SMT30C Series

12 Vin single output

ARTESYN TECHNOLOGIES

NEW Product

- **30 A current rating**
- **Input voltage range: 10.2 Vdc - 13.8 Vdc**
- **Output voltage range: 0.9 Vdc - 5.0 Vdc**
- **Industry leading value**
  - **Cost optimized design**
- **Excellent transient response**
- **Output voltage adjustability**
  - **Pathway for future upgrades**
  - **Supports silicon voltage migration**
  - **Resulting in reduced design-in and qualification time**
- **Designed in reliability: MTBF of > 4 million hours per Telcordia SR-332**
- **Available RoHS compliant**

The SMT30C series is a new high density open-frame, non-isolated converter for space sensitive applications. SMT30C has a wide input range of 10.2 Vdc to 13.8 Vdc and offers a wide 0.9 Vdc to 5.0 Vdc output voltage range with a 30 A load. An external resistor adjusts the output voltage from its pre-set value of 0.9 V to any value up to the 5 V maximum. Typical efficiency is 91%. The series offers remote ON/OFF and over-current protection as standard. With full international safety approvals including EN60950 and UI/cUL60950, the SMT30C reduces compliance costs and time to market.

2 YEAR WARRANTY

SPECIFICATIONS

All specifications are typical at nominal input Vin = 12 V, full load at 25 °C unless otherwise stated

OUTPUT SPECIFICATIONS

Voltage adjustability	(See Note 1)	0.9-5.0 Vdc
Output setpoint accuracy	1.0% trim resistors	±3%
Line regulation	Low line to high line	±0.2% max.
Load regulation	Full load to min. load	±1.0% max.
Min/max load		0 A/30 A
Overshoot	At turn-on	1.0% max.
Undershoot	At turn-off	100 mV max.
Ripple and noise 5 Hz to 20 MHz	(See Note 2)	50 mV pk-pk 15 mV rms
Transient response (See Note 3)		75 mV max. deviation 150 µs recovery to within regulation band
Current share	Full load	±10%

INPUT SPECIFICATIONS

Input voltage range	Nominal 12 V	10.2-13.8 Vdc
Input current	Minimum load Remote OFF	230 mA 30 mA
Input current (max.)	(See Note 4)	13.8 A max. @ Io max. and Vin = 10.8 V
Input reflected ripple	(See Note 2)	150 mA (pk-pk)
Remote ON/OFF Logic compatibility ON OFF		 Positive logic >2.4 Vdc <0.8 Vdc
Start-up time (See Note 5)	Power-up Remote ON/OFF	<30 ms <30 ms

INPUT SPECIFICATIONS (CONTD.)

Turn ON threshold	9.0 Vdc typ.
Turn OFF threshold	7.6 Vdc typ.

GENERAL SPECIFICATIONS

Efficiency		91% typ.
Switching frequency	Fixed	300 kHz typ.
Approvals and standards	(See Note 7)	TÜV Product Services IEC60950, UL/cUL60950
Material flammability		UL94V-0
Weight		28.3 g (1 oz)
Coplanarity		150 µm
MTBF	Telcordia SR-332	4,456,655 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 8)	Operating ambient, temperature Non-operating	0 °C to +80 °C -40 °C to +125 °C

PROTECTION

Short-circuit	Foldback, non-latching
Over-temperature	Hiccup, non-latching

RECOMMENDED SYSTEM CAPACITANCE

Input capacitance	(See Note 9)	270 µF/20 mΩ ESR max.
Output capacitance	(See Note 9)	2 x 680 µF/10 mΩ ESR max.

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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 (11,12)
						LINE	LOAD	
150 W	10.2-13.8 Vdc	0.9-5.0 Vdc	0 A	30 A	91%	±0.2%	±1.0%	SMT30C-12SADJJ

Part Number System with Options

SMT30C-12SADJJ

- **Product Family**: SMT = Surface Mount
- **Rated Output Current**: 30 = 30 A
- **Performance**: C = Cost Optimized
- **Packaging Options (11)**: J = Pb-free (RoHS 6/6 compliant)
- **Number of Outputs**: SADJ = Single Adjustable Output
- **Input Voltage**: 12 = 10.2 Vdc to 13.8 Vdc

Output Voltage Adjustment of the SMT30C Series

The ultra-wide output voltage trim range offers major advantages to users who select the SMT30C. 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 0.9 Vdc to 5.0 Vdc. When the SMT30C converter leaves the factory the output has been adjusted to the default voltage of 0.9 V.

