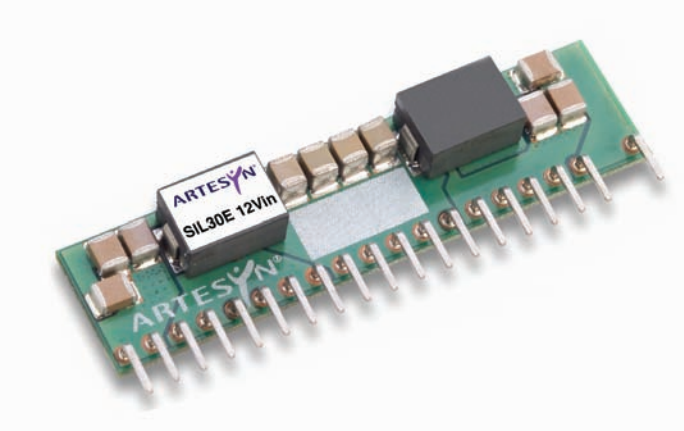
SIL30E Series

12 Vin
Single Output

Total Power: 99 W
Input Voltage: 8 - 14 VDC
# of Outputs: Single



Special Features

- 30 A current rating
- Input voltage range: 8 Vdc to 14 Vdc
- Output voltage range: 0.8 Vdc to 3.63 Vdc
- Ultra high efficiency: 93% @ 12 Vin and 3.3 Vout
- Extremely low internal power dissipation
- Minimal thermal design concerns
- Designed in reliability: MTBF of 9,200,000 hours per Telcordia SR-332
- Ideal solution where board space is at a premium or tighter card pitch is required
- Available RoHS compliant
- 2 Year Warranty

Safety

- UL/cUL : 60950-1 File No. 186249-A16-UL-1
- TÜV Product Service (EN60950) Certificate No. B 07 07 13890 259
- CB report and certificate to IEC60950

Electrical Specifications

Output		
Voltage adjustability:		0.8 - 3.63 Vdc
Setpoint accuracy:		± 1.3% typ
Line regulation:		± 0.2% typ
Load regulation:		± 1.5% typ
Total error band:		± 3.0% typ
Minumum load:		0 A
Overshoot/undershoot:		None
Ripple and noise:	5 Hz to 20 MHz	50 mV pk-pk 25 mV rms
Temperature coefficient:		±0.01%/°C
Transient response:	Vout = 1.5 V	50% to 75% load step
Slew rate:	= 0.5 A/µs	3% max deviation 10 µs recovery to within ± 1%
Remote sense:		10% Vo compensation
Input		
Input voltage range:		8 - 14 Vdc
Input current:	No load (max.)	250 mA
Input current (max.):		9.2 A max. @ lo max. and Vout = 3.3 V
Input reflected ripple:		220 mA rms
Remote ON/OFF:		(See Note 1)
Start-up time:		20 ms

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Electrical Specifications

All specifications are typical at 12 Vin and 1.5 Vout, full load at 25 °C unless otherwise stated.
Cout = 100 µF

EMC Characteristics	
Electrostatic discharge:	EN61000-4-2, IBC801-2
Conducted immunity:	EN61000-4-6
Radiated immunity:	EN61000-4-3

