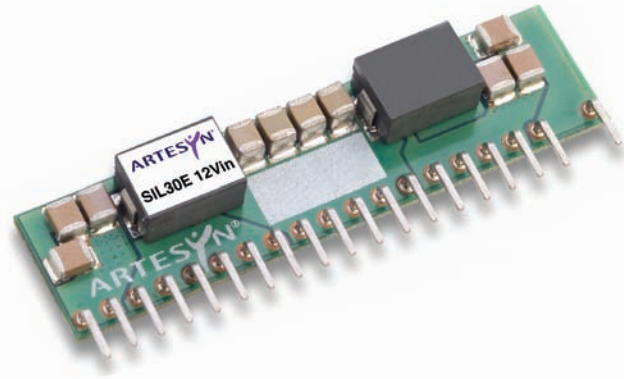


SIL30E Series

12 Vin Single Output

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



Rev.7.28.09_40
SIL30E Series
1 of 5

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
Minimum 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. @ Io max. and Vout = 3.3 V
Input reflected ripple:		220 mA rms
Remote ON/OFF:		(See Note 1)
Start-up time:		20 ms

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

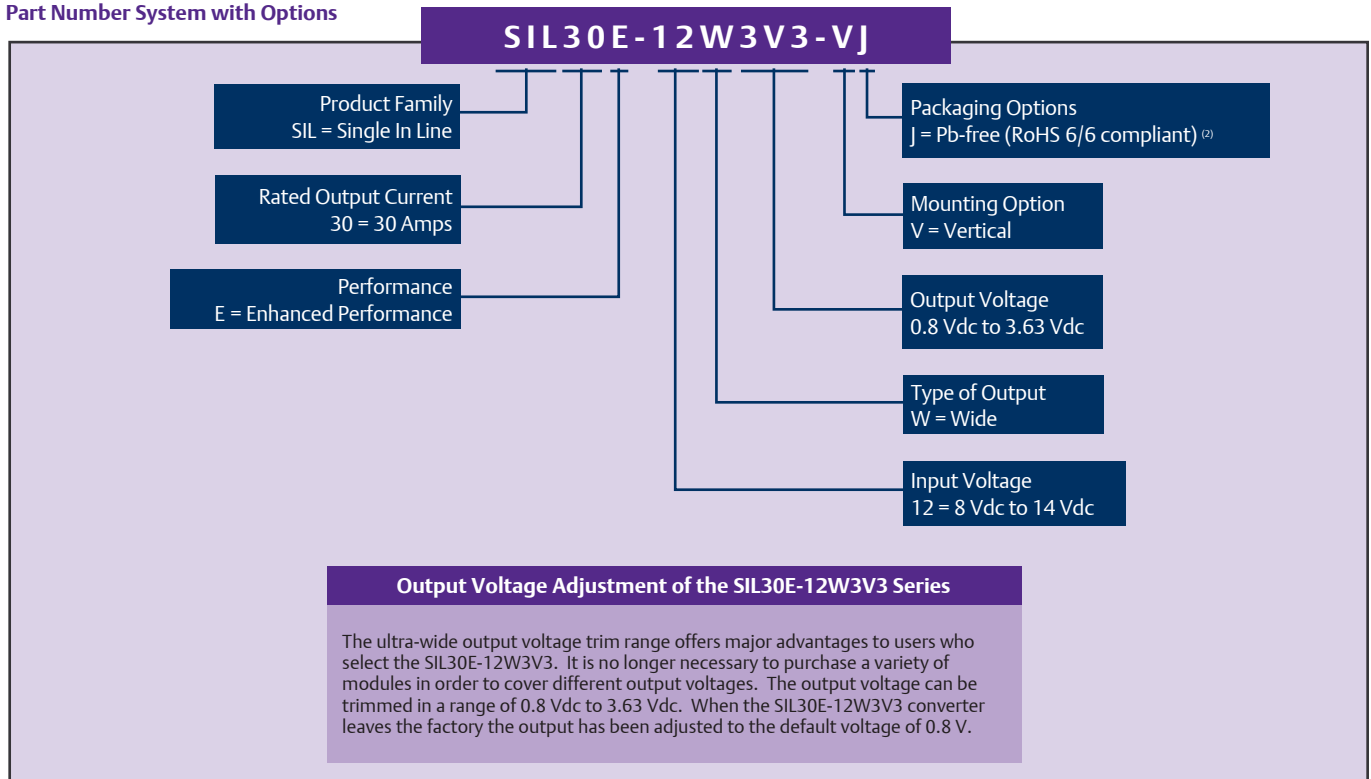
General Specifications		
Efficiency:	@12 Vin, 3.3 Vout	93% typ
Insulation voltage:		Non-isolated
Switching frequency:	Fixed	1.3 MHz typ
Approvals and standards:		EN60950-1 UL/cUL60950-1
Material flammability:		UL94V-0
Dimensions:	(L x W x H)	50.84 x 7.80 x 12.70 mm 2.000 x 0.307 x 0.500 inches
Pin length:		0.140 in (3.56 mm)
Weight:		7.0 g (0.25 oz)
MTBF (@40 °C; 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



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.

