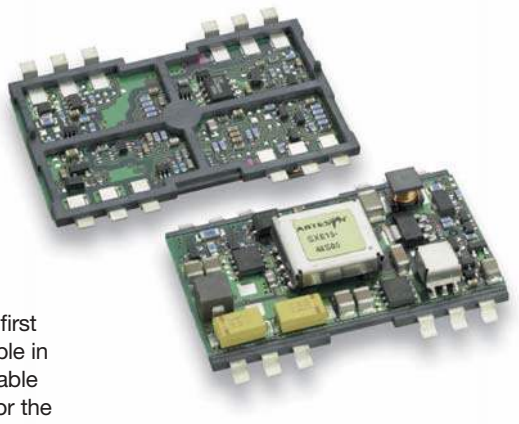
SXE15 Series

Dual positive output

ARTESYN TECHNOLOGIES

- **Two positive outputs**
- **Output voltage tracking**
- **High efficiency**
- **Approved to EN60950, UL/cUL1950**
- **Wide operating temperature, up to and exceeding 65ºC (natural convection)**
- **Up to 100% load imbalance**
- **Trim function**
- **No minimum load**
- **Complies with ETS 300 019-1-3/2-3**
- **Fully compliant with ETS 300 386-1**



The SXE15 is a new high efficiency open frame isolated 15 Watt converter series. The first two models in the series feature an input voltage range of 33 to 75VDC and are available in output voltages of 5V/3.3V and 3.3V/2.5V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. Typical efficiencies for the models are 86% for the 5V/3.3V and 85% for the 3.3V/2.5V version. The SXE15 series also has a remote on/off capability, with active high or active low logic. Overcurrent and overvoltage protection features are included as standard. With full international safety approval including EN60950 and cUL1950, the SXE15 reduces compliance costs and time to market.

CE (LVD) cULus TÜV

2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage adjustability	Both outputs	±10% min.
Voltage setpoint	Both outputs	±2% typ.
Voltage accuracy (See Note 8)	Both outputs	±4% max.
Output voltage (over all line and load conditions)	5V/3.3V	$4.931V < V_{o1} < 5.133V$ $3.236V < V_{o2} < 3.368V$
	3.3V/2.5V	$3.297V < V_{o1} < 3.431V$ $2.431V < V_{o2} < 2.531V$
Minimum load		0%
Ripple and noise 20MHz bandwidth		140mV pk-pk max. 50mV rms max.
Transient response 50% to 75% to 50%	D05-3V3, V_{01} D05-3V3, V_{02} D3V3-2V5, V_{01} D3V3-2V5, V_{02}	180mV max. 100mVmax. 150mV max. 100mV max.
Peak dev. settling time	To 1.0%, no external cap.	100µs
Short circuit protection (Isc)	10A rms	Continuous automatic recovery
Tracking		Max. differential 0.7V during start-up

INPUT SPECIFICATIONS

Input voltage range	48Vin nominal	33 to 75VDC
Input current	No load Remote OFF	35mA max. 25mA max.
UVLO turn ON voltage UVLO turn OFF voltage		33V (typ) 30V (typ)
Active high remote ON/OFF Logic compatibility ON OFF		(See Note 4) Open collector ref. to -input Open circuit or >2VDC <1.2VDC
Start-up time	Nominal line	2.5ms (typ)

EMC CHARACTERISTICS

ETS 300 386-1 table 5			
Conducted emissions	EN55022 (See Note 6)		Level A
	EN55022 (See Note 6)		Level B
Radiated emissions	EN55022 (see Longform data sheet)		Level B
Immunity:			
ESD air	EN61000-4-2	8kV, 15kV	
ESD contact	EN61000-4-2	6kV, 8kV	
EFT DC power	EN61000-4-4	2kV, 4kV	
EFT signal	EN61000-4-4	1kV, 2kV	
Radiated field enclosure	EN61000-4-3	10V/m	
Surges indoor signal	EN61000-4-5	500V	
Conducted (DC power)	EN61000-4-6	10V	
Conducted (signal)	EN61000-4-6	10V	(See Note 7)
Input transients	ETS 300 132-2, ETR 283		