Notes

1 Uses external resistor from TRIM to ground. See Application Note 170 for details.
2 Measured with external filter. See Application Note 170 for details.
3 di/dt = 10 A/µs, Vin = Nom, Tc = 25 °C, load change = 0.50 Io max. to 0.75 Io max, and vice versa.
4 External input fusing recommended.
5 Power up is the time from application of dc input to POWER GOOD high. Remote ON/OFF asserted high to POWER GOOD high.
6 Signal line assumed <3 m in length.
7 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
8 See Application Note 170 for operation above 50 °C.
9 See Application Note 170 for more details.
10 For redundant current sharing applications that use ORing diodes to separate the outputs, please add the suffix '-S' to the part number, e.g. SMT30C-12SADJ-SJ. Please refer to Application Note 170 for further details.
11 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
12 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at http://www.artesyn.com/powergroup/products.htm to find a suitable alternative.

International Safety Standard Approvals

UL/cUL CAN/CSA 22.2 No. 60950
UL 60950 File No. E139421

TÜV Product Service (EN60950:2000)
Certificate No. B 04 08 19870 228
CB report and certificate to IEC60950-US/6415C/UL

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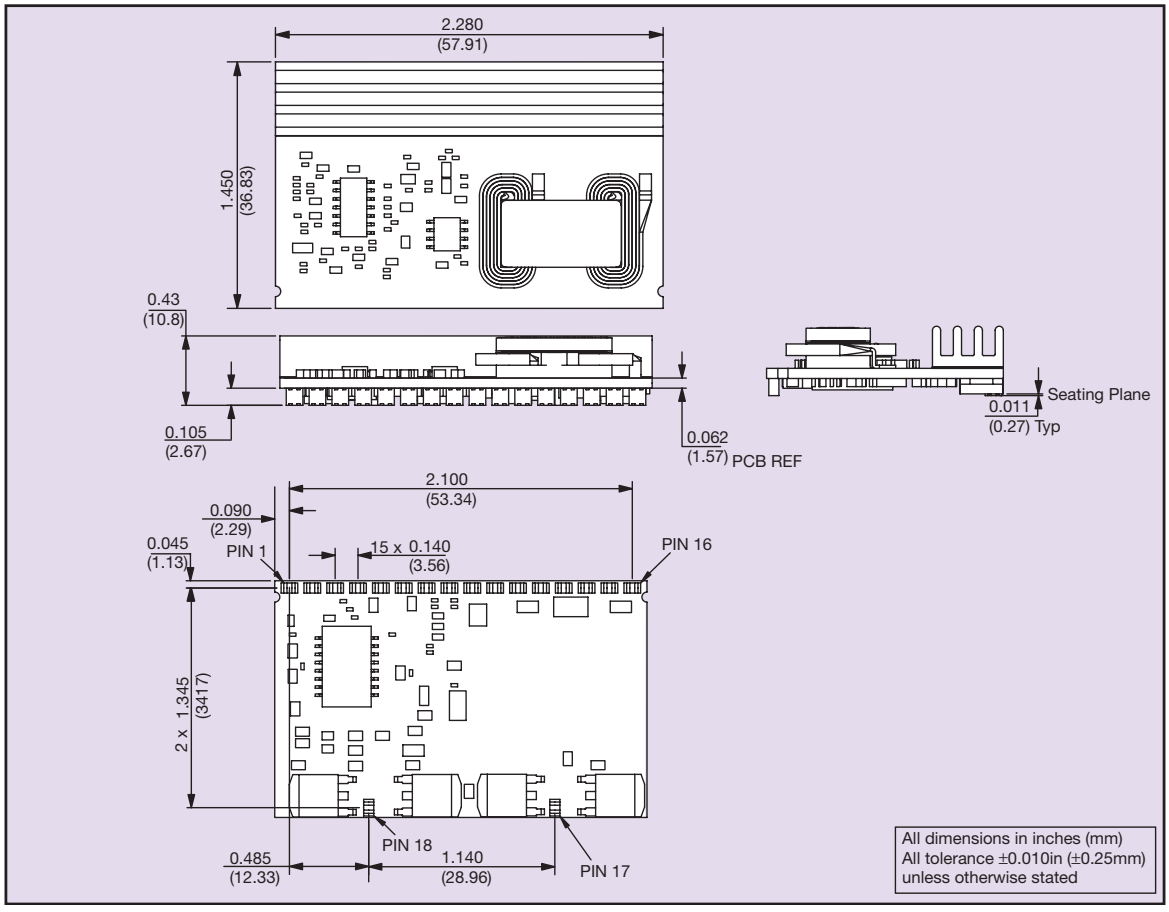
NEW Product



PIN CONNECTIONS			
PIN NO.	**FUNCTION**	**PIN NO.**	**FUNCTION**
1	Current Share	10	Vin
2	Trim	11	Vin
3	GND	12	Vout
4	GND	13	Vout
5	GND	14	GND
6	Sense-	15	Vout
7	Sense+	16	GND
8	Remote ON/OFF	17	Mechanical Support
9	Power Good	18	Mechanical Support

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http://moschip.ru/get-element

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