



Single output



- · Industry standard footprint
- Wide operating temperature, -40°C to +85°C (natural convection)
- 80% to 110% output trim
- No minimum load
- Overvoltage and overtemperature protection
- Remote sense compensation
- · Remote on/off

The EXB30 is a new high efficiency open frame isolated 30 Watt converter series in an industry standard footprint. The first five models in the series feature a 2:1 input voltage range of 36 to 75VDC and are available in output voltages of 12V, 5V, 3.3V, 2.5V and 2V. Each model is trimmable from 80 to 110% except the 12V output which has a wider trim range of 60% to 110%. The sub 5V models have an output current rating of 8A. Typical efficiencies for the models are 92% for the 5V, 90% for the 3.3V and 12V, 87% for the 2.5V and 86% for the 2V version. The EXB30 series offers remote on/off and remote sense compensation to correct for voltage drops at the load. Overcurrent, overvoltage and overtemperature protection features are included as standard. With full international safety approval including EN60950 and cUL1950, the EXB30 reduces compliance costs and time to market.





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[2 YEAR WARRANTY]

((LVD) 🚕







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

OUTPUT SPECIFICATION	ONS	
Voltage adjustability		80% to 110%
Set point accuracy		±1.5% max.
Line regulation	Low line to high lin	ne 0.1% max.
Load regulation	Full load to min. lo	ad 0.2% max.
Total error band		±3.0%
Minimum load		0%
Overshoot	At turn-on and turn	n-off None
Undershoot		None
Ripple and noise (See Note 1)	5Hz to 20MHz	150mV pk-pk 20mV rms
Temperature coefficient		±0.02%/°C
Transient response (See Note 2)		2.0% max. deviation 300µs recovery to vithin total error band
Remote sense	10% οι	utput voltage change
INPUT SPECIFICATION	IS	
Input voltage range	48Vin nominal	36 to 75VDC
Input current	No load Remote OFF	50mA max. 10mA max.
Input current (max.) (See Note 4)	48V models	1.0A max. @ lo max. and Vin = 36 to 75V
Input reflected ripple	(See Note 6)	30mA (pk-pk) typ.
Active high remote ON/O Logic compatibility ON OFF	Open	collector ref to -input pen circuit or >2VDC <1.2VDC
Undervoltage lockout	48Vin: power up 48Vin: power dow	34V n 31.5V
Start-up time (See Note 7)	Power up Remote ON/OFF	30ms 30ms

THE CHARACTERICTE	cc		
EMC CHARACTERISTI	CS		
Conducted emissions	EN55022 (See No EN55022 (See No	te 3)	Level A
Radiated emissions	EN55022 (See Ap	p. Note 108)	Level E
Immunity: ESD air ESD contact Radiated field enclosure Conducted (DC power) Conducted (signal) Input transients		V (NP), 8kV (R V/m (NP) V (NP) V (NP)	RP) P)
GENERAL SPECIFICAT	IONS		
Efficiency		S	ee table
Basic insulation	Input/output	1:	500VD0
Switching frequency	Fixed	300	kHz typ
Approvals and standards (See Note 5)		VDE0805, E IEC950, UL/o CSA C22.2	:UL1950
Material flammability			JL94V-(
Weight		40g	(1.41oz
MTBF	MIL-HDBK-217F @ 25°C, 100% loa ground benign	>300,000 ad	00 hour:
ENVIRONMENTAL SPE	CIFICATIONS		
Thermal performance	Operating ambien temperature	t -40°C to	o +85°0
	Non-operating	-40°C to	+125°0
ETS 300 019-2-3		Classes T3.1	to T3.
Altitude	Operating Non-operating	10,000 fe 40,000 fe	eet max eet max



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16 to 30 Watt DC converters

OUTPUT POWER	INPUT	OVP	OUTPUT	OUTPUT	OUTPUT	EFFICIENCY	REGI	JLATION	MODEL
(MAX.)	VOLTAGE		VOLTAGE	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER
16W	36-75VDC	2.3VDC	2.0V	0A	8A	86%	±0.1%	±0.2%	EXB30-48S2V0
20W	36-75VDC	2.9VDC	2.5V	0A	8A	87%	±0.1%	±0.2%	EXB30-48S2V5
26.4W	36-75VDC	3.8VDC	3.3V	0A	8A	90%	±0.1%	±0.2%	EXB30-48S3V3
30W	36-75VDC	5.65VDC	5.0V	0A	6A	92%	±0.1%	±0.2%	EXB30-48S05
30W	36-75VDC	14.2VDC	12.0V	0A	2.5A	90%	±0.1%	±0.2%	EXB30-48S12

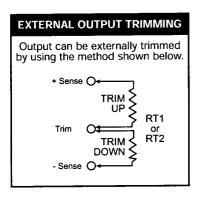
Notes

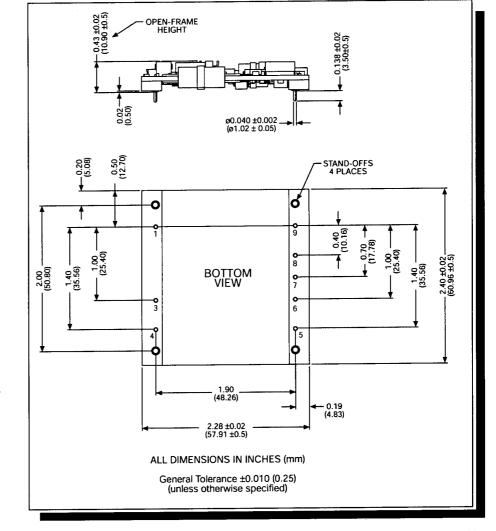
- Measured as per recommended set-up.
- $di/dt = 0.1A/\mu s$, Vin = 48VDC, Tc = 25°C, load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
- The EXB30 meets level A and level B conducted emissions only with external components connected before the input pins to the converter. Full details are given in Application Note 108 on the website. Recommended input fusing is a 2A HRC 200V rated fuse.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- Simulated source impedance of 12 μ H. 12 μ H inductor in series with +Vin.
- Start-up into resistive load.

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

PROTECTION	
Short circuit protection	Continuous
Overvoltage protection	Non-latching clamp
Thermal protection	125°C hot spot temperature with automatic recovery
TELECOM SPECIFICATION	
Central office interface A	ETS300-132-2, input voltage and current requirements

PIN CONNECTIONS		
PIN Number	FUNCTION	
1	- Vin	
2	No Pin	
3	Remote ON/OFF	
4	+ Vin	
5	+ Vout	
6	+ Sense	
7	Trim	
8	- Sense	
9	- Vout	





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