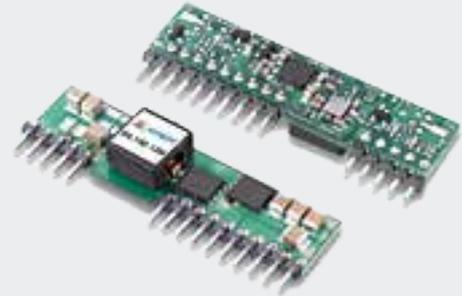


ARTESYN SIL15E SERIES

Non-Isolated DC-DC Converters



Advanced Energy's Artesyn SIL15E series of non-isolated DC-DC converters comprises four SIL15E_05V models and a single SIL15_12V model.

Three of the SIL15E_05V models offer fixed output voltages of 1.8 V, 2.5 V or 3.3 V, while the fourth is a wide output trim unit that can be adjusted over the range 0.8 to 3.63 Vdc. The 3.3 V fixed output model accepts a 4.5 to 5.5 Vdc input, while the other three models accept a 3 to 5.5 Vdc input. All four models can deliver up to 15 amps output current.

DATA SHEET

Total Power:

54.5 Watts

Input Voltage:

5.5 Vdc

of Outputs:

Single



SPECIAL FEATURES

- 15 A current rating
- Input voltage range: 3.0 - 5.5 Vdc
- Output voltage range: 0.8 - 3.63 V
- Ultra high efficiency: 95% @ 5 Vin and 3.3 Vout
- 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 pinout
- Available RoHS compliant
- Two year warranty

SAFETY

- UL, cUL CAN/CSA 22.2 No. E174104
- UL6950 File No. E174104
- TÜV Product Service (EN60950) Certificate No. B 03 10 38572
- CB report and certificate to DE3-51686M1

ELECTRICAL SPECIFICATIONS

Input		
Input voltage range		3.0 - 5.5 Vdc
Input current	No load	70 mA
Input current (max.)		11.8 A @ I _o max. and V _{out} = 3.63 V
Input current ripple		110 mA rms
Remote ON/OFF		See Note 2
Start-up time		<20 ms
Output		
Voltage adjustability	Fixed output version	±10.0%
	Wide trim version	0.8 - 3.63 Vdc
Setpoint accuracy		±0.4%
Line regulation		±0.2%
Load regulation		±1.0%
Minimum load		0 A
Overshoot/undershoot		None
Ripple and noise	0 - 20 MHz BW	60 mV pk-pk 25 mV rms max.
Temperature coefficient		±0.01% / °C
Transient response		60 mV max deviation 50 µs recovery to within ±1.0%
Short circuit protection		Continuous
Thermal protection		Automatic recovery

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

GENERAL SPECIFICATIONS

Efficiency		See Table
Insulation voltage		Non-isolated
Switching frequency	Fixed	300 kHz typical
Approvals and standards		EN60950 UL/cUL60950
Material flammability		UL94V-0
Dimensions	L x W x H	50.8 x 7.8 x 12.7 mm 2.0 x 0.31 x 0.5 inches
Pin length		0.135 ± 0.02 inches 3.43 ± 0.5 mm
Weight		5 g (0.18 oz)
MTBF	Telcordia SR-332 MIL-HDBK-217F	7,042,000 hours 680,000 hours

EMC CHARACTERISTICS

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

ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient temperature	-40 °C to +100 °C
(See Note 3)	Non-operating temperature	-40 °C to +125 °C

ORDERING INFORMATION

Model Number ^(2,5,6)	Output Power (Max.)	Input Voltage	Output Voltage	Output Current (Min.)	Output Current (Max.)	Efficiency (Typical)	Regulation	
							Line	Load
SIL15E-05W3V3-VJ	54.5 W	3.0 - 5.5 Vdc	0.8 - 3.63 Vdc	0 A	15 A	94% ⁽⁴⁾	±0.2%	±1.0%

PART NUMBER SYSTEM WITH OPTIONS

Product Family	Rated Output Current	Performance	Input Voltage	Type of Output	Output Voltage	Mounting Option	Packaging Options
SIL	15	E	05	W	3V3	V	J
SIL = Single In Line	15 = 15 Amps	E = Enhanced Performance	05 = 3 - 5.5 Vdc	W = Wide	3V3 = 3.3 V	V = Vertical H = Horizontal ⁽⁵⁾	J = Pb free (RoHS 6/6 compliant)



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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