

# DELPHI SERIES



## FEATURES

- ♦ High efficiency: 90.5% @ 3.3V/20A
- ♦ Size: 33.0x22.9x9.5mm (1.3"x0.90"x0.37")
- ♦ Input UVLO and OVP
- ♦ Industry standard footprint and pinout
- ♦ Fixed frequency operation
- ♦ SMD and Through-hole versions
- ♦ OTP and output OCP, OVP (default is auto-restart)
- ♦ Output voltage trim: -20%, +10%
- ♦ Monotonic startup into normal and pre-biased loads
- ♦ 2250V isolation and basic insulation
- ♦ No minimum load required
- ♦ No negative current during power or enable on/off
- ♦ ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- ♦ UL/cUL 60950 (US & Canada) recognized, and TUV (EN60950) certified
- ♦ CE mark meets 73/23/EEC and 93/68/EEC directive

## Delphi Series V48SR, 1/16<sup>th</sup> Brick 66W DC/DC Power Modules: 48V in, 1.2V~15V, 25A out

The Delphi Series V48SR, 1/16<sup>th</sup> Brick, 48V input, single output, isolated DC/DC converter, is the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. This product family provides up to 66 watts of power or 25A of output current (1.8V and below) in a new 1/16<sup>th</sup> brick form factor (1.3"x0.90") and pinout. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions. Typical efficiency of the 3.3V/20A module is greater than 90.5%. All modules are protected from abnormal input/output voltage, current, and temperature conditions. For lower power needs, but in a similar small form factor, please check out Delta S48SP (36W or 10A) and S48SE (17W or 5A) series standard DC/DC modules.

## OPTIONS

- ♦ SMD module available
- ♦ Positive remote On/Off
- ♦ OTP and output OVP, OCP mode (Auto-restart or latch)

## APPLICATIONS

- ♦ Optical Transport
- ♦ Data Networking
- ♦ Communications
- ♦ Servers



## SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage		36~75V	Voltage Accuracy	Typical	± 1.5%
Switching Frequency	Typical (3.3V)	415KHz	Line Regulation	Typical	± 0.1%
Isolation Voltage	In/Out	2250V	Load Regulation	Typical	± 0.1%
Isolation Capacitance	Typical	1nF	Ripple & Noise	Typical	50 mV
Isolation Resistance	Minimum	10M ohm	Current Limits	Typical	120%
MTBF	Bellcore (3.3V)	2.4m hours	Over Voltage	Typical	120%
OTP	Typical	135°C	Voltage Trim		+10%, -20%
Size	33.0x22.9x9.5mm	1.30"x0.90"x0.37"			

## PART NUMBERING SYSTEM

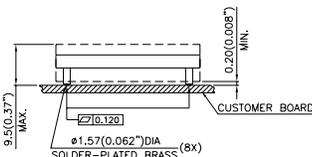
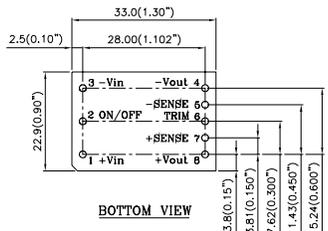
V	48	S	R	1R8	25	N	R	F	A
Product Type	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length/Type		Option Code
V - 1/16th brick	48-36V~75V	S - Single	R - regular	1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 - 2.5V 3R3 - 3.3V 050 - 5.0V 120 - 12V 150 - 15V	04 - 4.4A 05 - 5.5A 13 - 13A 20 - 20A 25 - 25A	N - Negative P - Positive	R - 0.170" N - 0.145" K - 0.110" M - SMD	F - RoHS 6/6 (Lead Free)	A - standard functions

## MODEL LIST

MODEL NAME	INPUT	OUTPUT	EFF @ 100% LOAD
V48SR1R225NRFA	36V~75V	1.2A	84.0%
V48SR1R525NRFA	36V~75V	1.4A	85.0%
V48SR1R825NRFA	36V~75V	1.6A	87.0%
V48SR2R520NRFA	36V~75V	1.8A	89.0%
V48SR3R320NRFA	36V~75V	2.4A	90.5%
V48SR05013NRFA	36V~75V	2.3A	91.0%
V48SR12005NRFA	36V~75V	2.3A	91.0%
V48SR15004NRFA	36V~75V	2.3A	91.0%

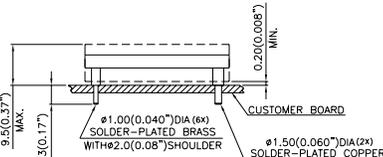
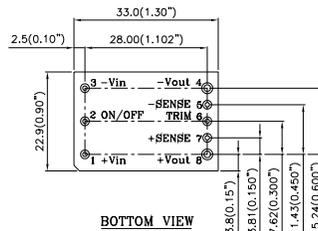
## MECHANICAL DRAWING

### Surface-mount module



SIDE VIEW

### Through-hole module



SIDE VIEW

NOTES:  
DIMENSIONS ARE IN MILLIMETERS AND (INCHES)  
TOLERANCES: X.Xmm±0.5mm(X.XX in.±0.02 in.)  
X.XXmm±0.25mm(X.XXX in.±0.010 in.)

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## WARRANTY

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