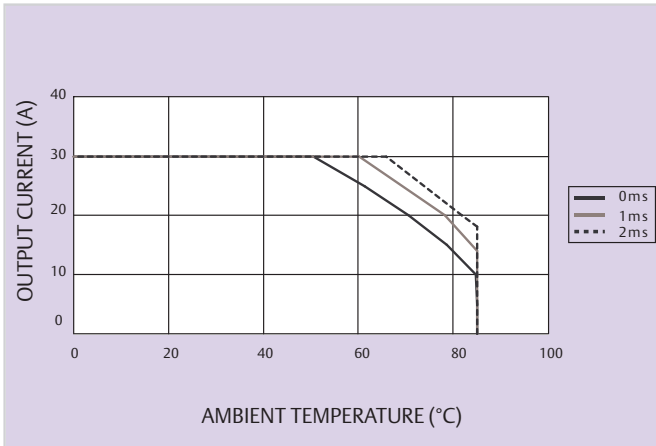


Figure 1 - Derating Curve
Vin = 12 V, Output Voltage = 1.5 V (See Note A)

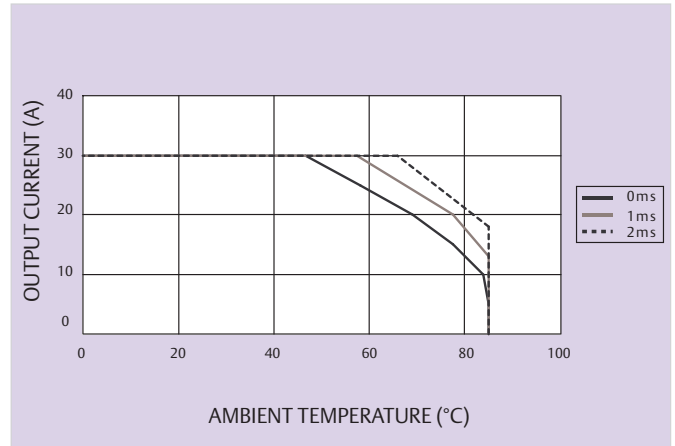


Figure 2 - Derating Curve
Vin = 12 V, Output Voltage = 1.8 V (See Note A)

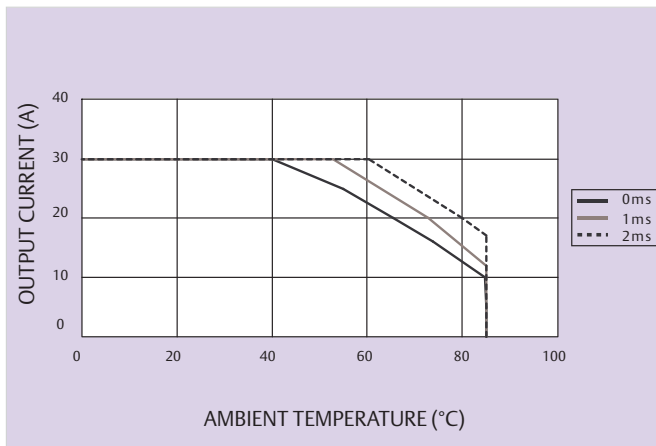


Figure 3 - Derating Curve
Vin = 12 V, Output Voltage = 2.5 V (See Note A)

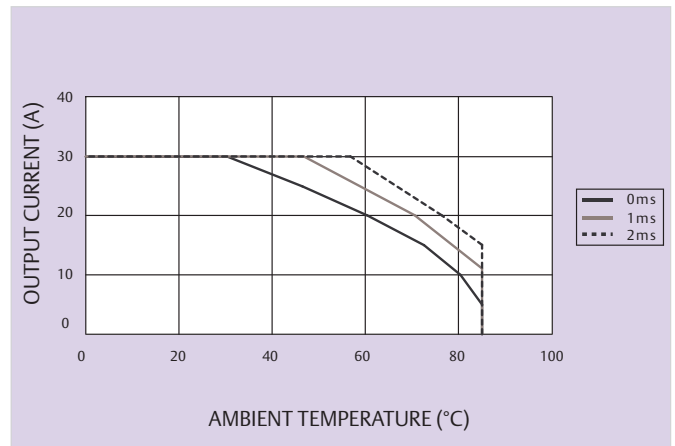


Figure 4 - Derating Curve
Vin = 12 V, Output Voltage = 3.3 V (See Note A)

