

120W Harsh Environment Quarter Brick Converters

Features

- ◆ Standard Quarter Brick Footprint
- ◆ 9-40, 18-40VDC Inputs
- ◆ 12 to 48V Nominal Outputs
- ◆ Up to 91.5% Efficiency
- ◆ Up to 115°C ambient temperatures
- ◆ 2250VDC Isolation
- ◆ Encapsulated for Rugged Environments
- ◆ No optocouplers used
- ◆ Enhanced Screening Option



Key Market Segments & Applications



Specifications		HQA				
Model		12V	15V	24V	28V	48V
Nominal Output Voltage	VDC	12V	15V	24V	28V	48V
Input Voltage Range	VDC	9 - 40V				18 - 40V
Input Current	A	16A Maximum				
Efficiency (100% load, 24V input)	%	90	89	87	89	91.5
Output Voltage Adjustment	VDC	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4	25.2 - 30.8	45.6 - 52.8
Output Voltage Accuracy	%	±3%				
Ripple & Noise (max) pk-pk	mV	150	200	250	250	300
Line Regulation (typ)	%	0.05	0.05	0.05	0.05	0.05
Load Regulation (max)	%	0.03	0.03	0.03	0.03	0.03
Overcurrent Protection (typ)	A	14.5	12	6.2	5.2	4.0
Overvoltage Protection (typ)	V	15	18	32	35	54
Remote On/Off	-	Yes; Low = ON, Open = OFF				
Remote Sense	-	Yes		Not as standard		
Operating Temperature	°C	Standard screening: -40°C to +115°C, Enhanced screening: -55°C to +115°C				
Storage Temperature	°C	-65°C to +125°C				
Temperature regulation	%	0.5% across full temperature range				
Humidity (non condensing)	%RH	MIL-STD 883 Method 1004.7				
Cooling	-	Conduction, convection or forced air				
Withstand Voltage	VDC	Input to baseplate, Input to Output 2250VDC				
Isolation Resistance	-	>10M				
Vibration	-	MIL-STD-202G, Method 201A, Unpowered, sweep 1: 5 to 50 Hz at 0.5g, sweep 2: 50 to 500 Hz at 1.5g, three axis				
Shock	-	MIL-STD-202G, Method 213B, Table 213-1, Test Condition I, Unpowered, 50G half sine 6ms, three axis				
Safety Agency Certifications	-	UL60950-1, CSA60950-1, EN60950-1, CE Mark				
Qualification Methods	-	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				

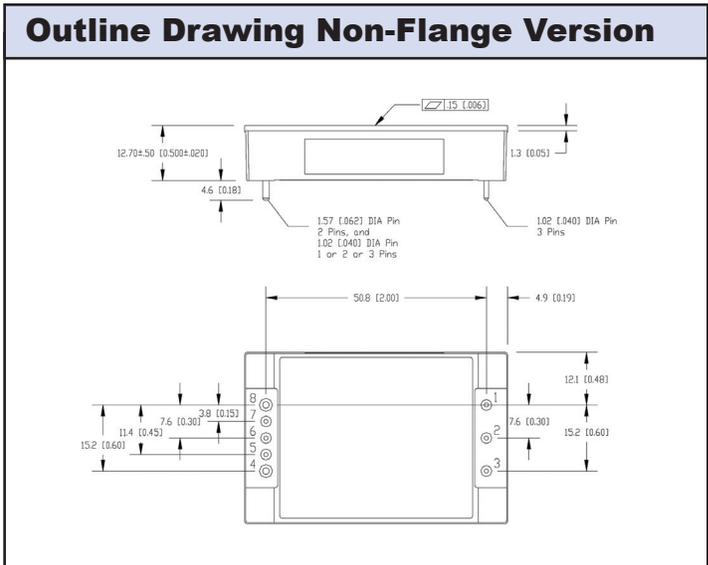
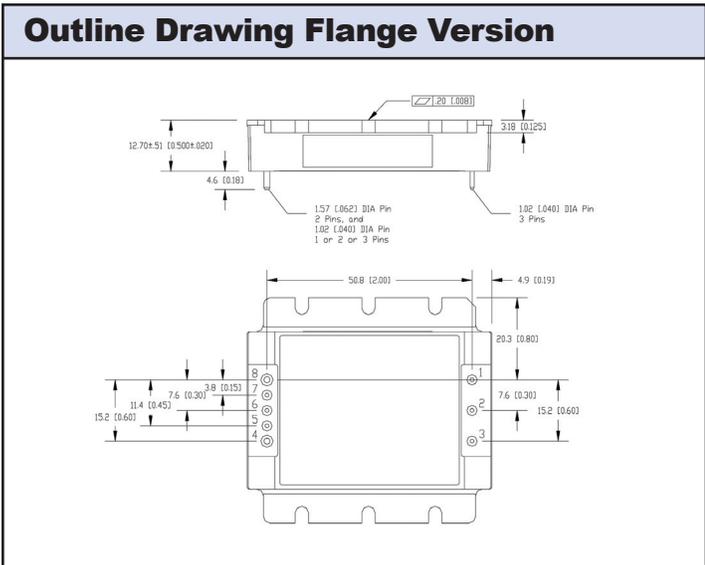
Note: See Installation Manual for full details, test methods of parameters and application notes

Model Selector						
Model	Input Voltage (V)	Output Voltage (V)	Max Current (A)	Maximum Power (W)	Flange	Screening
HQA2W120W120V-007-S	9 - 40	12	10	120	Y	Standard
HQA2W120W120V-N07-S	9 - 40	12	10	120	N	Standard
HQA2W120W150V-007-S	9 - 40	15	8	120	Y	Standard
HQA2W120W150V-N07-S	9 - 40	15	8	120	N	Standard
HQA2W120W240V-007-M	9 - 40	24	5	120	Y	Enhanced
HQA2W120W240V-007-S	9 - 40	24	5	120	Y	Standard
HQA2W120W240V-N07-S	9 - 40	24	5	120	N	Standard
HQA2W120W280V-007-S	9 - 40	28	4.2	118	Y	Standard
HQA2W120W280V-007-M	9 - 40	28	4.2	118	Y	Enhanced
HQA2W120W280V-N07-S	9 - 40	28	4.2	118	N	Standard
HQA24120W480V-007-S	18 - 40	48	2.5	120	Y	Standard

Preliminary Standard Model

*Contact factory for other Voltages or option codes

Screening		
Operation	S-Grade	M-Grade
Functional Test	Room and Hot Test	Cold, Room, and Hot Test
Burn in	Yes	Extended, 96 hour
Temperature Cycling	No	10 Cycles
Hi-Pot	2250VDC	2250VDC
Visual Inspection	Yes	Yes



Pinout

Pin	Function
1	Vin(+)
2	On/Off
3	Vin(-)
4	Vo(-)
5	sense (-), select models
6	Trim
7	Sense (+), select models
8	Vo(+)

For Additional Information, please visit us.tdk-lambda.com/lp/products/hqa-series.htm