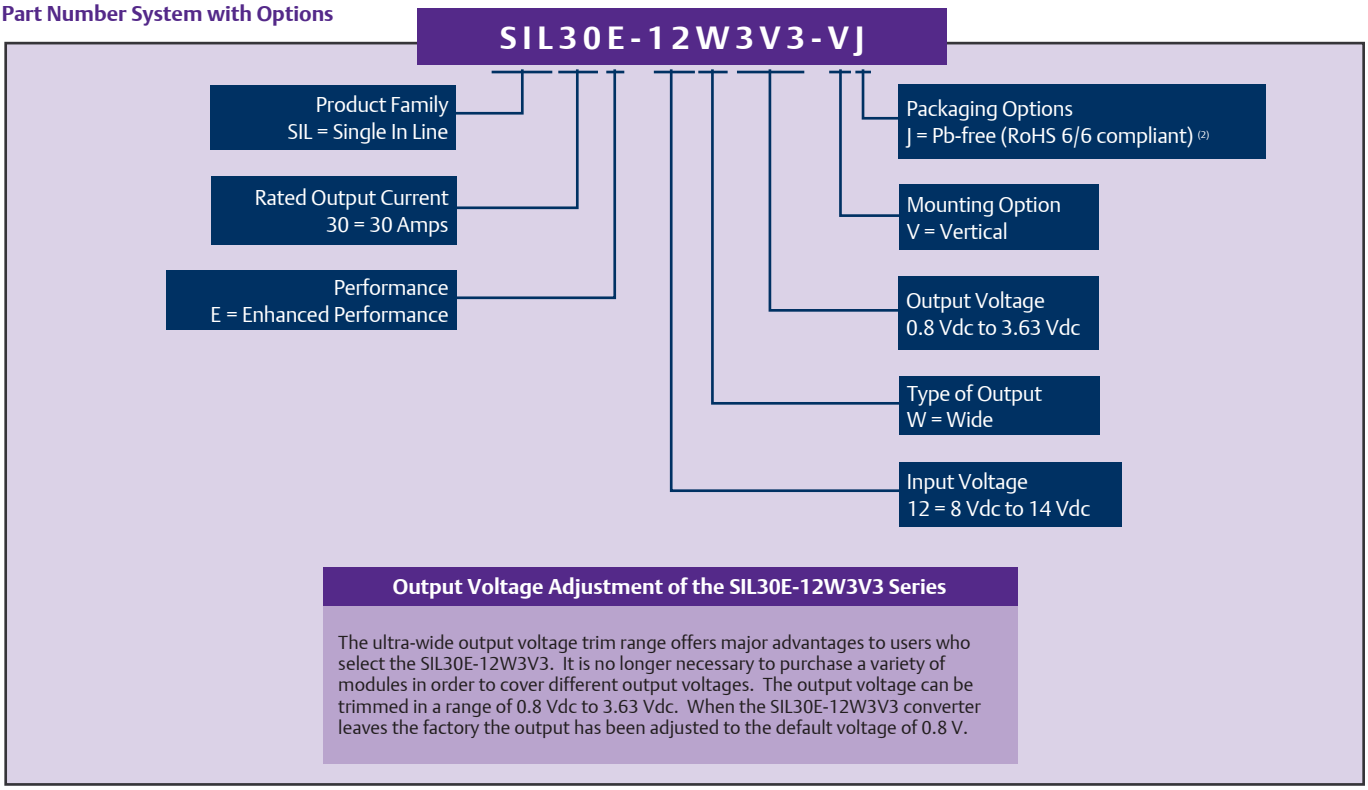
General Specifications		
Efficiency:	@12 Vin, 3.3 Vout	93% typ
Insulation voltage:		Non-isolated
Switching frequency:	Fixed	1.3 MHz typ
Approvals and standards:		EN60950-1 UL/cUL60950-1
Material flammability:		UL94V-0
Dimensions:	(L x W x H)	50.84 x 7.80 x 12.70 mm 2.000 x 0.307 x 0.500 inches
Pin length:		0.140 in (3.56 mm)
Weight:		7.0 g (0.25 oz)
MTBF (@40 ºC; 50% stress; ground benign):	Telcordia SR-332	9,200,000 hours
Environmental Specifications		
Thermal performance:	Operating ambient	-40 °C to +85 °C
	Non-operating	-40 °C to +125 °C

Protection	
Short-circuit:	Continuous
Thermal:	Automatic recovery

Ordering Information

Output Power (Max.)	Input Voltage	Output Voltage	Output Current		Efficiency (typ)	Regulation		Model Numbers [2,3]
			Min	Max		Line	Load	
99 W	8 - 14 Vdc	0.8 - 3.63 Vdc	0 A	30 A	93%	± 0.2%	± 1.5%	SIL30E-12W3V3-VJ

Part Number System with Options



Output Voltage Adjustment of the SIL30E-12W3V3 Series

The ultra-wide output voltage trim range offers major advantages to users who select the SIL30E-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 0.8 Vdc to 3.63 Vdc. When the SIL30E-12W3V3 converter leaves the factory the output has been adjusted to the default voltage of 0.8 V.

Notes

1 The SIL30E features a 'Positive Logic' 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 SIL30E:

Configuration	Converter Operation
Remote pin open circuit	Unit is ON
Remote pin pulled low [Von/off < 0.8 V]	Unit is OFF
Remote pin pulled high [Von/off >2.8 V]	Unit is ON

A 'Negative Logic' Remote ON/OFF version is also possible with this converter. Please consult the factory for details.

2 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.

3 NOTICE: Some models do not support all options. Please contact your local Emerson Network Power representative or use the on-line model number search tool at http://www.PowerConversion.com to find a suitable alternative.

Notes

A The derating curve represents the condition at which internal components are within the Artesyn derating guidelines.

B Characteristic data has been developed from actual products tested at 25 °C. This data is considered typical data for the converter.

