SXN15 Series

Single output



DC/DC CONVERTERS

10.8-15W High Efficiency DC/DC Converters

High efficiency topology, 87% typical at 5V

- Wide operating temperature, up to and exceeding 70°C (natural convection)
- 90% to 110% output trim
- No minimum load
- Overvoltage protection
- Remote on/off control

The SXN15 is a new high efficiency open frame isolated 15 Watt converter series in an industry standard footprint. The first four models in the series feature an input voltage range of 33 to 75VDC and are available in output voltages of 5V, 3.3V, 2.5V and 1.8V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. Typical efficiencies for the models are 87% for the 5V, 86% for the 3.3V, 85% for the 2.5V and 83% for the 1.8V version. The SXN15 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 SXN15 reduces compliance costs and time to market.



((LVD) FALUS TÜV

2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

	Voltage adjustability		!	90% to 110%
	Total error band	(See Note 11)		±3.5% max.
	Line regulation Low line to high line	1V8 and 2V5 mo 3V3 and S05 mo		0.5% max. 0.1% max.
	Load regulation Full load to min. load	1V8 model 2V5 model 3V3 and S05 mo	odels	2.0% max. 1.5% max. 0.5% max.
	Minimum load			0%
	Overshoot At turn-on and turn-off	1V8 and 2V5 mo 3V3 and S05 mo		3.5% max. None
	Undershoot			None
	Ripple and noise (See Note 1) 5Hz to 20MHz	1V8 and 2V5 mo 3V3 and S05 mo		40mV pk-pk 14mV rms 70mV pk-p 20mV rms
	Transient response (See Note 2) typ. deviation	1V8 and 2V5 mo 3V3 and S05 mo	dels 400 _l	150mV 100mV us recovery to tal error band

INDUT COECIFICATIONS

	INPUT SPECIFICATIONS		
	Input voltage range	48Vin nominal	33 to 75VDC
	Input current	No load Remote OFF	35mA max. 25mA max.
	Input current (max.)	(See Note 4)	0.55A max. @ Io max. and Vin = 33 to 75V
	Input reflected ripple	(See Note 6)	5mA (pk-pk) typ.
	Active high remote ON/OI Logic compatibility ON OFF	FF Op	(See Note 8) pen collector ref to -input Open circuit or >2VDC <1.2VDC
	Undervoltage lockout	Power up Power down	33V (typ.) 30V (typ.)
	Start-up time (See Note 7)	Power up Remote ON/OF	1.5ms (typ.) F 2.5ms (typ.)

EMC CHARACTERISTICS

Conducted emissions	EN55022 (See N EN55022 (See N	Level A Level B	
Radiated emissions	EN55022 (See L	Sheet) Level B	
Immunity:		_	
ESD air	EN61000-4-2	8kV, 15kV	
ESD contact	EN61000-4-2	6kV, 8kV	
Radiated field enclosure	EN61000-4-3	10V/m	
Conducted (DC power)	EN61000-4-6	10V	
Conducted (signal)	EN61000-4-6	10V	(See Note 10)
Input transients	ETS 300 132-2	2, ETR 283	·

GENERAL SPECIFICATIONS

Efficiency		See table
Operational insulation	Input/output	1500VDC
Switching frequency	Fixed	265kHz typ.
Approvals and standards	(See Note 5)	UL/cUL1950, EN60950 TÜV Rheinland
Material flammability		UL94V-0
Weight		12g (0.42oz)
MTBF Representative model:	MIL-HDBK-217F 48S05 @ 48Vin, 4 100% load groun BELLCORE 332	,

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 9)	Operating ambient temp. (3.3V and 5V)	-40°C to +65°C
	Operating ambient temp. (1.8V and 2.5V)	-40°C to +70°C
	Non-operating (All models)	-40°C to +120°C

File Name: SXN15S.PDF Rev: 16 Oct 2002

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OUTPUT POWER	INPUT	OVP	ОИТРИТ	OUTPUT CURRENT	OUTPUT CURRENT	EFFICIENCY	REGU	JLATION	MODEL
(MAX.)	VOLTAGE		VOLTAGE	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER (8)
10.8W	33-75VDC	2.3VDC	1.8V	0A	6A	83%	0.3%	2.0%	SXN15-48S1V8
15W	33-75VDC	3.2VDC	2.5V	0A	6A	85%	0.3%	1.5%	SXN15-48S2V5
15W	33-75VDC	4VDC	3.3V	0A	4.5A	86%	0.1%	0.5%	SXN15-48S3V3
15W	33-75VDC	6VDC	5.0V	0A	3A	87%	0.1%	0.5%	SXN15-48S05

Notes

- 1 Measured as per recommended set-up. See Application Note 116 for further details.
- 2 di/dt = 0.1A/µs, Vin = 48VDC, Tc = 25°C, load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
- 3 The SXN15 meets level A and level B conducted emissions only with external components connected before the input pins to the converter. See Application Note 116 for further details.
- 4 Recommended input fusing is a 2A HRC 200V rated fuse.
- 5 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 6 Measured with external filter. See Application Note 116 for further details.
- 7 Start-up into resistive load.
- 3 Active low remote on/off is available. Standard product is active high. Designate with the Suffix '-R' e.g. SXN15-48S05-R.
- 9 Operating ambient temperatures are specified at natural convection. Higher operating temperatures are possible with increased airflow. See Application Note 116 for further details.
- 10 Signal Line assumed < 3m in length.
- 11 This parameter is calculated at worst case line, load, temperature and initial settings.

PROTECTION

Short circuit protection Continuous

Overvoltage protection Non-latching clamp

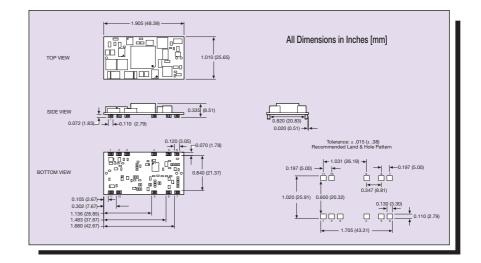
TELECOM SPECIFICATION

Central office interface A

ETS300-132-2, input voltage and current requirements

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

PIN CONNECTIONS					
PIN NUMBER	FEATURE				
1	Vout +				
2	Vout -				
3	N/C				
4	Trim N/C N/C N/C				
5					
6					
7					
8	On/Off				
9	N/C				
10	Vin -				
11	Vin +				
9	N/C Vin -				



International Safety Standard Approvals

c**FL**us TÜV UL/cUL 1950 3rd edition. File No. E135734

TÜV Rheinland. Certificate No. R2074133

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Application Note

Longform Data Sheet

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