | -Vin   | -Vin      | -Vin  |
| 9         | NC     | no pin    | Com   |
| 11        | NC     | NC        | -Vout |
| 14        | +Vout  | +Vout     | +Vout |
| 16        | -Vout  | -Vout     | Com   |
| 22,23     | +Vin   | +Vin      | +Vin  |

NC= No Connection

### „B“ Pinning (/H only)



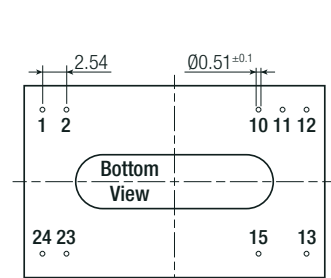
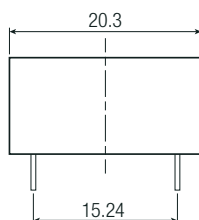
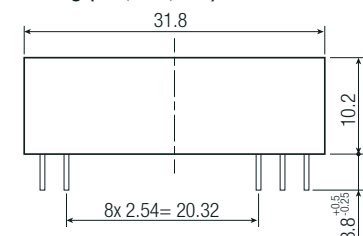
### Recommended Footprint Details



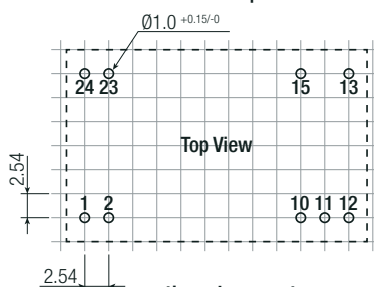
### „B“ Pinning (/H only)

| Pin # | Single | Dual  |
|-------|--------|-------|
| 1     | +Vin   | +Vin  |
| 2     | no pin | -Vout |
| 3     | no pin | Com   |
| 10    | -Vout  | Com   |
| 11,14 | +Vout  | +Vout |
| 12,13 | -Vin   | -Vin  |
| 15    | -Vout  | Com   |
| 22    | no pin | Com   |
| 23    | no pin | -Vout |
| 24    | +Vin   | +Vin  |

### „C“ Pinning (/H2, /H4, /H6)



### Recommended Footprint Details



### „C“ Pinning (/H2,/H4,/H6)

| Pin # | Single | Dual  |
|-------|--------|-------|
| 1,2   | +Vin   | +Vin  |
| 10,11 | NC     | COM   |
| 12    | -Vout  | NC    |
| 13    | +Vout  | -Vout |
| 15    | NC     | +Vout |
| 23,24 | -Vin   | -Vin  |

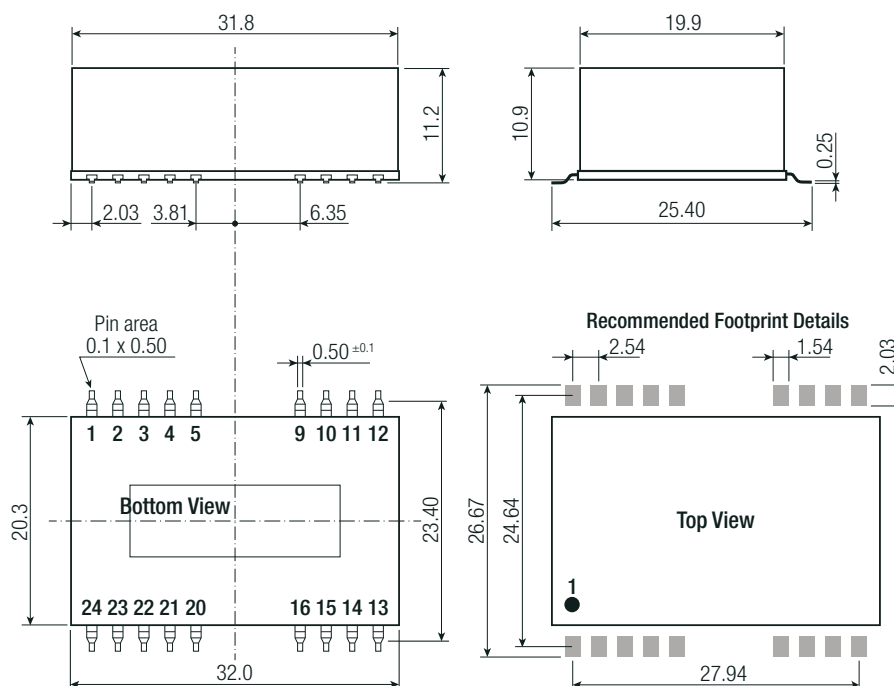
NC= No Connection

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tolerance  $\pm 0.25\text{mm}$

