

DC/DC Quarter Bricks/High Efficiency

XPiQ inc.

Intelligent Design Quality Product

30 Amps
KHQ030 Series



- Low Voltage Outputs
- High Power Density
- Efficiency 91% for 3.3V
- ETSI 300-321-2 Isolation
- International Safety Approvals
- Fixed Switching Frequency
- Low Profile

Specification

Input

- Input Voltage Range • 36-76 VDC
- Input Current • 0.93A - 2.29A, see chart
- Input Reflected Ripple Current • 20mA
- Remote On/Off • Shorted to -Vin (Logic Low) = on
Open (Logic high) = off
Negative logic is standard,
Positive logic is available
- Input Reverse Voltage Protection • External components required

Output

- Output Voltage • 1.2 VDC to 3.3 VDC
- Output Voltage Adjustment • $\pm 10\%$
- Minimum Load • 0 minimum load required
- Line Regulation • 0.1% (36-75 VDC; full load)
- Load Regulation • 0.1% (no load to full load; 48V input)
- Output Voltage Accuracy • $\pm 50\text{mV}$
- Ripple & Noise • 100mV pk-pk
- Transient Response • 3% max deviation, 100 μs recovery time for a 25% step load change
- Temperature Coefficient • 0.01%/°C
- Remote Sense • Standard
- Overvoltage Protection • 115%-130%, recycle input to reset

- Overcurrent Protection
- Short Circuit Protection
- Overtemperature Protection

- 110-135% auto restart
- Protected to short circuit conditions, hiccup mode
- Standard with auto restart

General

- Efficiency • 91% for 3.3V out, see chart
- Isolation • 1500 VDC Input to Output
- Size • 1.45" x 0.417" x 2.28" without baseplate
- Weight • 35g for open frame

Environmental

- Operating Temperature with 200LFM • -40 to 85°C ambient with derating
Full power to 55°C
- Cooling • Convection cooled/forced air (refer to derating curve)
- Humidity • 5-95% RH non condensing
- Dimensions • 1.45" x 0.417" x 2.28" (36.8 x 10.6 x 57.9) without baseplate

Safety

- Safety Approvals • UL 60950, IEC 60950, CSA 60950 per cUL, CE Marked for LVD
- EMI/EMC • FCC level B Part 15 with external filtering
- Warranty • 1 Year



OUTPUT VOLTAGE & CURRENT RATINGS

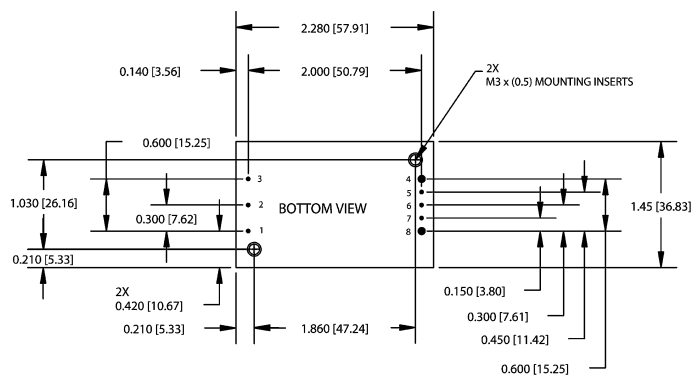
KHQ030

Power (Watts)	Voltage	Max Current	Efficiency	Input I	Model
36 W	1.2 V	30 A	82%	0.93 A	KHQ03048S1V2
45 W	1.5 V	30 A	85%	1.13 A	KHQ03048S1V5
54 W	1.8 V	30 A	87%	1.33 A	KHQ03048S1V8
75 W	2.5 V	30 A	89%	1.80 A	KHQ03048S2V5
100 W	3.3 V	30 A	91%	2.29 A	KHQ03048S3V3

Notes

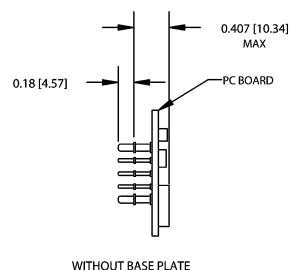
- Standard product is open frame with negative logic.
- Baseplate versions are build to order.
- Please add one of the following suffix code to the part number when ordering.
 AL = Open Frame/Negative logic AH = Open Frame/Positive logic
 BL = Baseplate/Negative logic BH = Baseplate/Positive logic

Mechanical Details

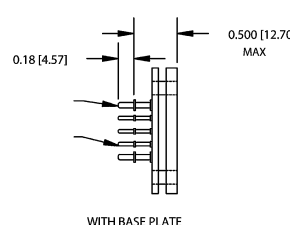


All Dimensions in Inches (mm)
 Tolerance .XX = ± 0.02 in. (.50mm)
 .XXX = ± 0.01 in. (.254mm)

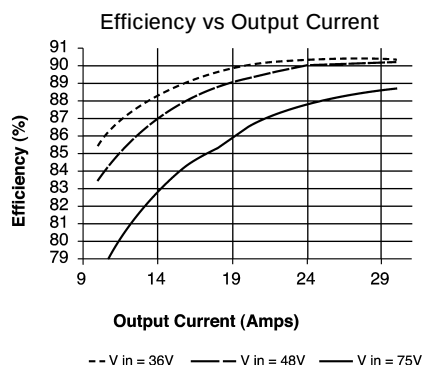
2X .062 (2.0) DIA PLATED BRASS PINS
 6X .040 (1.02) DIA PLATED BRASS PINS



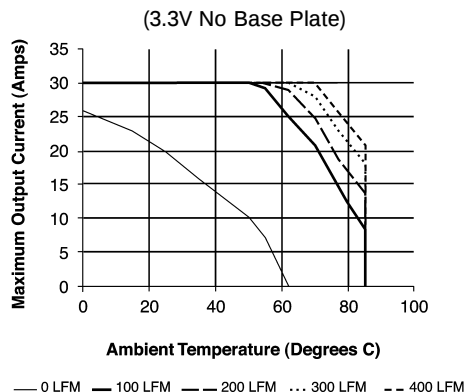
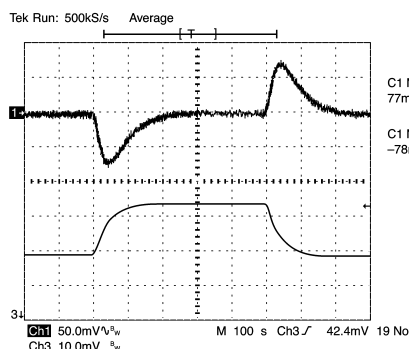
Pin	Functions
1	+Input
2	On/Off
3	-Input
4	-Output
5	-Sense
6	Trim
7	+Sense
8	+Output



Derating Curves



-- V in = 36V — V in = 48V — V in = 75V
 (3.3V) Transient Response
 Load Step 50% to 75% of 1 out



(3.3V) Output Ripple & Noise at full load

