

Input Specifications

Input current no load / full load	5 Vin models: 30 mA / 260 mA typ. 12 Vin models: 15 mA / 110 mA typ. 24 Vin models: 8 mA / 55 mA typ.
Surge voltage (1 sec. max.)	5 Vin models: 9 V max. 12 Vin models: 18 V max. 24 Vin models: 30 V max.
Reflected input ripple current	can be reduced by ext. 1–2.2 µF polyester film capacitor
Input filter	internal capacitors

Output Specifications

Voltage set accuracy	±3 %
Voltage balance (dual output models)	±1 % max.
Regulation	– Input variation 1.2 % / 1 % change Vin – Load variation 20 – 100 % 10 % max.
Ripple and noise (20 MHz Bandwidth)	120 mVpk-pk max.
Temperature coefficient	±0.02 %/°C
Short circuit protection	limited 1 sec. max.
Capacitive load	single output models: 22 µF max. dual output models: 10 µF max.

General Specifications

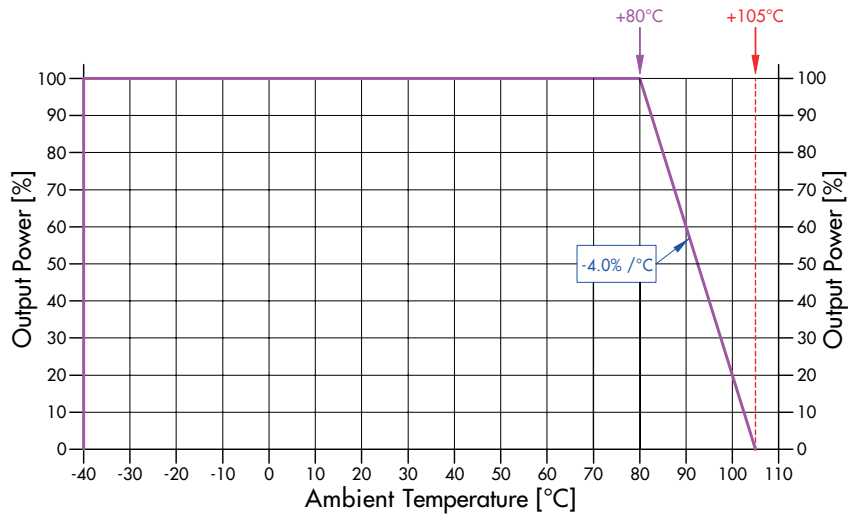
Temperature ranges	– Operating (see also enclosed derating curve) – Case temperature – Storage	–40°C to +85°C (no derating) +105°C max. –55°C to +125°C
Humidity (non condensing)		95 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F, at+25°C, ground benign)		>2'000'000 h
Isolation voltage (60 sec.)	– Input/Output	1'000 VDC
Isolation capacity	– Input/Output	40 pF typ.
Isolation resistance	– Input/Output	>1'000 Mohm
Switching frequency		100 kHz typ. (frequency modulation)
Frequency change over line and load		±30 %
Environmental compliance	– Reach – RoHS	www.tracopower.com/products/reach-declaration.pdf RoHS directive 2011/65/EU

Physical Specifications

Casing material		epoxy molding compound (flammability to UL 94V-0 rated)
Package weight	single output models: dual output models:	1.5 g (0.053 oz), 1.8 g (0.064 oz) for 24 Vin 1.8 g (0.064 oz), 2.2 g (0.078 oz) for 24 Vin
Moisture sensitivity		level 3
Reflow soldering profile (IPC/JEDEC J-STD-020D)		peak temp. 245°C (10 sec. max.) 217°C for 90 sec. max. Convection reflow solder process is recommended
Packaging		www.tracopower.com/overview/tsm