**Specifications** (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

Dimension Drawing SMD plastic case (mm)



„A“ Pinning

| Pin #       | Single | Dual  |
|-------------|--------|-------|
| 1 „Note8“   | CTRL   | CTRL  |
| 2,3         | -Vin   | -Vin  |
| 4,5         | NC     | NC    |
| 9           | NC     | Com   |
| 10,12,13,15 | NC     | NC    |
| 11          | NC     | -Vout |
| 14          | +Vout  | +Vout |
| 16          | -Vout  | Com   |
| 20,21,24    | NC     | NC    |
| 22,23       | +Vin   | +Vin  |

NC= No Connection

„B“ Pinning

| Pin #    | Single | Dual  |
|----------|--------|-------|
| 1        | +Vin   | +Vin  |
| 2        | NC     | -Vout |
| 3        | NC     | Com   |
| 4,5,9    | NC     | NC    |
| 10       | -Vout  | Com   |
| 11       | +Vout  | +Vout |
| 12,13    | -Vin   | -Vin  |
| 14       | +Vout  | +Vout |
| 15       | -Vout  | Com   |
| 16,20,21 | NC     | NC    |
| 22       | NC     | Com   |
| 23       | NC     | -Vout |
| 24       | +Vin   | +Vin  |

NC= No Connection

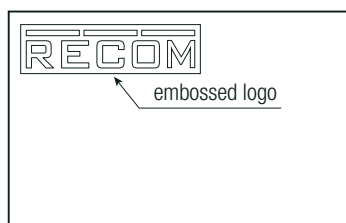
„C“ Pinning

| Pin #       | Single | Dual  |
|-------------|--------|-------|
| 1,2         | +Vin   | +Vin  |
| 3,4,5,9     | NC     | NC    |
| 10,11       | NC     | Com   |
| 12          | -Vout  | NC    |
| 13          | +Vout  | -Vout |
| 14          | NC     | NC    |
| 15          | NC     | +Vout |
| 16,20,21,22 | NC     | NC    |
| 23,24       | -Vin   | -Vin  |

NC= No Connection

**Notes:**

Note18: All models with plastic housings have an embossed RECOM logo. See below top view:



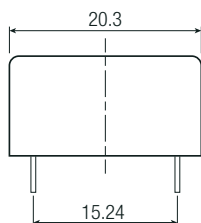
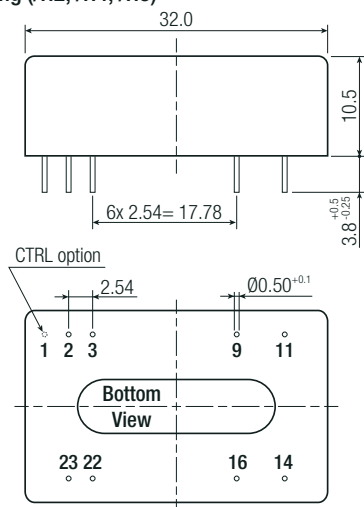
continued on next page

tolerance ±0.35mm

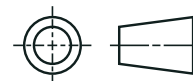
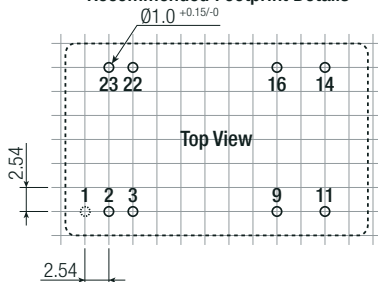
Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

