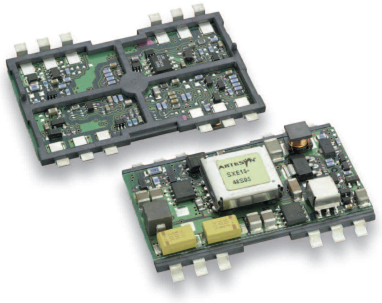
SXE15 Series

Dual positive output

- **Two positive outputs**
- **Output voltage tracking**
- **High efficiency**
- **Approved to EN60950, UL/cUL1950**
- **Wide operating temperature, up to and exceeding 65 °C (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**
- **Available RoHS compliant**



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 Vdc to 75 Vdc and are available in output voltages of 5 V/3.3 V and 3.3 V/2.5 V. 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 5 V/3.3 V and 85% for the 3.3 V/2.5 V 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.

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)	5 V/3.3 V	4.931 V < V_{o1} < 5.133 V 3.236 V < V_{o2} < 3.368 V
	3.3 V/2.5 V	3.297 V < V_{o1} < 3.431 V 2.431 V < V_{o2} < 2.531 V
Minimum load		0%
Ripple and noise 20 MHz bandwidth		140 mV pk-pk max. 50 mV rms max.
Transient response 50% to 75% to 50%	D05-3V3J, V_{01} D05-3V3J, V_{02} D3V3-2V5J, V_{01} D3V3-2V5J, V_{02}	180 mV max. 100 mVmax. 150 mV max. 100 mV max.
Peak dev. settling time	To 1.0%, no external cap.	100 µs
Short circuit protection (Isc)	10 A rms	Continuous automatic recovery
Tracking		Max. differential 0.7 V during start-up

INPUT SPECIFICATIONS

Input voltage range	48 Vin nominal	33-75 Vdc
Input current	No load Remote OFF	35 mA max. 25 mA max.
UVLO turn ON voltage UVLO turn OFF voltage		33 V (typ) 30 V (typ)
Active high remote ON/OFF Logic compatibility ON OFF		(See Note 4) Open collector ref. to -input Open circuit or >2 Vdc <1.2 Vdc
Start-up time	Nominal line	2.5 ms (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 datasheet)	Level B
Immunity:		
ESD air	EN61000-4-2	8 kV, 15 kV
ESD contact	EN61000-4-2	6 kV, 8 kV
EFT DC power	EN61000-4-4	2 kV, 4 kV
EFT signal	EN61000-4-4	1 kV, 2 kV
Radiated field enclosure	EN61000-4-3	10 V/m
Surges indoor signal	EN61000-4-5	500 V
Conducted (dc power)	EN61000-4-6	10 V
Conducted (signal)	EN61000-4-6	10 V (See Note 7)
Input transients	ETS 300 132-2, ETR 283	

GENERAL SPECIFICATIONS

Efficiency		See table
Operational insulation	Input/output	1500 Vdc
Input fuse		2.0 A slow blow
Switching frequency	Fixed	265 kHz
Approvals and standards	(See Notes 1, 2 and 3)	UL/cUL 1950, EN60950 TÜV Rheinland
Weight		12 g (0.42 oz)
Coplanarity		150 µm
MTBF Representative model:	MIL-HDBK-217F 48S05J @ 48 Vin, 40 °C, 100% load ground benign BELLCORE 332	1,790,000 hours >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

SXE15 Series

Dual positive output

ARTESYN TECHNOLOGIES

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

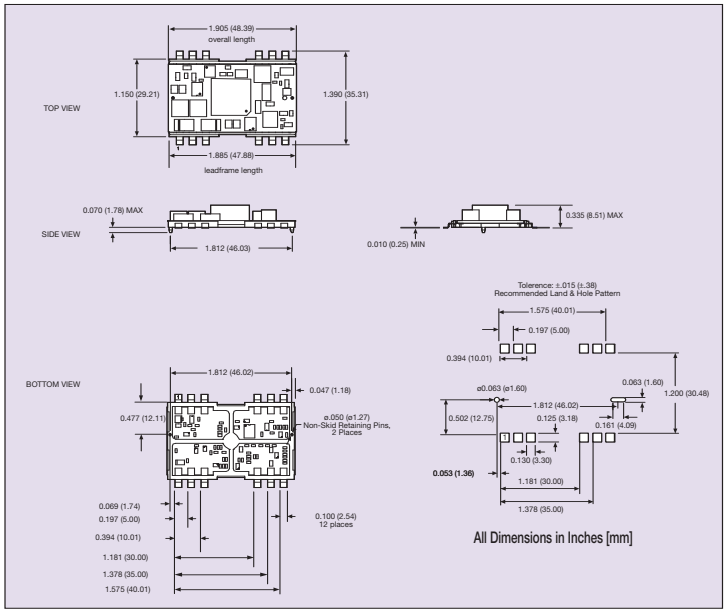
INPUT VOLTAGE	OUTPUT VOLTAGE 1	OUTPUT VOLTAGE 2	OUTPUT CURRENT 1	OUTPUT CURRENT 2	OVP 1	OVP 2	TYPICAL EFFICIENCY	MODEL NUMBER (4,9,10)
33-75 Vdc	5 V	3.3 V	3 A	4.5 A	6.2 V	4.2 V	86%	SXE15-48D05-3V3J
33-75 Vdc	3.3 V	2.5 V	3.5 A	4.5 A	4 V	3 V	85%	SXE15-48D3V3-2V5J

Notes

1 User must provide recommended fuses in order to comply with safety approvals.
2 Maximum continuous output power.
15 Watts for D05-3V3J model.
11.55 Watts for D3V3-2V5J model.
3 Maximum temperature on hot spots not to exceed 115 °C.
Refer to Longform datasheet for details.
4 The SXE15 features 'Active High' Remote ON/OFF as standard. An 'Active Low' Remote ON/OFF version is also available. To order the 'Active Low' version of the SXE15-48D05-3V3J please add the suffix '-R' towards the end of the part number, i.e. SXE15-48D05-3V3-RJ. As our part numbers cannot exceed 18 characters when ordering the 'Active Low' version of the SXE15-48D3V3-2V5J please add the suffix 'R' towards the end of the part number, i.e. SXE15-48D3V3-2V5RJ.
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 <3 m in length.
8 This parameter is calculated at worst case line, load, temperature and initial conditions.
9 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.

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

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 +



International Safety Standard Approvals

cULus UL/cUL 1950 3rd edition. File No. E135734

TÜV TÜV Rheinland. File No. 10401-3336-0196
Licence No. 40004290

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