

**MYRRA encapsulated electronic transformers are Switched Mode Power Supplies based on Flyback topology.**

**They constitute an interesting alternative to the traditional supply in the most common applications of power lower than 5W.**

**ENERGY SAVING due to high efficiency and low standby power**

The applications for the Electronic serie are:

- Alternative to the linear transformers in all AC/DC applications of power up to than 5W
- Alternative to DC/DC converters for application in D.C.current (Telecom supplies, electric substations etc.)
- Industrial, domestic and consumer electronics applications
- Standby devices and others DC or AC auxiliary supplies

With the same footprint as a EI30 transformer, they will replace:

- 50 Hz Transformer
- Fuse
- Bridge Rectifier
- Filtering Capacitor

Regulated types will also replace linear regulator and heatsink

## MAIN FEATURES

- Wide input voltage range
- Increased power. 3 x compared to standard EI30 transformer
- Better energetic efficiency: 70% typical compared to 40% for the conventional supply
- Very low Standby Power consumption: meets requirements of Energy Star or EC Code of Conduct
- Same footprint as EI30 transformer : Upgrade your application without redesign of PCB

## SAFETY STANDARDS

Meets all requirements of:

- EN 60950
- EN 60335
- EN 61558-2-17
- Uses UL listed components
- Uses UL 94-V0 plastic and resin

## EMC STANDARDS

Conducted and radiated emissions conform to

- EN 55014-1
- EN 55022 class B

Immunity conform to

- EN 55014-2
- EN 61000-4-x

## ONE OUTPUT 2.5 & 5W - Regulated

### ELECTRICAL SPECIFICATIONS

Input voltage range

85 to 265 Volts AC

85 to 370 Volts DC

Input Frequency 47 to 440 Hz

Output voltage accuracy (full load )  $\pm 2\%$

Line output voltage variation  $\pm 0.3\%$

Load output voltage variation  $\pm 0.5\%$

No load input power < 200mW

Energy consumption and efficiency :

Meets requirements of Energy Star and

EC Code of Conduct

### SAFETY

Prepared for Class II – reinforced insulation

Input / Output Isolation test voltage: 4000 Vac

Operating ambient temperature:

- 25°C / + Ta (See table)

Storage temperature: - 40°C / + 85°C

Input protection by integrated fusible resistor

Output short circuit protection: automatic restarts when fault condition is removed

Thermal shutdown with automatic recovery if internal temperature exceeds allowable value

| Reference | Output voltage (DC Volts) | Output current (DC mA) | Output Power (W) | Efficiency (%) | Ta (°C) |
|-----------|---------------------------|------------------------|------------------|----------------|---------|
| 47121     | 3.3                       | 750                    | 2.5              | 65             | +70     |
| 47122     | 5                         | 550                    | 2.75             | 68             | +70     |
| 47123     | 9                         | 270                    | 2.5              | 72             | +70     |
| 47124     | 12                        | 210                    | 2.5              | 74             | +70     |
| 47125     | 15                        | 170                    | 2.5              | 75             | +70     |
| 47126     | 24                        | 110                    | 2.5              | 77             | +70     |
| 47151     | 3.3                       | 1350                   | 4.2              | 65             | +50     |
| 47152     | 5                         | 900                    | 4.5              | 68             | +50     |
| 47153     | 9                         | 550                    | 5                | 72             | +50     |
| 47154     | 12                        | 420                    | 5                | 75             | +50     |
| 47155     | 15                        | 320                    | 5                | 76             | +50     |
| 47156     | 24                        | 220                    | 5                | 79             | +50     |

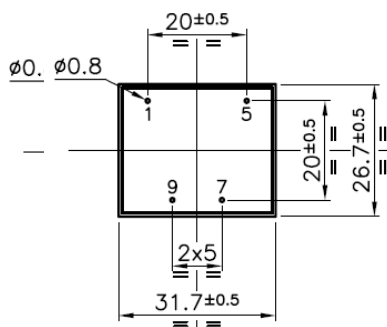
### DIMENSIONS and PINOUT

4 pins

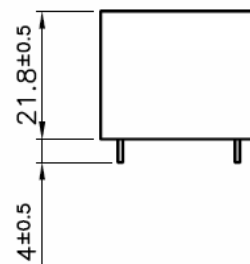
pins 1 & 5 : AC or DC Input

pin 7: DC output +V

pin 9: DC output 0V



(view from pins side):