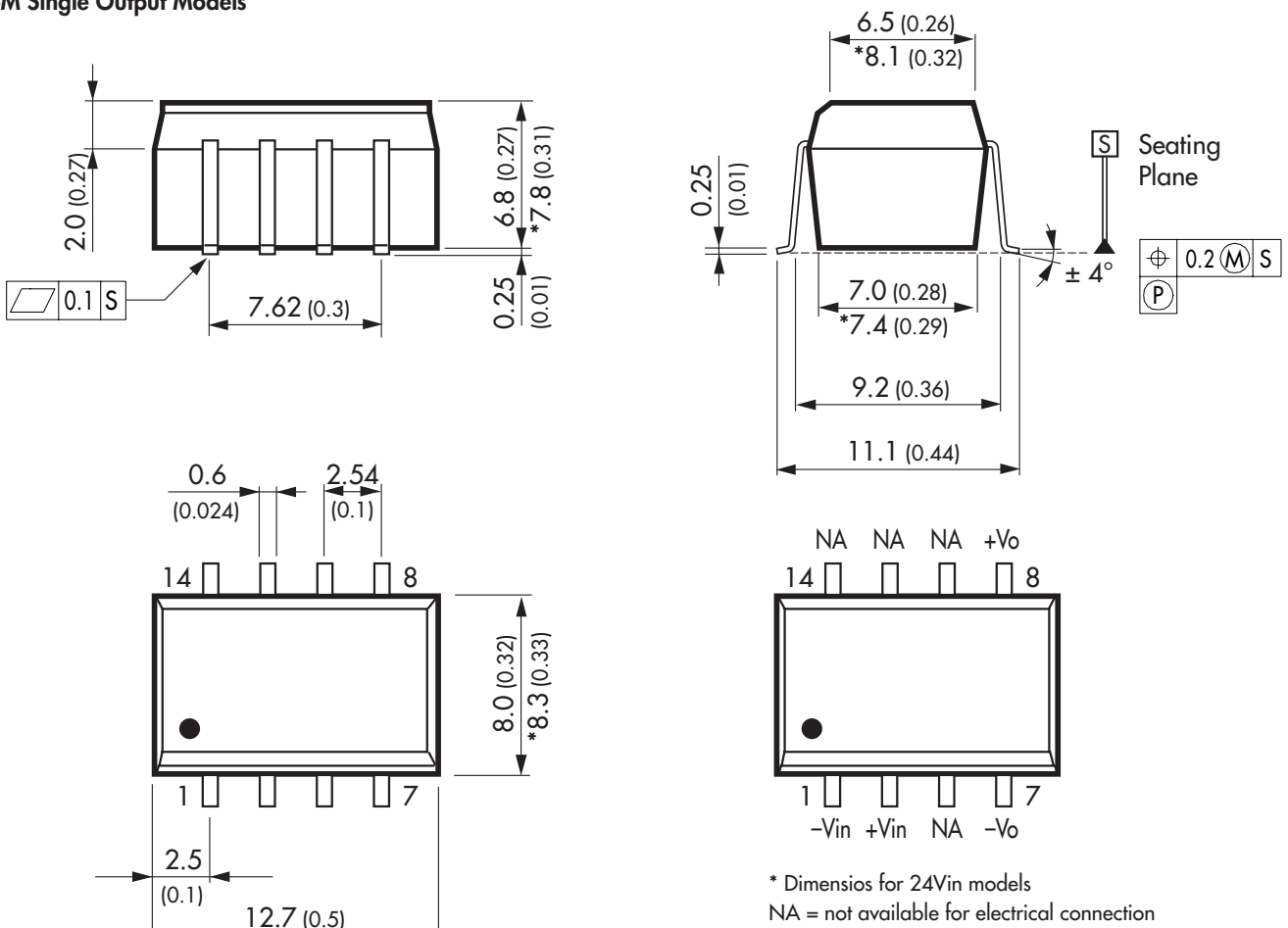
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Derating all TSM Models