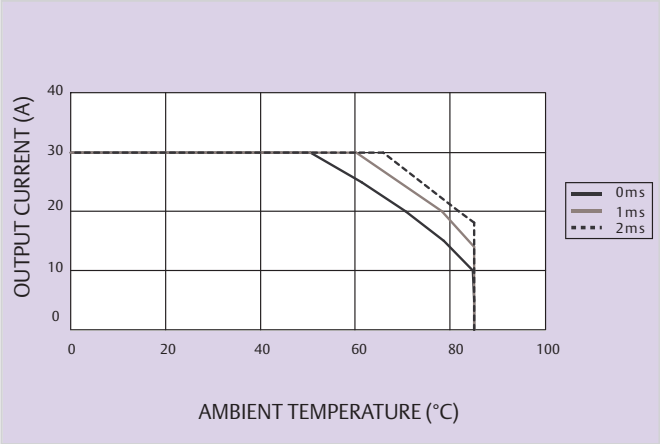


Figure 1 - Derating Curve
Vin = 12 V, Output Voltage = 1.5 V (See Note A)

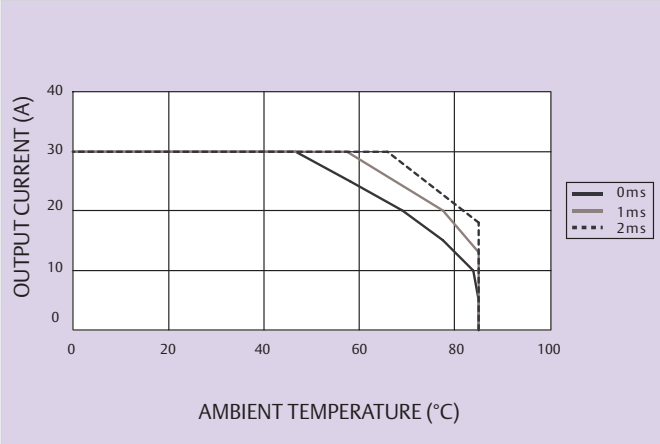


Figure 2 - Derating Curve
Vin = 12 V, Output Voltage = 1.8 V (See Note A)

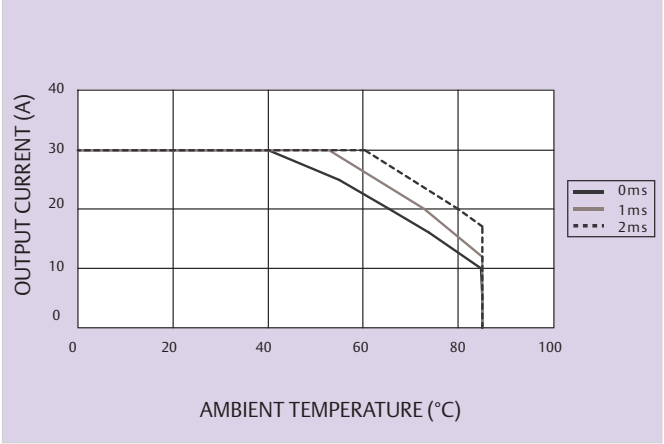


Figure 3 - Derating Curve
Vin = 12 V, Output Voltage = 2.5 V (See Note A)

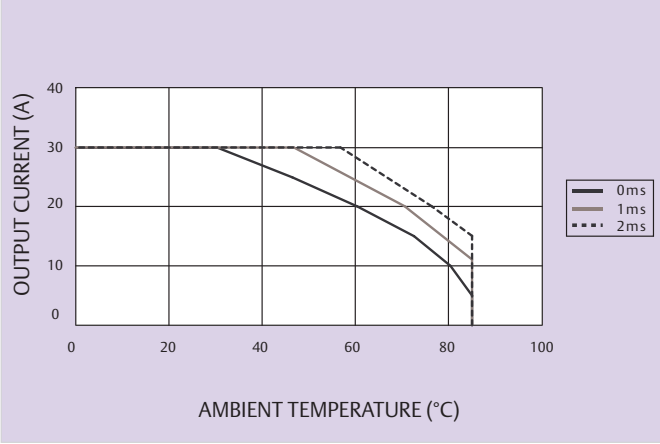


Figure 4 - Derating Curve
Vin = 12 V, Output Voltage = 3.3 V (See Note A)