## ONE OUTPUT 3.2 & 5W Non Regulated

### ELECTRICAL SPECIFICATIONS

Input voltage range

85 to 265 Volts AC

85 to 370 Volts DC

Input Frequency 47 to 440 Hz

Output voltage accuracy (full load)  $\pm 5\%$

Line output voltage variation  $\pm 3\%$

Load output voltage variation 0/ +30%

No load input power < 300mW

### SAFETY

Prepared for Class II – reinforced insulation

Input / Output Isolation test voltage: 4000 Vac

Operating ambient temperature:

- 25°C / + Ta (See table)

Storage temperature: - 40°C / + 85°C

Input protection by integrated fusible resistor

Output short circuit protection: automatic restarts when fault condition is removed

Thermal shutdown with automatic recovery if internal temperature exceeds allowable value

| Reference | (DC Volts) | Output current (DC mA) | Output Power (W) | Efficiency (%) | Ta (°C) |
|-----------|------------|------------------------|------------------|----------------|---------|
| 47114     | 12         | 200                    | 2.4              | 74             | +70     |
| 47133     | 9          | 360                    | 3.2              | 73             | +70     |
| 47134     | 12         | 270                    | 3.2              | 75             | +70     |
| 47136     | 24         | 130                    | 3.2              | 80             | +70     |
| 47163     | 9          | 560                    | 5 *              | 73             | +50     |
| 47164     | 12         | 420                    | 5 *              | 75             | +50     |
| 47166     | 24         | 210                    | 5 *              | 80             | +50     |

\* Nota: Power up to 5.4W is possible with input voltage  $\geq 97$  Vac

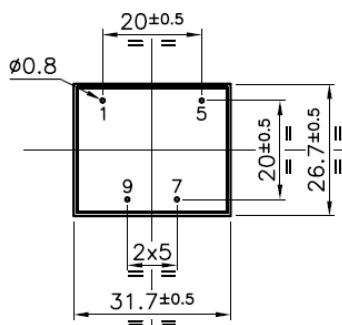
### DIMENSIONS and PINOUT

4 pins

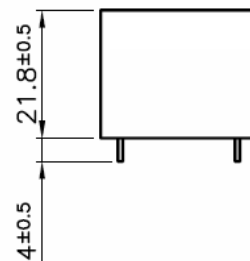
pins 1 & 5 : AC or DC Input

pin 7: DC output +V

pin 9: DC output 0V



(view from pins side):



## TWO COMMON OUTPUTS 3 to 5W - Regulated

## ELECTRICAL SPECIFICATIONS

Input voltage range

85 to 265Volts AC

85 to 370V DC

Input Frequency 47 to 440 Hz

Output voltage accuracy : see table for 10 to 100% rated load of each output (includes line and load variations)

No load input power < 200mW

Energy consumption and efficiency : Meets requirements of Energy Star or EC Code of Conduct

The 2 outputs share a common 0v reference.  
This enables closer coupling and a better cross-regulation of the outputs

## SAFETY

Prepared for Class II – reinforced insulation

Input / Output Isolation test voltage: 4000 Vac

Operating ambient temperature:

- 25°C / + Ta (See table)

Storage temperature: - 40°C / + 85°C

Input protection by integrated fusible resistor

Output short circuit protection: automatic restarts when fault condition is removed

Thermal shutdown with automatic recovery if internal temperature exceeds allowable value

| Reference | Output 1<br>Output 2<br>(DC Volts) | Output 1<br>Output 2<br>(DC mA) | Output Power<br>(W) | Output 1<br>Output 2<br>accuracy | Efficiency (%) | Ta<br>(°C) |
|-----------|------------------------------------|---------------------------------|---------------------|----------------------------------|----------------|------------|
| 47243     | +10.5<br>+7                        | 380 max<br>100 max              | 4 *                 | ± 3%<br>± 15%                    | 72             | +60        |
| 47244     | +15<br>+7                          | 300 max<br>70 max               | 4 *                 | ± 3%<br>± 15%                    | 73             | +60        |
| 47245     | +12<br>+5.5                        | 130 max<br>300 max              | 3.2                 | ± 5%<br>± 10%                    | 65             | +70        |
| 47246     | +5<br>+12                          | 400 (600max)<br>170 max         | 4                   | ± 3%<br>± 15%                    | 65             | +60        |
| 47247     | +15<br>-15                         | 130 max<br>130 max              | 4                   | ± 8%<br>± 8%                     | 73             | +60        |
|           |                                    |                                 |                     |                                  |                |            |
|           |                                    |                                 |                     |                                  |                |            |
|           |                                    |                                 |                     |                                  |                |            |