## Dimension Drawing DIP24 metal case (mm)

### „A“ Pinning (/H2, /H4, /H6)



#### Recommended Footprint Details

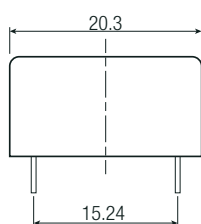
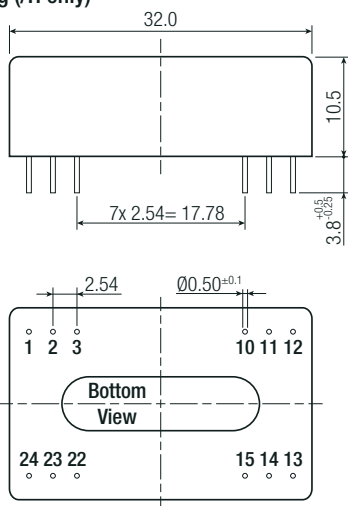


### „A“ Pinning (/H2,/H4,/H6)

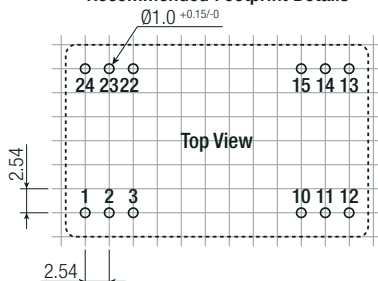
| Pin #     | Single | Single/X2 | Dual  |
|-----------|--------|-----------|-------|
| 1 „Note8“ | CTRL   | CTRL      | CTRL  |
| 2,3       | -Vin   | -Vin      | -Vin  |
| 9         | NC     | no pin    | Com   |
| 11        | NC     | NC        | -Vout |
| 14        | +Vout  | +Vout     | +Vout |
| 16        | -Vout  | -Vout     | Com   |
| 22,23     | +Vin   | +Vin      | +Vin  |

NC: No Connection

### „B“ Pinning (/H only)



#### Recommended Footprint Details

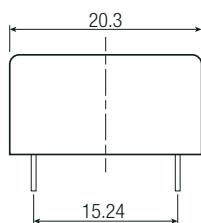
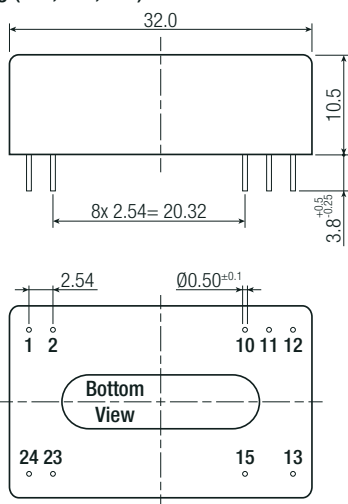


### „B“ Pinning (/H only)

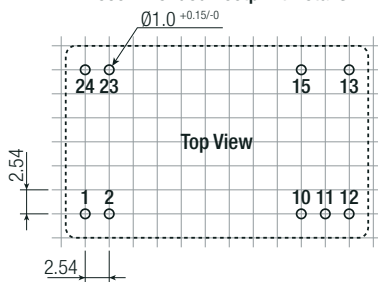
| Pin # | Single | Dual  |
|-------|--------|-------|
| 1     | +Vin   | +Vin  |
| 2     | no pin | -Vout |
| 3     | no pin | Com   |
| 10    | -Vout  | Com   |
| 11,14 | +Vout  | +Vout |
| 12,13 | -Vin   | -Vin  |
| 15    | -Vout  | Com   |
| 22    | no pin | Com   |
| 23    | no pin | -Vout |
| 24    | +Vin   | +Vin  |

NC= No Connection

### „C“ Pinning (/H2, /H4, /H6)



#### Recommended Footprint Details



### „C“ Pinning (/H2,/H4,/H6)

| Pin # | Single | Dual  |
|-------|--------|-------|
| 1,2   | +Vin   | +Vin  |
| 10,11 | NC     | COM   |
| 12    | -Vout  | NC    |
| 13    | +Vout  | -Vout |
| 15    | NC     | +Vout |
| 23,24 | -Vin   | -Vin  |