Outline Dimensions

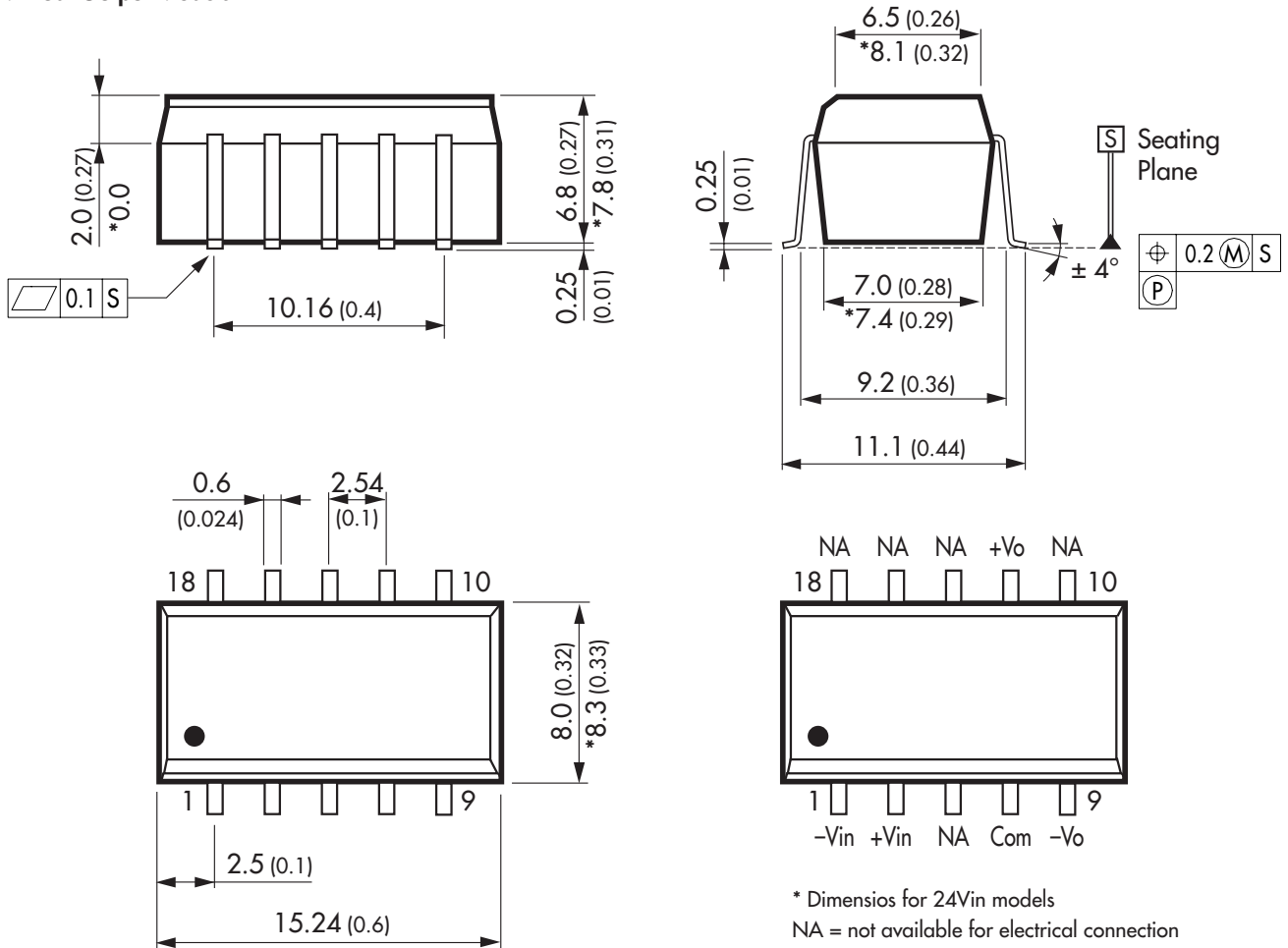
TSM Single Output Models



Dimensions in [mm], () = Inch
 Pin pitch tolerances: ±0.13 (±0.0051)
 Other tolerances: ±0.25 (±0.01)