\* Nota: Power up to 5W is possible with input voltage  $\geq 97$  Vac and  $T_a \leq 50^\circ\text{C}$

## DIMENSIONS and PINOUT

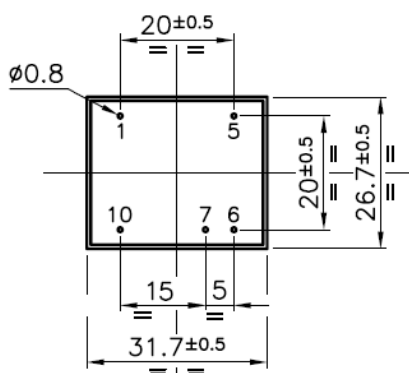
5 pins

pins 1 & 5 : AC or DC Input

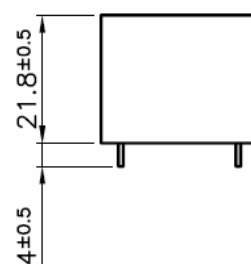
pin 6: Common output 0V

pin 7: DC output 1

pin 10: DC output 2



(view from pins side):



## TWO ISOLATED OUTPUTS 3 to 5W - Regulated

### ELECTRICAL SPECIFICATIONS

Input voltage range

85 to 265Volts AC

85 to 370V DC

Input Frequency 47 to 440 Hz

Output voltage accuracy : see table for 10 to 100% rated load of each output (includes line and load variations)

No load input power < 200mW

Energy consumption and efficiency :

Meets requirements of Energy Star or EC Code of Conduct

2 isolated outputs - Output 1 only is regulated and should provide the higher power

### SAFETY

Prepared for Class II – reinforced insulation

Input / Output Isolation test voltage: 4000 Vac

Output1 / Output 2 isolation : 4000Vac

Operating ambient temperature:

- 25°C / + Ta (See table)

Storage temperature: - 40°C / + 85°C

Input protection by integrated fusible resistor

Output short circuit protection: automatic restarts when fault condition is removed

Thermal shutdown with automatic recovery if internal temperature exceeds allowable value

| Reference | Output 1<br>Output 2<br>(DC Volts) | Output 1<br>Output 2<br>(DC mA) | Output Power<br>(max W) | Output 1<br>Output 2<br>accuracy | Efficiency (%) | Ta<br>(°C) |
|-----------|------------------------------------|---------------------------------|-------------------------|----------------------------------|----------------|------------|
| 47252     | 5<br>5                             | 350 (600max)<br>350 max         | 3.5                     | ± 3%<br>± 15%                    | 66             | +60        |
| 47254     | 12<br>12                           | 165 (300max)<br>165 max         | 4                       | ± 5%<br>± 15%                    | 72             | +60        |
| 47255     | 15<br>15                           | 135 (200max)<br>135 max         | 4                       | ± 5%<br>± 15%                    | 73             | +60        |
| 47257     | 5<br>12                            | 400 (600max)<br>170 max         | 4                       | ± 3%<br>± 15%                    | 68             | +60        |
| 47258     | 18<br>8                            | 150 (200max)<br>150 max         | 4                       | ± 5%<br>± 15%                    | 72             | +60        |
|           |                                    |                                 |                         |                                  |                |            |
|           |                                    |                                 |                         |                                  |                |            |

### DIMENSIONS and PINOUT

6 pins

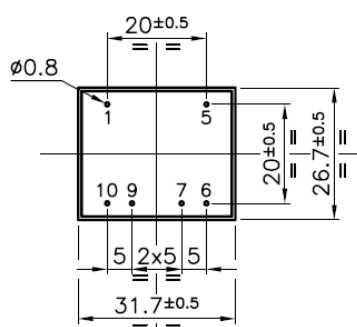
pins 1 & 5 : AC or DC Input

pin 6: DC output1 0V

pin 7: DC output1 +V

pin 9: DC output2 0V

pin 10: DC output2 +V



(view from pins side):

