

EXQ60D SERIES

Dual positive output



- Two positive outputs
- Output voltage tracking
- High efficiency
- Approved to EN60950 (TÜV Rheinland), UL/cUL1950
- Operating baseplate temperature of -40°C to +100°C
- 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 EXQ60 is a new high efficiency, open frame, isolated 60 Watt converter series in an industry standard quarter-brick footprint. The EXQ60 delivers very high output current at low voltages, and excellent useable power density for today's high end applications. 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 91% for the 5V/3.3V and 90% for the 3.3V/2.5V version. The EXQ60 series also has a remote on/off capability. Overcurrent and overvoltage protection features are included as standard. With full international safety approval including EN60950, (TÜV Rheinland) and UL/cUL1950, the EXQ60 reduces compliance costs and time to market.

[2 YEAR WARRANTY] C US TÜV

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

OUTPUT SPECIFICATIONS									
Voltage adjustability	Both outputs	±10%							
Setpoint accuracy	Both outputs (Se	e Note 1) ±1% max.							
Output voltage	5V/3.3V	4.75V < Vo1 < 5.23V 3.20V < Vo2 < 3.43V							
(over all line and load conditions)	3.3V/2.5V	3.18V < Vo1 < 3.48V 2.39V < Vo2 < 2.60V							
Minimum load	Both outputs	0%							
Ripple and noise	20MHz bandwidth	n 60mV pk-pk max., 20mV rms max.							
Transient response peak dev. settling time	50% to 75% and back 120mV/80mV to 1.0%, no external cap. 100µs								
Short circuit protection		Both outputs							
Tracking	S	Outputs track tart-up and shutdown							
INPUT SPECIFICATIONS									
Input voltage range	48Vin nominal	33 to 75VDC							
Input current	No load Remote OFF	60mA max. 20mA max.							
UVLO turn ON voltage UVLO turn OFF voltage		33V (typ) 30V (typ)							
Start-up time	Nominal line	8ms (typ)							
Active high remote ON/0 Logic compatibility ON OFF	Open ((See Note 4) Collector ref. to -input Open circuit or >4VDC <1.2VDC							

ELECTROMAGNETIC (COMPATIBILITY SPEC	CIFICATIONS						
ETS 300 386-1 table 5 Conducted emissions Immunity: ESD air ESD contact Radiated field enclosure Conducted (DC power) Conducted (signal) Input transients		al filter Level B Level B IP), 15kV (RP) IP), 8kV (RP) (NP) IP) IP)						
GENERAL SPECIFICAT	IONS							
Efficiency		See table						
Operational insulation	Input/output	1500VDC						
Input fuse		5.0A slow blow						
Switching frequency	Fixed	400kHz (5V/3V3) 325kHz (3V3/2V5)						
Approvals and standards (See Notes 2,		UL1950, EN60950 TÜV Rheinland						
Weight		45g (1.6 oz)						
MTBF	MIL-HDBK-217F @ 25°C, 100% load ground benign	>270,000 hours						
ENVIRONMENTAL SPECIFICATIONS								
Thermal performance	Operating baseplate temperature Non-operating	-40°C to +100°C -40°C to +125°C						

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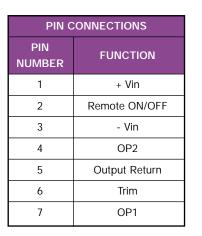
60 Watt High efficiency DC/DC converters

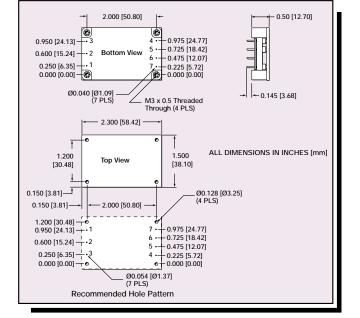
INPUT OUTPUT VOLTAGE		OUTPUT CURRENT		OVP		TYPICAL	MODEL	
VOLTAGE	OP1	OP2	1	2	1	2	EFFICIENCY	NUMBER ⁽⁴⁾
33-75VDC	5V	3.3V	12.0A	15.0A	5.9V	4.0V	91.5%	EXQ60-48D05-3V3
33-75VDC	3.3V	2.5V	12.0A	16.0A	4.0V	3.0V	90.5%	EXQ60-48D3V3-2V5

Notes

- 1 Io1 = 6A, Io2 = 9A
- 2 User must provide recommended fuses in order to comply with safety approvals.
- Maximum continuous output power.
 60 Watts for D05-3V3 models
 40 Watts for D3V3-2V5 models.
- Active low remoteon/off is available. Standard product is active high. When ordering active low parts, designate with the Suffix '-R', e.g. EXQ60-48D3V3-2V5-R.

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





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