SMT10E Series
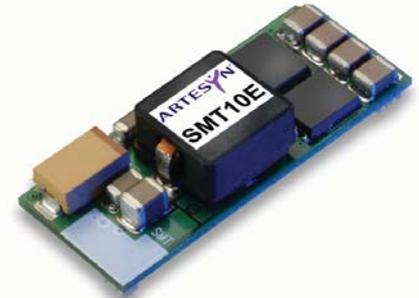## 12Vin single output

DC/DC CONVERTERS	E Class Non-isolated	1

NEW Product

- **10A Current rating**
- **Input voltage range: 10V - 14V**
- **Output voltage range: 0.8V - 3.63V**
- **Ultra high efficiency: 94% @ 12Vin and 3.3Vout**
- **Extremely low internal power dissipation**
- **Minimal thermal design concerns**
- **Designed in reliability: MTBF of 6,920,000 hours per Telcordia SR-332**
- **Ideal solution where board space is at a premium or tighter card pitch is required**
- **Industry standard surface-mount footprint**

The SMT10E series are non-isolated DC/DC converters packaged in a surface-mount footprint giving designers a cost effective solution for conversion from a 12V source. The SMT10E has a wide input range (10V to 14V) and offers a wide 0.8V to 3.63V output voltage range with a 10A load, which allows for maximum design flexibility and a pathway for future upgrades. The SMT10E is designed for applications that include distributed power, workstations, optical network and wireless applications. Implemented using state of the art surface-mount technology and automated manufacturing techniques, the SMT10E offers compact size and efficiencies of up to 94%.

c**RU**us **TÜV**

2 YEAR WARRANTY

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

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OUTPUT SPECIFICATIONS

Voltage adjustability		0.8V to 3.63V
Setpoint accuracy		±0.4% typ.
Line regulation		±0.2% typ.
Load regulation		±1.0%typ.
Total error band		±3.0% typ.
Minimum load		0A
Overshoot/undershoot		None
Ripple and noise	5Hz to 20MHz	60mV pk-pk 25mV rms
Temperature co-efficient		±0.01%/°C
Transient response		100mV max. deviation 100µs recovery to within ±1.0%
Remote sense		10% Vo compensation

INPUT SPECIFICATIONS

Input voltage range		10 to 14VDC
Input current	No load (max.)	100mA
Input current (max.)		3A max. @ Io max. and Vout = 3.3V
Input reflected ripple		100mA rms
Remote ON/OFF		(See Note 1)
Start-up time		20ms

EMC CHARACTERISTICS

Electrostatic discharge	EN61000-4-2, IEC801-2
Conducted immunity	EN61000-4-6
Radiated immunity	EN61000-4-3

GENERAL SPECIFICATIONS

Efficiency		94%
Insulation voltage		Non-isolated
Switching frequency	Fixed	200kHz typ.
Approvals and standards		EN60950 UL/cUL60950
Material flammability		UL94V-0
Dimensions	(LxWxH)	33.02 x 13.46 x 8.21mm 1.3 x 0.53 x 0.323 inches
Weight		6.3g (0.22oz)
Coplanarity		100µm
MTBF	Telcordia SR-332	6,920,000 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 2)	Operating ambient, temperature	-40°C to +85°C
	Non-operating	-40°C to +125°C

PROTECTION

Short-circuit protection	Continuous
Thermal protection	Automatic recovery

International Safety Standard Approvals

c**RU**us — UL/cUL CAN/CSA 22.2 No. E174104
UL 60950 file No. E174104

TÜV — TÜV Product Service (EN60950) Certificate No. B02 12 38272 035
CB report and certificate to IEC60950