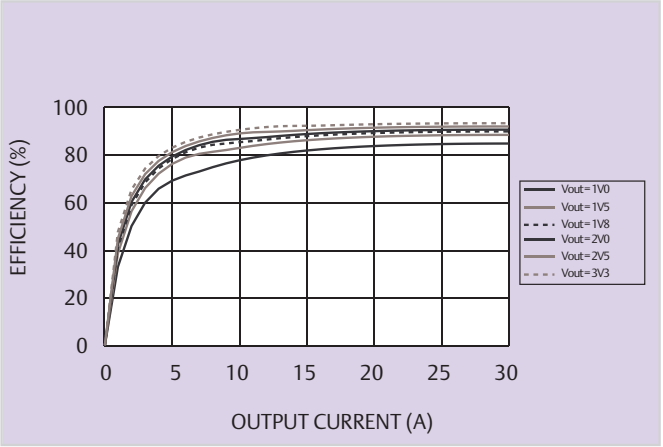


Figure 5 - Efficiency vs Load Current
Vin = 12 V (See Note B)

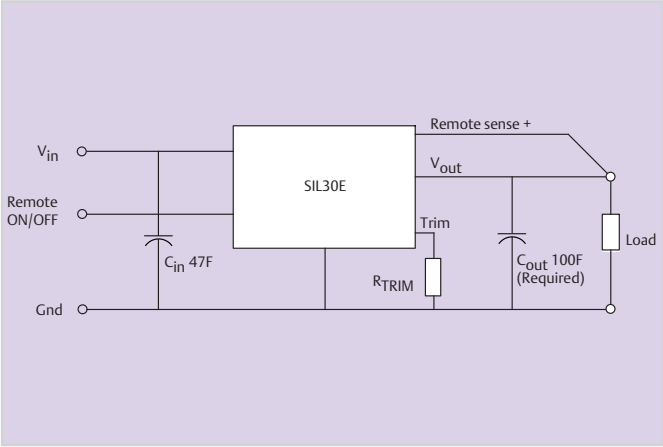
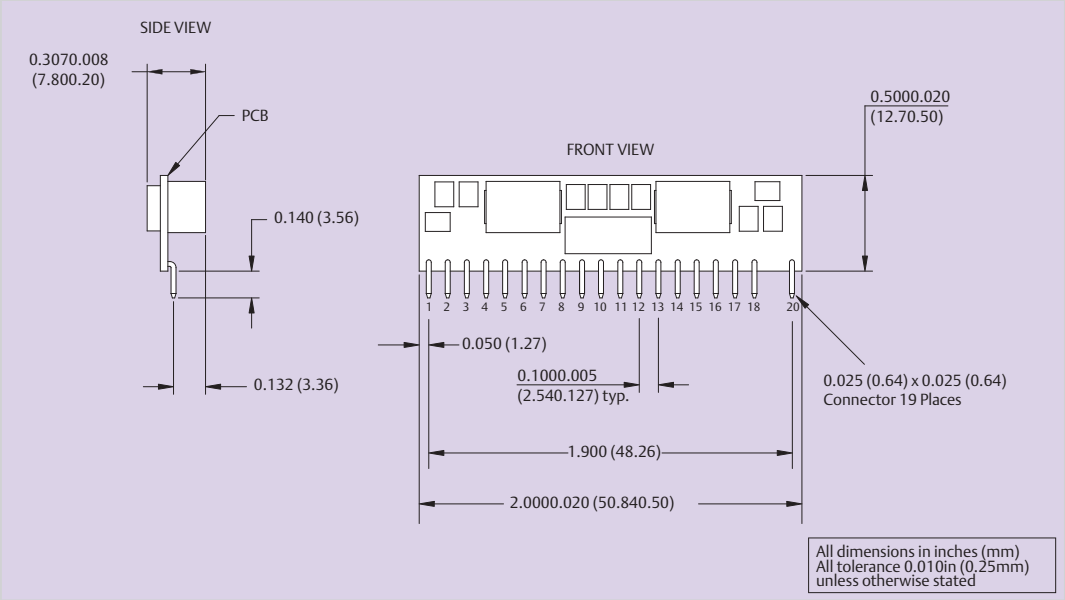


Figure 6 - Standard Application

Mechanical Drawing



Pin Connections			
Pin No.	**Function**	**Pin No.**	**Function**
1	Vin	11	Vout
2	Vin	12	Vout
3	Ground	13	Remote ON/OFF
4	Ground	14	Ground
5	Trim	15	Ground
6	Remote Sense+	16	Ground
7	Ground	17	Ground
8	Ground	18	Vin
9	Vout	19	N/C
10	Vout	20	Vin

Figure 7 - Mechanical Drawing and Pinout Table

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