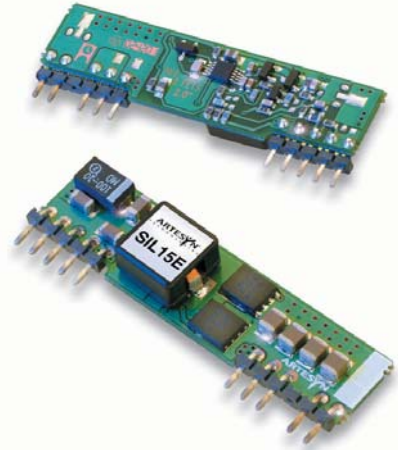


SIL15E Series

12Vin single output

NEW Product

- **15A 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 >7 million hours per Telcordia SR-332**
- **Ideal solution where board space is at a premium or tighter card pitch is required**
- **Industry standard footprint and pin out**



2 YEAR WARRANTY

The SIL15E series are non-isolated DC/DC converters packaged in a single-in-line footprint giving designers a cost effective solution for conversion from a 12V source. The SIL15E offers a range of fixed outputs and one wide trim output unit at an industry leading 15A which allows maximum design flexibility and a pathway for future upgrades. The SIL15E 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 SIL15E offers compact size and efficiencies of up to 94%.

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

SPECIFICATIONS

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	70mA
Input current (max.)	5.5A max. @ Io max. and Vout = 3.3V	
Input reflected ripple	60mA rms	
Remote ON/OFF	(See Note 1)	
Start-up time	35ms	

EMC CHARACTERISTICS

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

GENERAL SPECIFICATIONS

Efficiency	See table	
Insulation voltage	Non-isolated	
Switching frequency	Fixed	200kHz typ.
Approvals and standards	EN60950 UL/cUL60950	
Material flammability	UL94V-0	
Dimensions (Vertical model)	(LxWxH)	50.8 x 7.8 x 12.7mm 2.0 x 0.31 x 0.5 inches
Pin length	0.135 ±0.02 in (3.43 ±0.5mm)	
Weight	5g (0.18oz)	
MTBF	Telcordia SR-332	7,042,000 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



UL/cUL CAN/CSA 22.2 No. E174104
UL 60950 file No. E174104

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

SIL15E Series

12Vin single output

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.) ⁽³⁾	REGULATION		MODEL NUMBER
						LINE	LOAD	
49.5W	10V - 14V	0.8V - 3.63V	0A	15A	94%	±0.2%	±1.0%	SIL15E-12W3V3

Part Number System with Options

SIL15E-12S3V3-V

Product Family
SIL = Single In Line

Rated Output Current
15 = 15Amps

Performance
E = Enhanced Performance

Mounting Option
V = Vertical
H = Horizontal

Output Voltage
0.8V - 3.63V

Type of Output
S = Single
W = Wide

Input Voltage
12 = 10V - 14V

Output Voltage Adjustment of the SIL15E-12W3V3 Series

The ultra-wide output voltage trim range offers major advantages to users who select the SIL15E-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 SIL15E-12W3V3 converter leaves the factory the output has been adjusted to the default voltage of 0.8V

Notes

- The SIL15E 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 SIL15E:

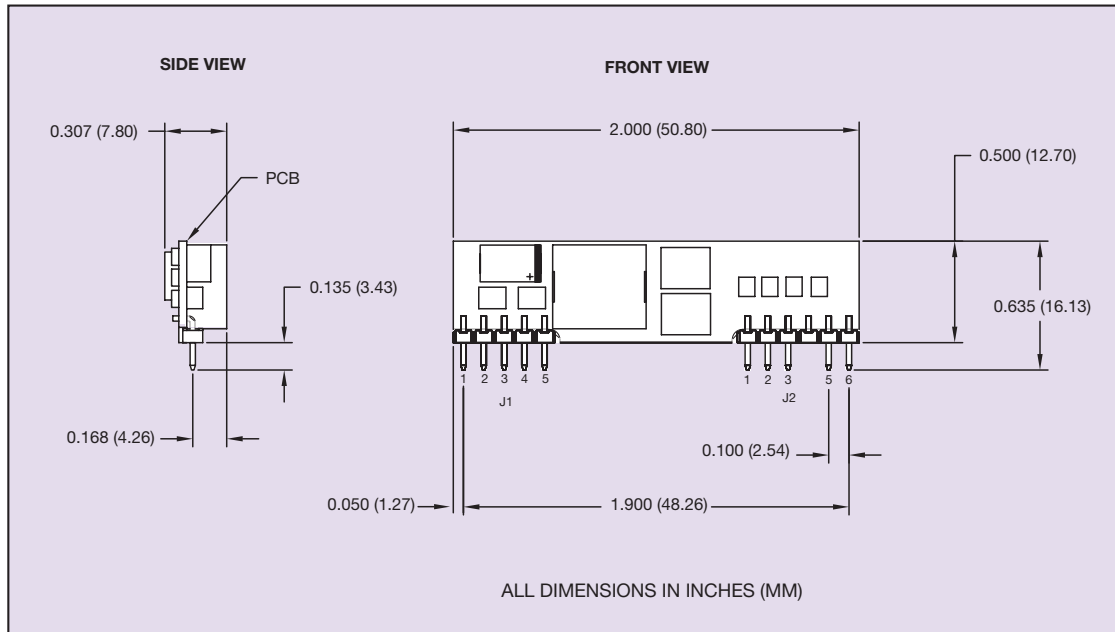
Configuration	Converter Operation
Remote pin open circuit	Unit is ON
Remote pin pulled low [Von/off <0.8V]	Unit is OFF
Remote pin pulled high [Von/off >1.6V]	Unit is ON

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

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

SIL15E Series

12Vin single output



J1 PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	+Vout
2	+Vout
3	Remote Sense (+)
4	+Vout
5	Ground

J2 PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	Ground
2	+Vin
3	+Vin
4	No Pin
5	Trim
6	Remote ON/OFF