

# DELPHI SERIES



## FEATURES

- ◆ Input voltage range: 38V~55V
- ◆ High efficiency: 96.0% @ 12V/20A
- ◆ Size: 63.5mm x 31.8mm x 11.4mm  
(2.50" x 1.25" x 0.45")
- ◆ Industry standard pinout
- ◆ Fully protected: Input UVLO, OVP, Output OCP and OTP
- ◆ Parallelable for higher output power
- ◆ 2250V isolation
- ◆ Basic insulation
- ◆ Monotonic startup
- ◆ No minimum load required
- ◆ ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- ◆ UL/cUL 60950 (US & Canada), and TUV (EN60950) - pending
- ◆ CE mark meets 73/23/EEC and 93/68/EEC - pending

## Delphi Series Q48SB, 240W Bus Converter DC/DC Power Modules: 48V in, 12V/20A out

The Delphi Series Q48SB, 48V input, single output, vertically mounted quarter brick, 240W bus converter is the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. This product family supports intermediate bus architectures and powers multiple downstream non-isolated point-of-load (POL) converters and devices. The Delphi Series Q48SB operates from a nominal 48V input and provides up to 240W of power or 20A of output current in an industry standard vertically mounted quarter brick footprint. Typical efficiency for the 12V/20A module is 96%. With optimized component placement, creative design topology, and numerous patented technologies, the Q48SB bus converter delivers outstanding electrical and thermal performance. An optional heatsink is available for harsh thermal requirements.

## OPTIONS

- ◆ Positive On/Off logic
- ◆ Heatsink available for extended operation
- ◆ OTP and OCP mode (Auto restart or latch)

## APPLICATIONS

- ◆ Datacom / Networking
- ◆ Wireless Networks
- ◆ Optical Network Equipment
- ◆ Server and Data Storage
- ◆ Industrial/Testing Equipment

## SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage		38~55V	Voltage Set Point	Typical	11.85
Switching Frequency	Typical	200KHz	Load Regulation	Typical	370mV
Isolation Voltage	In/Out	2250V	Total Output Range		8.8V~13.7V
Isolation Capacitance	Typical	1000pF	Ripple & Noise	Typical	80 mV
Isolation Resistance	Minimum	10M ohm	OCP	Typical	130% of load
Size	2.50" x 1.25" x 0.45"	63.5 x 31.8 x 11.4mm	OTP	Typical	118°C

## PART NUMBERING SYSTEM

Q	48	S	B	120	20	N	V	F	A
Type of Product	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length		Option Code
Q - Quarter Brick	38V~55V	S - Single	B - Bus Converter	120 - 12V	20 - 20A	N- Negative	V-Vertical	F- RoHS 6/6 (Lead Free)	A - Standard Functions

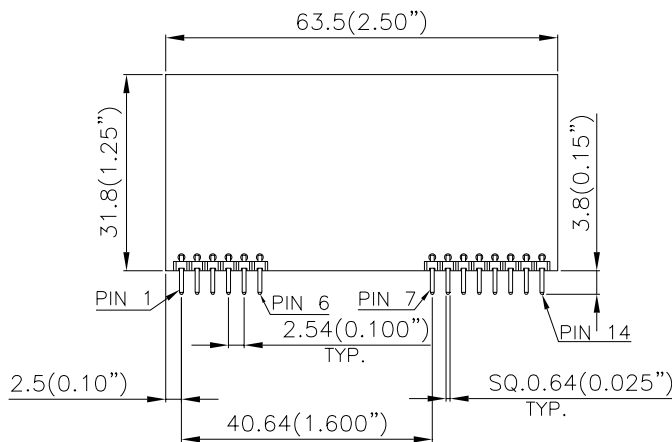
## MODEL LIST

MODEL NAME	INPUT		OUTPUT		EFF @ 100% LOAD
Q48SB12020NVFA	38V~55V	6A	12V	20A	96%

## MECHANICAL DRAWING

TOP VIEW

SIDE VIEW



PIN ASSIGNMENT

PIN#	FUNCTION
1	ON/OFF
2	NC
3	VIN+
4	VIN-
5	VIN+
6	VIN-
7	VOUT-
8	VOUT+
9	VOUT-
10	VOUT+
11	VOUT-
12	VOUT+
13	VOUT-
14	VOUT+

NOTES:

DIMENSIONS ARE IN MILLIMETERS AND (INCHS)

TOLERANCE: X.X mm±0.5 mm(X.XX in.±0.02 in.)

X.XX mm±0.25 mm(X.XXX in.±0.010 in.)

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## WARRANTY

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