ARTESYN
NDQ900 SERIES

900 Watt Quarter-Brick DC-DC Converter



Advanced Energy's Artesyn NDQ900 series quarter-brick non-isolated DC-DC converter provides a single regulated low noise output. It delivers up to 900 W with 12.25 V output voltage and an input range of 40 to 60 VDC. It is designed primarily for use with standard 48 V telecommunications equipment supplies. A PMBus™ interface is also provided for flexible digital control and monitoring. The main application area is in datacom applications.

AT A GLANCE

Total Power

900 Watt
(12.25 V @ 73.7 A)

Input Voltage:

40 to 60 VDC

Single Output

12.25 V

SPECIAL FEATURES

- 900 W continuous power
- Ultra high efficiency: 96.7% peak
- 40 - 60 VDC Datacom input range
- Contact cooling or heatsink mounting
- Fixed switching frequency
- Parrallel operation, active current sharing
- PMBus™ function
- Remote control function (negative logic)
- Power good function
- No mimimum load required
- Excellent thermal performance
- High reliability
- RoHS 3.0
- Input under voltage protection
- Input over voltage protection
- Output over voltage protection
- Output over current protection
- Over temperature protection
- Two year warranty (consult factory for extended terms)

SAFETY

- IEC/EN/UL/CSA 62368-1
- CE and UCKA Mark
- UL/TUV
- UL94, V-0

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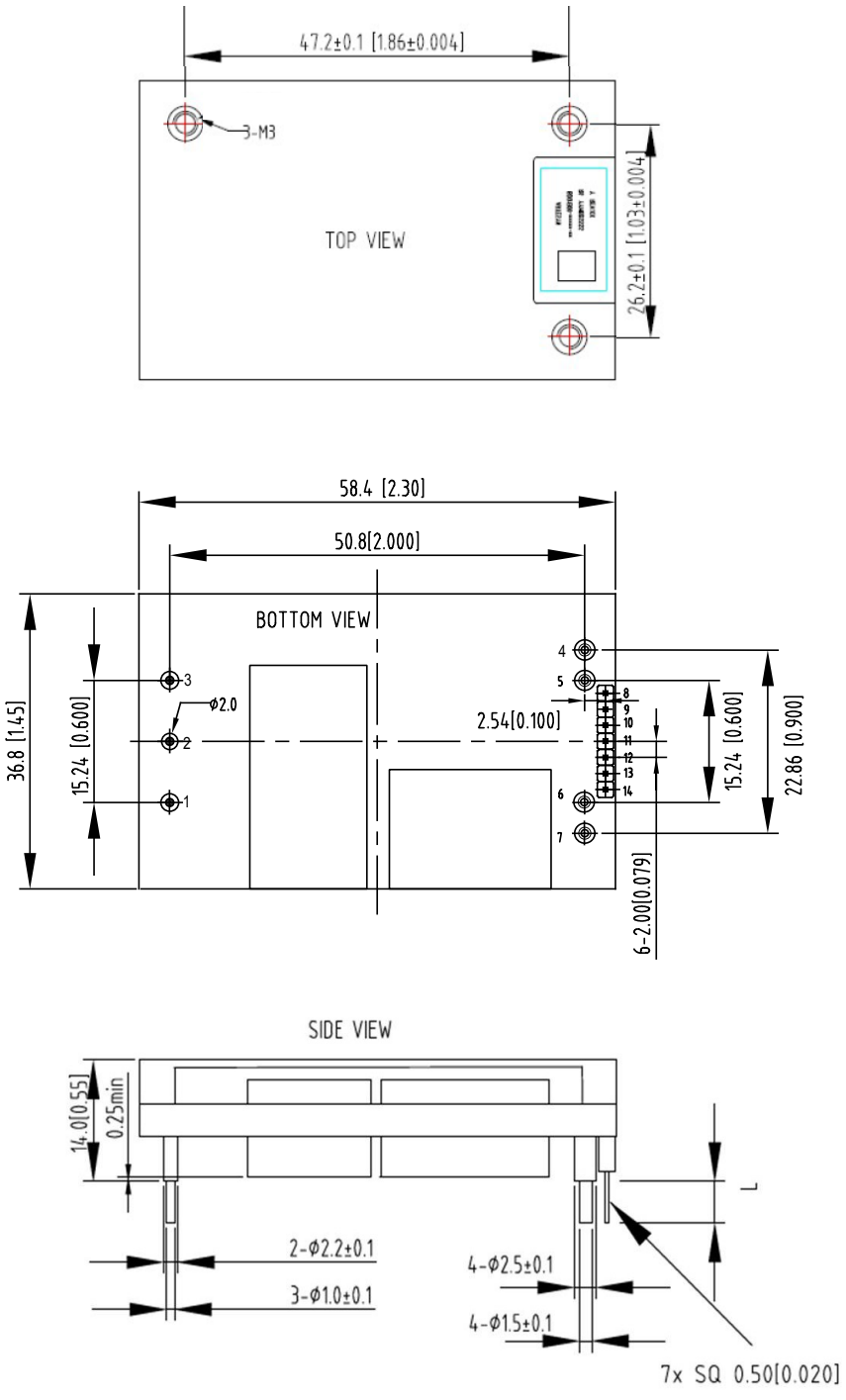
ELECTRICAL SPECIFICATIONS