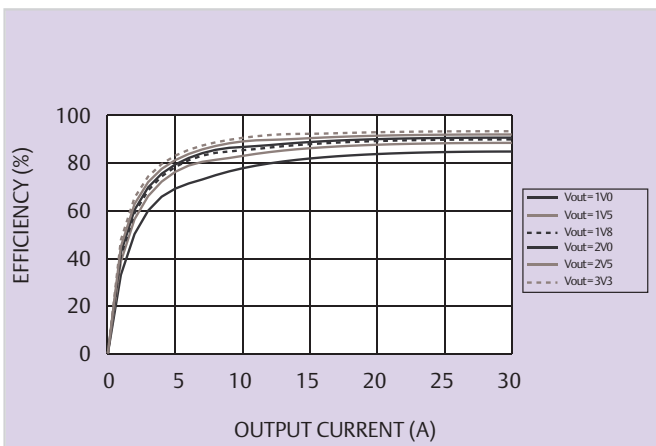


Figure 5 - Efficiency vs Load Current
Vin = 12 V (See Note B)

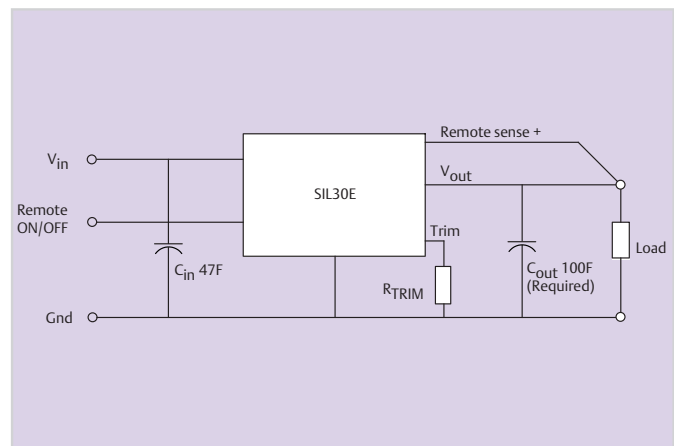
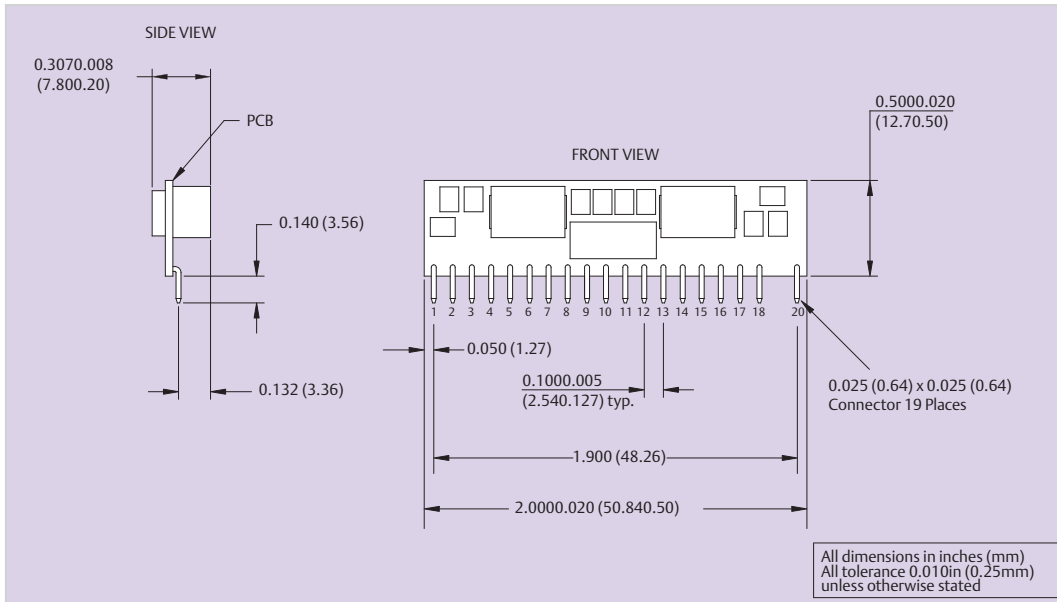


Figure 6 - Standard Application

Mechanical Drawing



Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 760 930 4600
Facsimile: +1 760 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.PowerConversion.com
techsupport.embeddedpower@emerson.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Emerson Network Power.
The global leader in enabling
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
©2009 Emerson Electric Co.

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