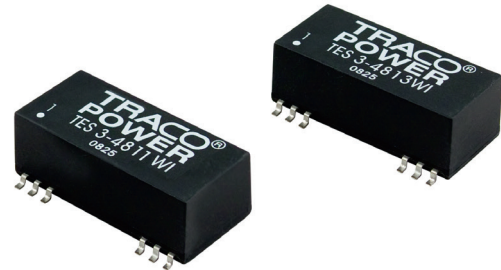


### Features

- ◆ Compact SMD package
- ◆ 33.4 x 18.8 mm footprint
- ◆ Ultra-wide 4:1 input voltage range
- ◆ I/O isolation 1500 VDC
- ◆ Operating temp. range  $-40^{\circ}\text{C}$  to  $+71^{\circ}\text{C}$
- ◆ Short circuit protection
- ◆ Input filter to meet EN 55022, class A
- ◆ Remote On/Off
- ◆ High accuracy of pin co-planarity
- ◆ Qualified for leadfree reflow solder process according IPC/JEDEC J-STD-020D
- ◆ Available in tape & reel package
- ◆ 3-year product warranty



The TES-3WI series is a family of high performance 3W dc/dc-converter modules in a low profile SMD package with compact dimensions. The 14 modules feature ultra-wide 4:1 input ranges with tightly regulated output voltage. High efficiency allows an operating temperature range of  $-40^{\circ}\text{C}$  to  $+71^{\circ}\text{C}$  at full load.

Further features are built-in EMI-filter to meet EN 55022 class A without external components and remote On/Off control. The products comply with IPC J-STD-020D and are qualified for high temperature lead-free reflow solder process.

### Models

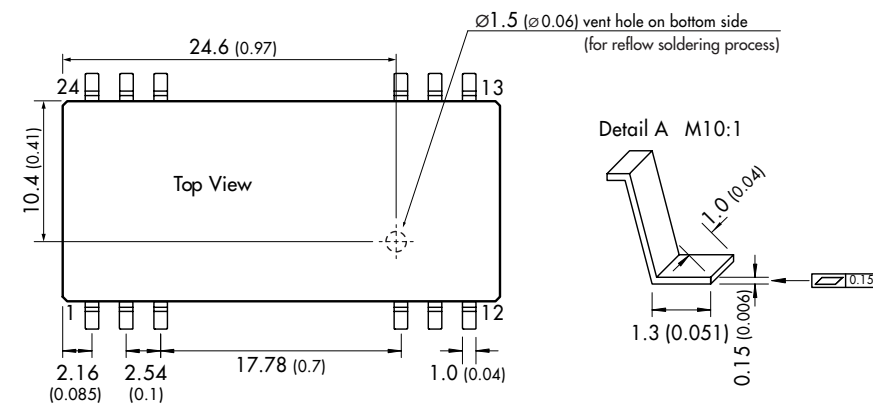
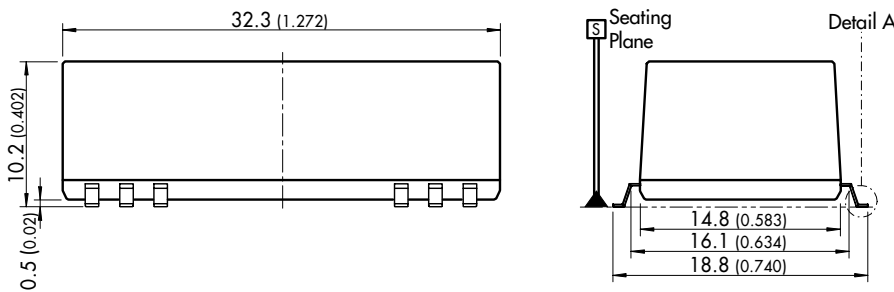
Ordercode	Input voltage	Output voltage	Output current max.	Efficiency typ.
TES 3-2410WI	9 – 36 VDC (nominal 24 VDC)	3.3 VDC	750 mA	75 %
TES 3-2411WI		5 VDC	600 mA	79 %
TES 3-2412WI		12 VDC	250 mA	81 %
TES 3-2413WI		15 VDC	200 mA	81 %
TES 3-2421WI		$\pm 5$ VDC	$\pm 300$ mA	78 %
TES 3-2422WI		$\pm 12$ VDC	$\pm 125$ mA	81 %
TES 3-2423WI		$\pm 15$ VDC	$\pm 100$ mA	81 %
TES 3-4810WI	18 – 75 VDC (nominal 48 VDC)	3.3 VDC	750 mA	76 %
TES 3-4811WI		5 VDC	600 mA	80 %
TES 3-4812WI		12 VDC	250 mA	83 %
TES 3-4813WI		15 VDC	200 mA	83 %
TES 3-4821WI		$\pm 5$ VDC	$\pm 300$ mA	80 %
TES 3-4822WI		$\pm 12$ VDC	$\pm 125$ mA	83 %
TES 3-4823WI		$\pm 15$ VDC	$\pm 100$ mA	83 %



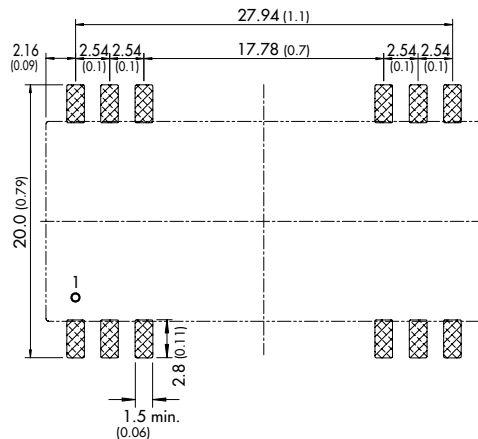
**Physical Specifications**

Casing material	non conductive plastic (UL 94V-0 rated)
Package weight	8.8 g (0.31oz)
Lead-free reflow solder process	as per J-STD-020D.1 (to find at: <a href="http://www.jedec.org">www.jedec.org</a> - free registration required)
Moisture sensitivity level (MSL)	level 2 as per J-STD-033B.1 (to find at: <a href="http://www.jedec.org">www.jedec.org</a> - free registration required)
Washing process	not recommended. Product non-hermetical.

**Outline Dimensions**



Solder Pad Dimension



Pin-Out		
Pin	Single	Dual
1	-Vin (GND)	-Vin (GND)
2	-Vin (GND)	-Vin (GND)
3	Remote On/Off	Remote On/Off
10	No con.	Common
11	No con.	No con.
12	No con.	-V Output
13	+V Output	+V Output
14	No con.	No con.
15	-V Output	Common
22	No con.	No con.
23	+Vin (Vcc)	+Vin (Vcc)
24	+Vin (Vcc)	+Vin (Vcc)

No con. = Pin to be isolated from circuitry

Dimensions in [mm], ( ) = Inch  
Tolerances ±0.25 (±0.01)  
Pin pitch tolerances ±0.13 (±0.005)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)