Outline Dimensions

TSM Dual Output Models

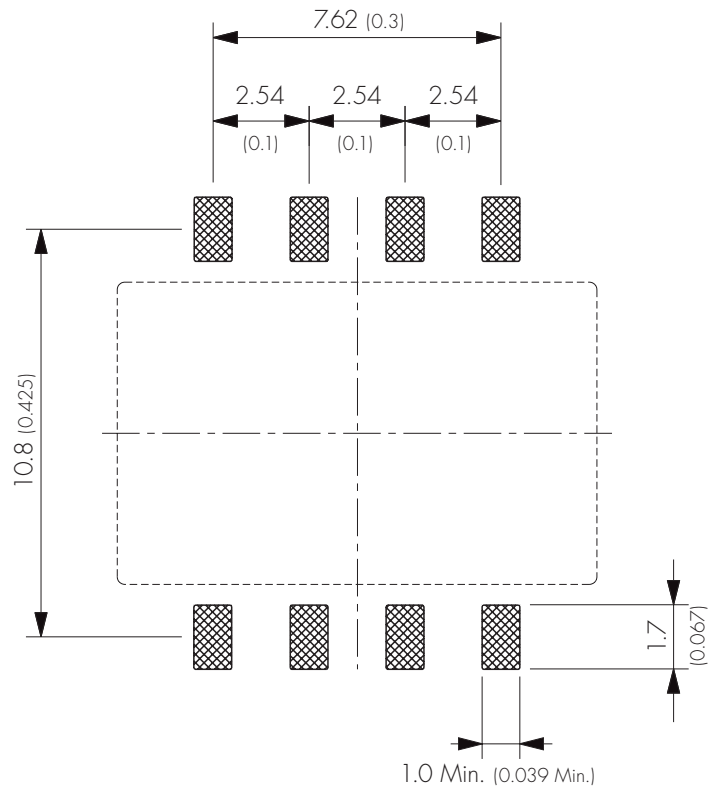


* Dimensios for 24V_{in} models
NA = not available for electrical connection

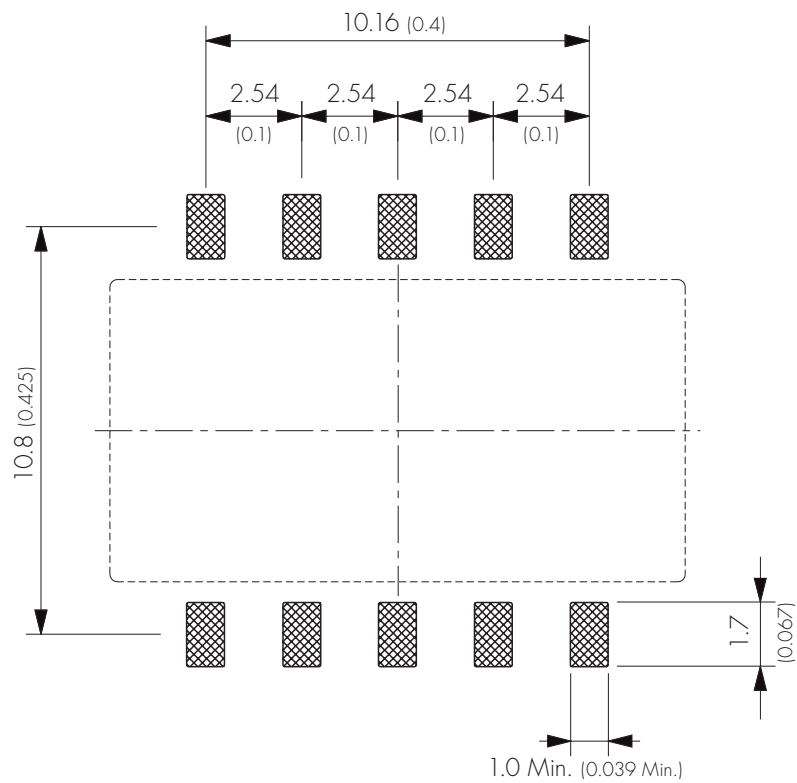
Dimensions in [mm], () = Inch
Pin pitch tolerances: ±0.13 (±0.0051)
Other tolerances: ±0.25 (±0.01)

Solder Pad Dimensions mm (inches)

TSM Single Output Models



TSM Dual Output Models



Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com

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