SMT10E Series
12Vin single output

ARTESYN
T E C H N O L O G I E S ®

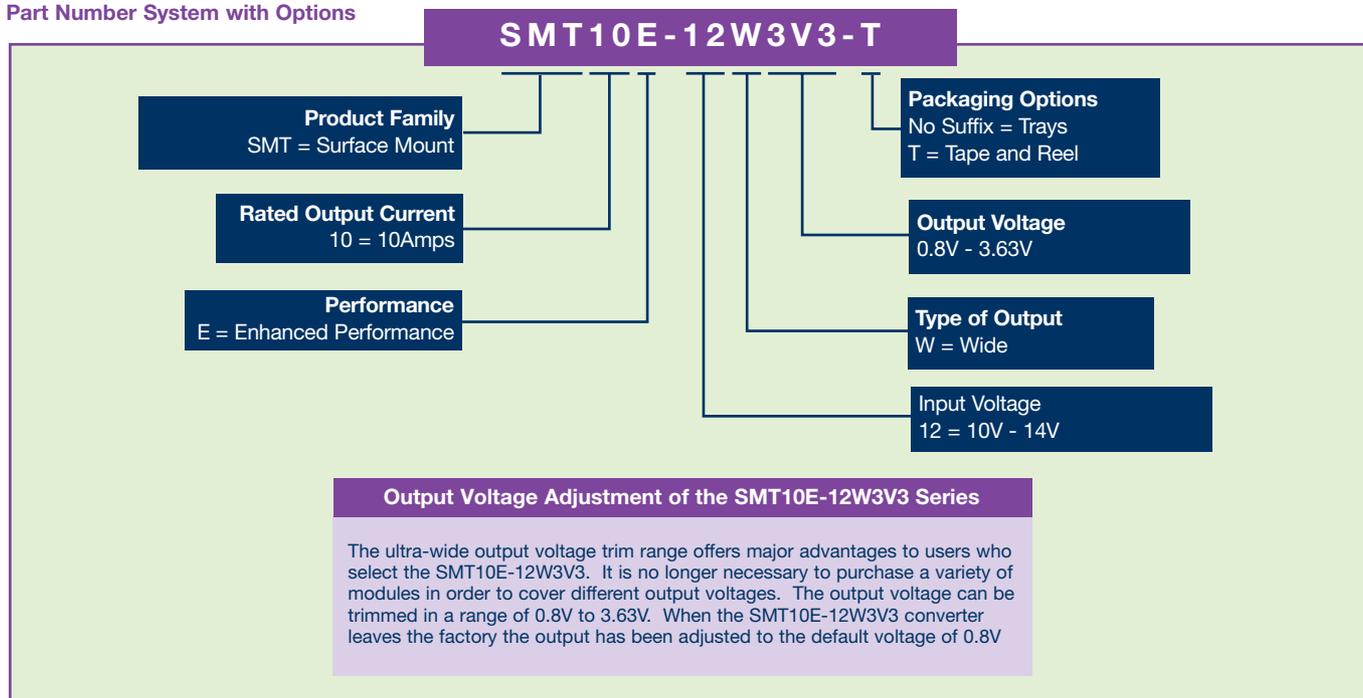| DC/DC CONVERTERS	E Class Non-isolated	2

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

NEW Product

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER
						LINE	LOAD	
33W	10V - 14V	0.8V - 3.63V	0A	10A	94%	±0.2%	±1.0%	SMT10E-12W3V3

Part Number System with Options

S M T 1 0 E - 1 2 W 3 V 3 - T

Product Family
SMT = Surface Mount

Rated Output Current
10 = 10Amps

Performance
E = Enhanced Performance

Packaging Options
No Suffix = Trays
T = Tape and Reel

Output Voltage
0.8V - 3.63V

Type of Output
W = Wide

Input Voltage
12 = 10V - 14V

Output Voltage Adjustment of the SMT10E-12W3V3 Series

The ultra-wide output voltage trim range offers major advantages to users who select the SMT10E-12W3V3. It is no longer necessary to purchase a variety of modules in order to cover different output voltages. The output voltage can be trimmed in a range of 0.8V to 3.63V. When the SMT10E-12W3V3 converter leaves the factory the output has been adjusted to the default voltage of 0.8V

Notes

1 The SMT10E features an 'Active High' Remote ON/OFF operation. If not using the Remote ON/OFF pin, leave the pin open (the converter will be on). The Remote ON/OFF pin is referenced to ground.