Input	
Input voltage range	40 - 60 VDC
Input voltage nominal	43 - 54 VDC
Input UVLO	Turn-on: 40 VDC max Turn-off: 39 VDC max Hysteresis: 3.5 VDC max
I/O insolation and I/O isolation	Non-Isolated primary to secondary. Common input and output ground connection
Maximum input current	24.3 A (Vin = 40 VDC, full load)
Efficiency (50 Vin, 25 °C ambient)	96.4% at 100% load 96.7% at Peak power
Output	
Output voltage (Vin = 40~60 V)	12.25 V
Output current maximum	73.7 A
Output power	900W nominal 1000W peak power for 50mSec
Output regulation Load regulation Line regulation	 +/-200mV typical +/-60mV typical
Noise & ripple	50 mV pk-pk typical with 4000uF electrolytic capacitor
Over current point	120% of rated current, 90 A typical
Over current protection method	Hiccup
Control	
Enable	TTL compatible (negative logic)
PMBus (Suffix "I" modules)	7-pin port, standard command protocol

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40° C to +85 °C
Storage temperature	-55 °C to +125 °C

MECHANICAL DRAWING



Unit: mm (inch) L=3.80mm
TOLERANCE: X.X mm±0.5 mm [X.XX in.± 0.02 in.]
X.XX mm±0.25 mm[X.XXX in.±0.01 in.]
Note: Only modules with Suffix "I" have pin 8 ~ 14.

PIN DESIGNATIONS

Pin	Function	Function
1	Vin+	Positive input voltage
2	CNT	Remote ON/OFF control
3	Vin-	Negative input voltage
4	Vo-	Negative output sense (Optional-fit)
5	Vo-	Negative output sense
6	Vo+	Positive output voltage
7	Vo+	Positive output voltage (Optional-fit)
8	PG	Power Good
9	Sig_gnd	PMBus GND
10	DATA	PMBus data signal
11	SMBAlert	PMBus interface
12	CLK	PMBus clock signal
13	Addr	PMBus address
14	Ishare	Current share

PIN LENGTH OPTIONS

Device code suffix	Pin length
-4	4.6 mm ± 0.25 mm
-6	3.8 mm ± 0.25 mm
-8	2.8 mm ± 0.25 mm
None	5.8 mm ± 0.25 mm

ORDERING INFORMATION

Model number	Output voltage set point	Output current	Logic	PMBus™
NDQ900-48S12B-6LI	12.25 VDC	73.7 A	Negative Enable	Yes

B = Baseplate
6 = 3.8 mm pin length
L = RoHS 3.0 compliant
I = PMBus interface, Ishare pin, Power Good pin

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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