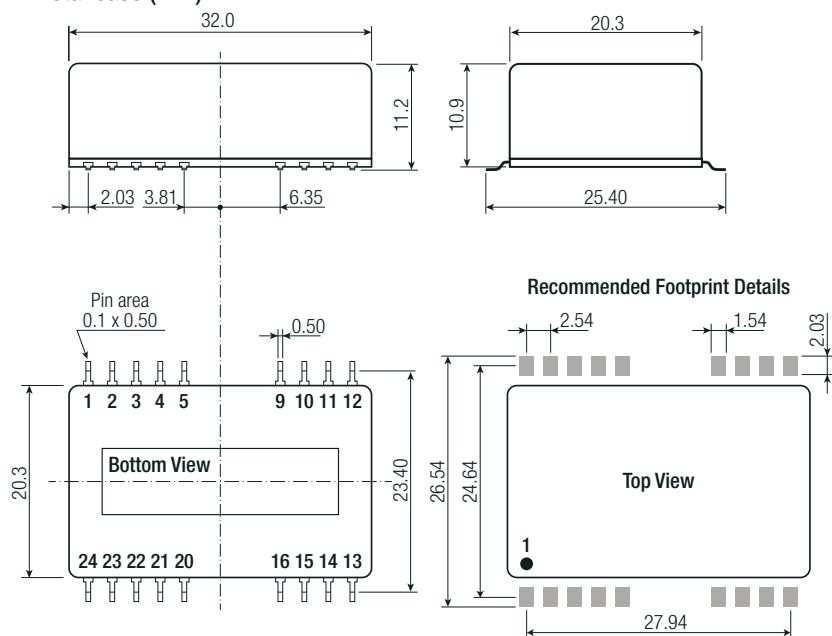
NC= No Connection

tolerance ±0.25mm

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**Specifications** (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

Dimension Drawing SMD metal case (mm)



„A“ Pinning

| Pin #       | Single | Dual  |
|-------------|--------|-------|
| 1 „Note8“   | CTRL   | CTRL  |
| 2,3         | -Vin   | -Vin  |
| 4,5         | NC     | NC    |
| 9           | NC     | Com   |
| 10,12,13,15 | NC     | NC    |
| 11          | NC     | -Vout |
| 14          | +Vout  | +Vout |
| 16          | -Vout  | Com   |
| 20,21,24    | NC     | NC    |
| 22,23       | +Vin   | +Vin  |

NC= No Connection

„B“ Pinning

| Pin #    | Single | Dual  |
|----------|--------|-------|
| 1        | +Vin   | +Vin  |
| 2        | NC     | -Vout |
| 3        | NC     | Com   |
| 4,5,9    | NC     | NC    |
| 10       | -Vout  | Com   |
| 11       | +Vout  | +Vout |
| 12,13    | -Vin   | -Vin  |
| 14       | +Vout  | +Vout |
| 15       | -Vout  | Com   |
| 16,20,21 | NC     | NC    |
| 22       | NC     | Com   |
| 23       | NC     | -Vout |
| 24       | +Vin   | +Vin  |

NC= No Connection

„C“ Pinning

| Pin #       | Single | Dual  |
|-------------|--------|-------|
| 1,2         | +Vin   | +Vin  |
| 3,4,5,9     | NC     | NC    |
| 10,11       | NC     | Com   |
| 12          | -Vout  | NC    |
| 13          | +Vout  | -Vout |
| 14          | NC     | NC    |
| 15          | NC     | +Vout |
| 16,20,21,22 | NC     | NC    |
| 23,24       | -Vin   | -Vin  |

NC= No Connection

tolerance ±0.35mm

## PACKAGING INFORMATION

| Parameter                   | Type                      |     | Value                  |
|-----------------------------|---------------------------|-----|------------------------|
| Packaging Dimension (LxWxH) | tube                      | THT | 530.0 x 23.0 x 19.0mm  |
|                             |                           | SMD | 530.0 x 32.0 x 19.0mm  |
|                             | tape and reel (“-R” only) |     | 355.0 x 342.0 x 70.0mm |
| Tape Width                  |                           |     | 44mm                   |
| Packaging Quantity          | tube                      |     | 15pcs                  |
|                             | tape and reel             |     | 100pcs                 |
| Storage Temperature Range   |                           |     | -55°C to +125°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.