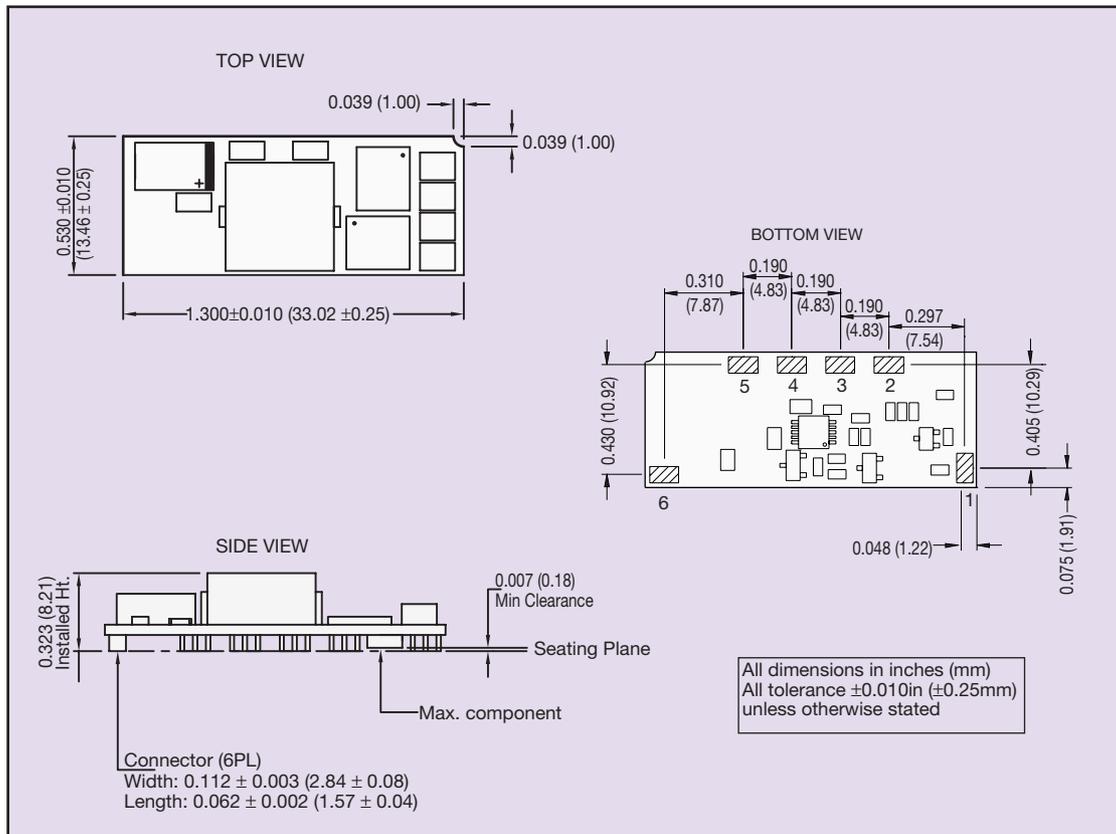The following conditions apply for the SMT10E:

Configuration	Converter Operation
Remote pin open circuit	Unit is ON
Remote pin pulled low [Von/off < 0.8V]	Unit is OFF
Remote pin pulled high [Von/off >1.6V]	Unit is ON

An 'Active Low' Remote ON/OFF version is also possible with this converter. Please consult the factory for details.

2 Full de-rating curves available in both the Long Form Data Sheet and Application Note.

DC/DC CONVERTERS	E Class Non-isolated	3

For the most current data and application support visit www.artesyn.com/powergroup/products.htm **NEW Product**

TOP VIEW

0.039 (1.00)

0.039 (1.00)

0.530 +0.010 (13.46 ± 0.25)

1.300±0.010 (33.02 ±0.25)

BOTTOM VIEW

0.310 (7.87)
0.190 (4.83)
0.190 (4.83)
0.190 (4.83)
0.297 (7.54)

0.430 (10.92)

0.405 (10.29)

5 4 3 2

6   1

0.048 (1.22)

0.075 (1.91)

SIDE VIEW

0.007 (0.18) Min Clearance

0.323 (8.21) Installed Ht.

Seating Plane

Max. component

Connector (6PL)
Width: 0.112 ± 0.003 (2.84 ± 0.08)
Length: 0.062 ± 0.002 (1.57 ± 0.04)

All dimensions in inches (mm)
All tolerance ±0.010in (±0.25mm)
unless otherwise stated

PIN CONNECTIONS	
PIN NUMBER	FUNCTION
1	Remote ON/OFF
2	Remote Sense +*
3	Trim*
4	+Vout
5	Ground
6	+Vin

*The sense function and the trim function are customer specified
options. Please consult factory for details.

Please consult our website for the following items: ✔ *Application Note* ✔ *Longform Data Sheet*   **www.artesyn.com**