

85W MIL-COTS Quarter Brick Converters

Features

- ◆ Standard Quarter Brick Footprint
- ◆ 9-40 Input
- ◆ Up to 90% Efficiency
- ◆ Up to 115°C baseplate temperatures
- ◆ 2250VDC Isolation
- ◆ Encapsulated for Rugged Environments
- ◆ No optocouplers used
- ◆ Designed to meet MIL-STD-461; MIL-STD-1275; MIL-STD-704; Sec 16-18 of RTCA/DO-160 with FQx Filters²



Key Market Segments & Applications



Specifications						
Model		HQA				
Nominal Output Voltage	VDC	5V	12V	15V	24V	28V
Input Voltage Range	VDC	9 - 40V				
Input Current	A	13A Maximum				
Efficiency (100% load, 24V input)	%	91	90	92	87	88.5
Output Voltage Adjustment	VDC	4.5 - 5.5	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4	25.2 - 30.8
Output Voltage Accuracy	%	±3%				
Ripple & Noise (max) pk-pk	mV	150	200	200	250	200
Line Regulation (typ)	%	0.05	0.05	0.05	0.05	0.05
Load Regulation (typ)	%	0.03	0.03	0.03	0.03	0.03
Overcurrent Protection (typ)	A	27	11	8	5.2	4.2
Overvoltage Protection (typ)	V	6.5	15	18	32	35
Remote On/Off	-	Yes; Low = ON, Open = OFF				
Remote Sense	-	Yes	Not as standard			
Operating Temperature	°C	Standard screening: -40°C to +115°C				
Storage Temperature	°C	-65°C to +125°C				
Temperature regulation	%	0.5% across full temperature range				
Cooling	-	Conduction, convection or forced air				
Isolation Voltage	VDC	Input to Output, Input to Baseplate, Output to Baseplate, 2250 VDC				
Isolation Resistance	MΩ	>10MΩ				
Safety Agency Certifications	-	UL60950-1, CSA60950-1, EN60950-1, CE Mark				
Qualification Methods	-	Consistent with MIL-STD-883F and MIL-STD-202G				
Weight (Typ)	g	100 (Flanged version)				
Size (LxWxH)	in(mm)	Flanged version: 2.39 x 2.2 x 0.5" (60.6 x 55.9 x 12.7); Non-flanged version: 2.39 x 1.54 x 0.5" (60.6 x 39 x 12.7)				
Warranty	yrs	3 Years				

Note:

- 1) See Installation Manual for full details, test methods of parameters and application notes.
- 2) TDK Filter part numbers: FQA020ADC (EMI); FQB020ADC (EMI + Input Transient). Please refer to the Application Notes for details of the applicable Standards & Tests conducted.

Model Selector

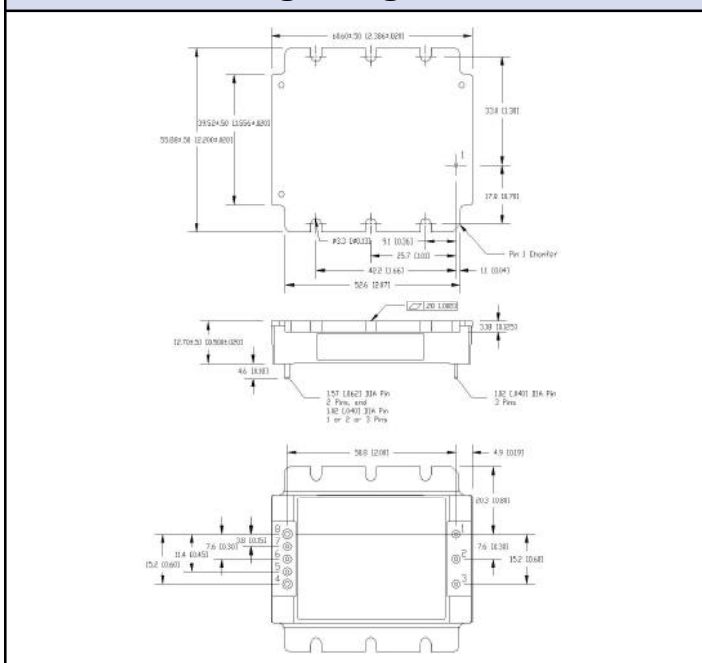
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Maximum Power (W)
HQA2W085W050V-007-S	9 - 40	5	17	85
HQA2W085W120V-007-S	9 - 40	12	7.1	85
HQA2W085W150V-007-S	9 - 40	15	5.7	85
HQA2W085W240V-007-S	9 - 40	24	3.5	85
HQA2W085W280V-007-S	9 - 40	28	3	85

Options

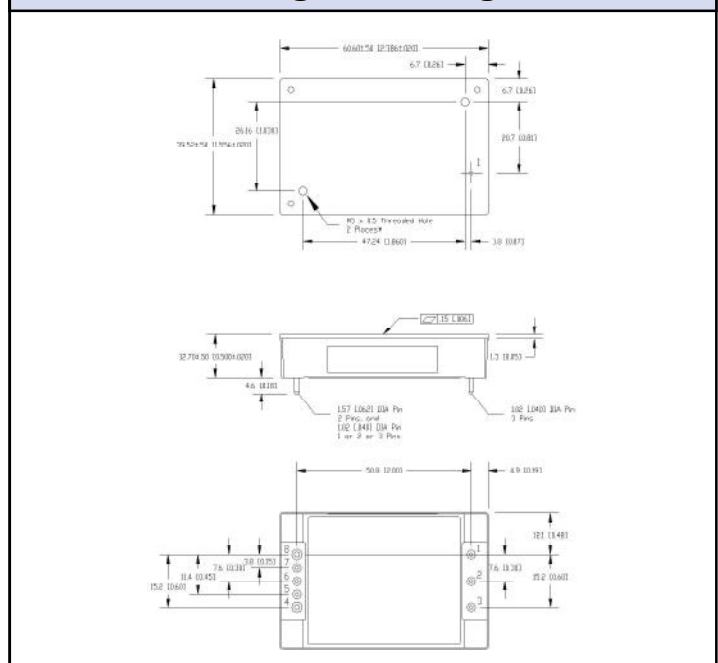
Suffix	Description
-007-S	Flanged Baseplate, Standard Screening
-N07-S	Non-Flanged Baseplate, Standard Screening

*Contact factory for other Voltages or option codes

Outline Drawing Flange Version



Outline Drawing Non-Flange Version



Screening

Operation	S-Grade (Standard Screening)
Functional Test	Room and Hot Test
Burn in	Yes
Temperature Cycling	No
Hi-Pot	2250VDC
Visual Inspection	Yes

Evaluation Board

Part #	Contents
FQX-HQA-EVK-D0	Evaluation board (no modules); fits either an FQA or FQB filter and two (2) HQA or GQA modules.

Pinout

Pin	Function
1	Vin(+)
2	On/Off
3	Vin(-)
4	Vo(-)
5	Sense (-), available on Vo ≤ 15V models
6	Trim
7	Sense (+), available on Vo ≤ 15V models
8	Vo(+)

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>

