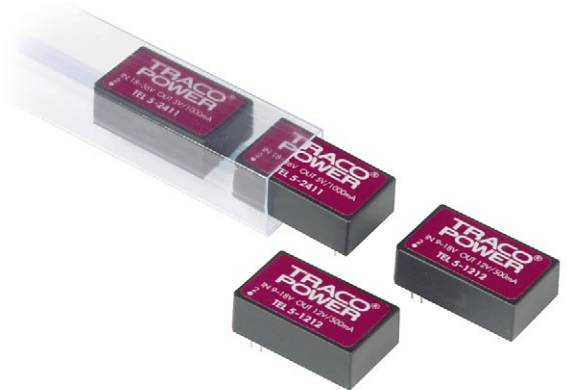


#### Features

- ◆ Wide 2:1 Input Range
- ◆ Cost efficient SMD-Design
- ◆ High Power Density
- ◆ High Efficiency up to 86%
- ◆ Regulated Outputs
- ◆ I/O-Isolation 1'500 VDC
- ◆ Indefinite Short-Circuit Protection  
24-pin DIP with Industry Standard Pinout
- ◆ High Reliability, MTBF >1 Mio. h
- ◆ Internal EMI Filter to comply with  
EN 55022, Class A (optional)
- ◆ 3 Year Product Warranty



The TEL 5 Series is a range of DC/DC-converter modules with wide input range of 2:1. State of the art SMD-technology guarantees a product with very high reliability and excellent cost /performance ratio. High efficiency allows an operating temperature range of -25°C to +71°C without derating. This product series provides an economical solution for many cost critical applications in industrial and consumer electronics.

#### Models

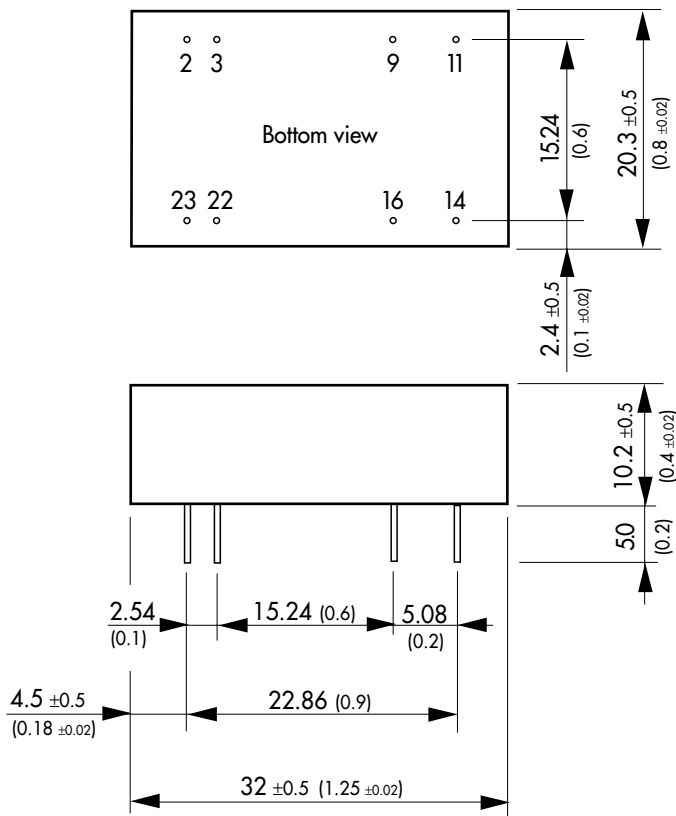
| Ordercode  | Input voltage range | Output voltage | Output current max. | Efficiency typ. |
|------------|---------------------|----------------|---------------------|-----------------|
| TEL 5-1210 | 9 – 18 VDC          | 3.3 VDC        | 1200 mA             | 77 %            |
| TEL 5-1211 |                     | 5 VDC          | 1000 mA             | 81 %            |
| TEL 5-1212 |                     | 12 VDC         | 500 mA              | 84 %            |
| TEL 5-1222 |                     | ± 12 VDC       | ± 250 mA            | 84 %            |
| TEL 5-1223 |                     | ± 15 VDC       | ± 200 mA            | 84 %            |
| TEL 5-2410 | 18 – 36 VDC         | 3.3 VDC        | 1200 mA             | 79 %            |
| TEL 5-2411 |                     | 5 VDC          | 1000 mA             | 83 %            |
| TEL 5-2412 |                     | 12 VDC         | 500 mA              | 86 %            |
| TEL 5-2422 |                     | ± 12 VDC       | ± 250 mA            | 86 %            |
| TEL 5-2423 |                     | ± 15 VDC       | ± 200 mA            | 86 %            |



**Physical Specifications**

|                       |  |
|-----------------------|--|
| Case material         | non conductive plastic<br>(UL 94V-0 rated) |
| Weight                | 17 g (0.60 oz)                             |
| Soldering temperature | max. 260 °C / 10 sec.                      |

**Outline Dimensions mm (inches)**



| Pin-Out |            |            |
|---------|------------|------------|
| Pin     | Single     | Dual       |
| 2       | -Vin (GND) | -Vin (GND) |
| 3       | -Vin (GND) | -Vin (GND) |
| 9       | No pin     | Common     |
| 11      | No con.    | -Vout      |
| 14      | +Vout      | +Vout      |
| 16      | -Vout      | Common     |
| 22      | +Vin (Vcc) | +Vin (Vcc) |
| 23      | +Vin (Vcc) | +Vin (Vcc) |

Pin diameter  $\varnothing 0.5 \pm 0.05$  (0.02 ±0.002)  
Tolerances  $\pm 0.5$  (0.02)

Specifications can be changed without notice