



Industrial



Cots



Comm

120W Harsh Environment Quarter Brick Converters

Features	Benefits
• Standard Quarter Brick Footprint	• Assists System Integration
• 9-40, 18-40VDC Inputs	• Designed for 28V DC Networks
• Up to 91.5% Efficiency	• Easier System Thermal Management
• Up to 115°C Baseplate Temperatures	• Suitable for Conduction Cooling
• Rugged Package with Encapsulation	• For Rugged Environments
• No Optocouplers Used	• Allows High Temperature Operation
• Enhanced Screening Option	• Suitable for High Reliability Applications



Specification		HQA			
Model		12V	24V	28V	48V
Nominal Output Voltage	VDC	12V	24V	28V	48V
Input Voltage Range	VDC	9 - 40V			18 - 40V
Input Current	A	16A Maximum			
Efficiency (100% load, 24V input)	%	90	87	89	91.5
Output Voltage Adjustment	VDC	10.8 - 13.2	21.6 - 26.4	25.2 - 30.8	45.6 - 52.8
Output Voltage Accuracy	%	±3%			
Ripple & Noise (max) pk-pk	mV	150	250	250	300
Line Regulation (typ)	%	0.05	0.05	0.05	0.05
Load Regulation (max)	%	0.03	0.03	0.03	0.03
Overcurrent Protection (typ)	A	14.5	6.2	5.2	4.0
Overvoltage Protection (typ)	V	15	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	Ω	>10MΩ			
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	100g (Flanged version)			
Size (LxWxH)	mm	Flanged version: 60.6 x 55.9 x 12.7; Non-flanged version: 60.6 x 39 x 12.7			
Warranty	yrs	3			

Notes: 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)	Maxumim Power (W)	Flange	Screening
HQA2W120W120V-007-S	9 - 40	12	10	120	Y	Standard
HQA2W120W120V-N07-S	9 - 40	12	10	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

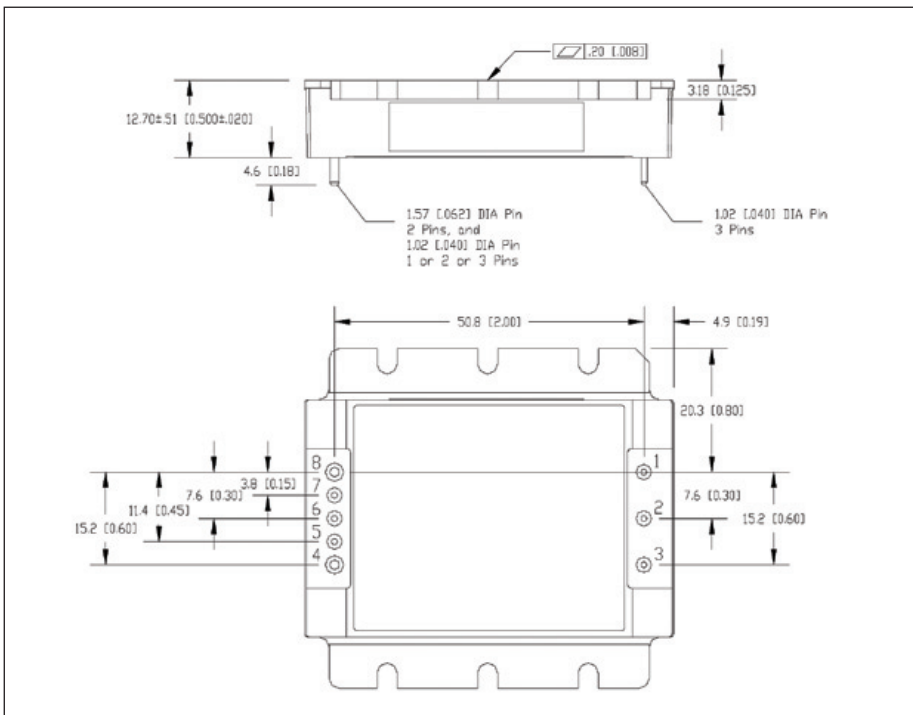
Standard Model

Notes: *Contact factory for other Voltages or option codes

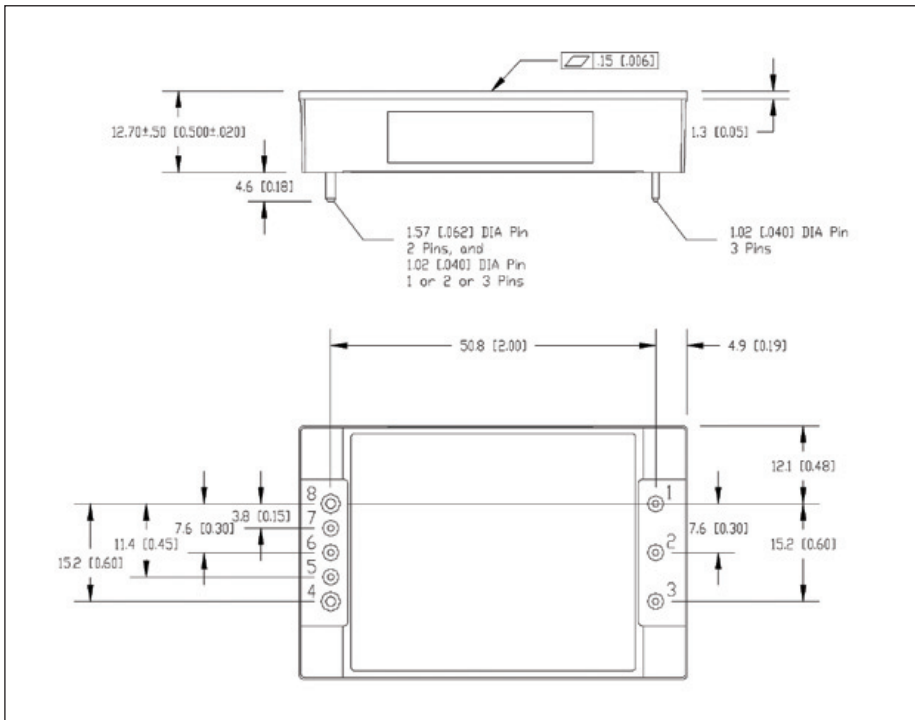
Screening

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

Outline Drawing Flange Version HQA Series



Outline Drawing Non-Flange Version HQA Series



Pin Assignment

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



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