GENERAL SPECIFICATIONS

Efficiency		See table
Operational insulation	Input/output	1500VDC
Input fuse		2.0A slow blow
Switching frequency	Fixed	265kHz
Approvals and standards (See Notes 1, 2 and 3)		UL/cUL 1950, EN60950 TÜV Rheinland
Weight		12g (0.42oz)
MTBF	MIL-HDBK-217F	>600,000 hours
Representative model:	48S05 @ 48Vin, 40°C, 100% load ground benign	
	BELLCORE 332	>1,500,000 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 5)	Operating ambient temperature	-40°C to +65°C,
	Non-operating	-40°C to +120°C

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Dual positive output

ARTESYN TECHNOLOGIES

DC/DC CONVERTERS	15W High Efficiency DC/DC Converters	2

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

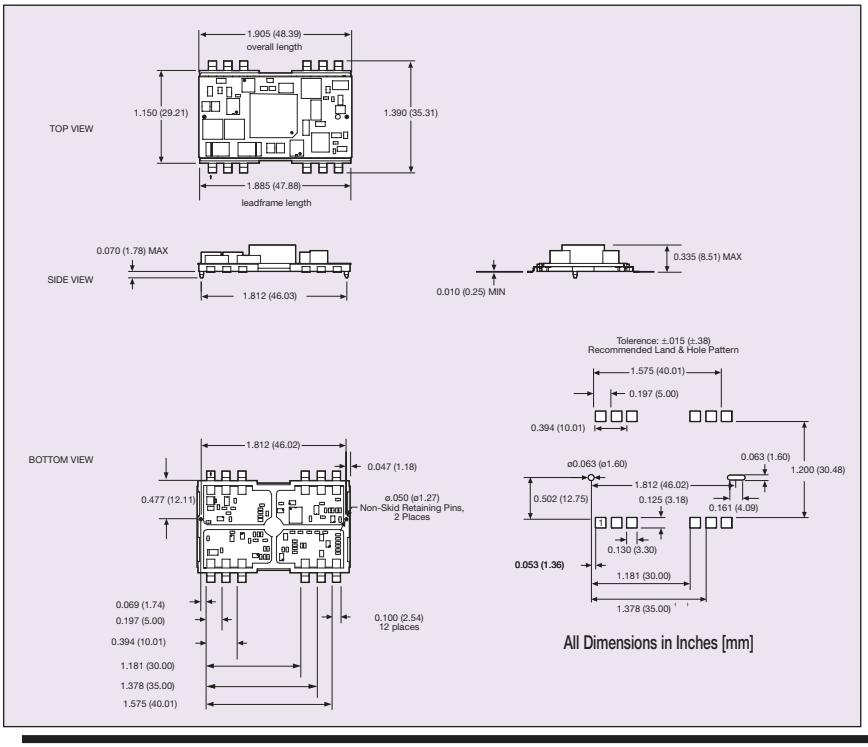
INPUT VOLTAGE	OUTPUT VOLTAGE 1	OUTPUT VOLTAGE 2	OUTPUT CURRENT 1	OUTPUT CURRENT 2	OVP 1	OVP 2	TYPICAL EFFICIENCY	MODEL NUMBER (4)
33-75VDC	5V	3.3V	3.0A	4.5A	6.2V	4.2V	86%	SXE15-48D05-3V3
33-75VDC	3.3V	2.5V	3.5A	4.5A	4.0V	3.0V	85%	SXE15-48D3V3-2V5

Notes

1. User must provide recommended fuses in order to comply with safety approvals.
2. Maximum continuous output power.
   15 Watts for D05-3V3 model.
   11.55 Watts for D3V3-2V5 model.
3. Maximum temperature on hot spots not to exceed 115°C.
   Refer to Longform data sheet for details.
4. Active low remote on/off is available. Standard product is active high.
   Designate with the suffix '-R', e.g. SXE15-48D05-3V3-R.
5. Operating ambient temperatures are specified at natural convection.
   Higher operating temperatures with increased airflow.
   See Application Note 116 for further details.
6. Measured with external filter. See Application Note 116 for further details.
7. Signal line assumed <3m in length.
8. This parameter is calculated at worst case line, load, temperature and initial conditions.

PIN CONNECTIONS	
PIN NUMBER	FEATURE
1	V_{o1} (+)
2	Com
3	V_{o2} (+)
4	Trim
5	N/C
6	N/C
7	N/C
8	On/Off
9	N/C
10	N/C
11	Vin -
12	Vin +

CAUTION: Hazardous internal voltages and high temperatures. Ensure that unit is not user accessible.



International Safety Standard Approvals

c UL us — UL/cUL 1950 3rd edition. File No. E135734

TÜV — TÜV Rheinland. Certificate No. R2074133