

# DELPHI SERIES



## FEATURES

- High efficiency: 91% @ 28V/12.5A
- Standard footprint:  
61.0x57.9x12.7mm (2.40"x2.28"x0.5")
- Industry standard pin out
- Fixed frequency operation
- Metal baseplate
- Fully protected: OTP, OCP, OVP, UVLO
- 2:1 input voltage range
- Basic insulation
- 2250V isolation
- ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- UL/cUL 60950-1 (US & Canada) recognized, and TUV (EN60950-1) certified
- CE mark meets 73/23/EEC and 93/68/EEC directive

## Delphi Series H48SN, 350W Half Brick Family DC/DC Power Modules: 48V in, 28V/12.5A out

The Delphi Series H48SN Half Brick, 48V input, single output, isolated DC/DC converters are the latest offering from a world leader in power systems technology and manufacturing -- Delta Electronics, Inc. This product family provides up to 350 watts of power in an industry standard footprint. It provides 91% efficiency for 28V at full load. 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. All models are fully protected from abnormal input/output voltage, current, and temperature conditions. The Delphi Series converters meet all safety requirements with basic insulation. A variety of optional heatsinks are available for extended thermal operation, as well as for use in higher air flow applications: 200 to 400 LFM.

## OPTIONS

- Positive on/off logic
- Short pin length

## APPLICATIONS

- Telecom / DataCom
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial / Test Equipment

## SPECIFICATIONS

| GENERAL SPECIFICATIONS |                     |                      | OUTPUT SPECIFICATIONS |         |            |
|------------------------|---------------------|----------------------|-----------------------|---------|------------|
| Input voltage          |                     | 36~75V               | Voltage accuracy      | Typical | ±1.0%      |
| Frequency              | Typical             | 350KHz               | Line regulation       | Typical | ±0.01%     |
| Isolation Capacitance  | In/Out              | 2250V                | Load regulation       | Typical | ±0.05%     |
| MTBF                   | Bellcore            | TBD                  | Ripple & noise        | Typical | 150 mV     |
| OTP                    | Typical             | 115°C                | Current limits        | Typical | 130%       |
| Size                   | (2.40"x2.28"x0.50") | 61.0 x 57.9 x 12.7mm | Voltage Trim          | Typical | +10%, -40% |

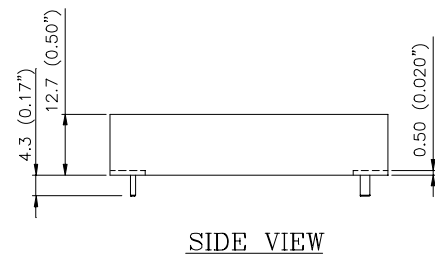
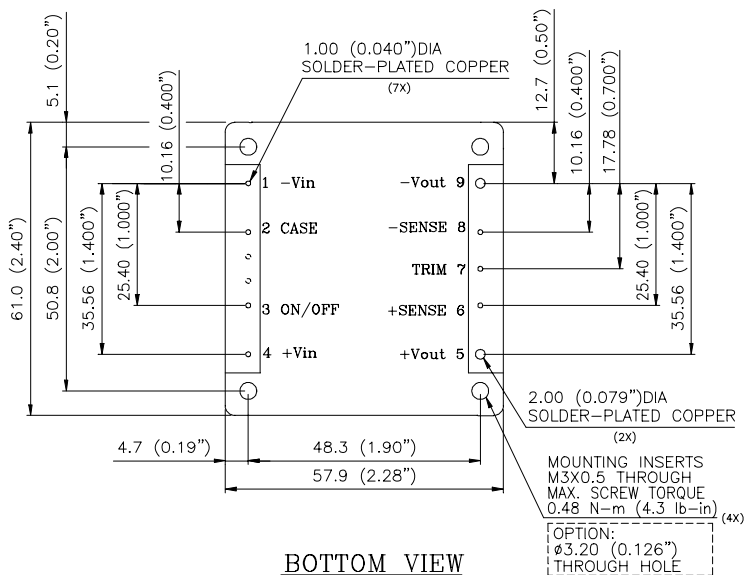
## PART NUMBERING SYSTEM

| H             | 48            | S                 | N              | 280            | 12             | N                          | R                                   | F  | A  |
|---------------|---------------|-------------------|----------------|----------------|----------------|----------------------------|-------------------------------------|--|--|
| Form Factor   | Input Voltage | Number of Outputs | Product Series | Output Voltage | Output Current | ON/OFF Logic               | Pin Length                          |  | Option Code  |
| H- Half Brick | 48V           | S- Single         | N- 350W series | 280- 28V       | 12- 12.5A      | N- Negative<br>P- Positive | R- 0.170"<br>N- 0.145"<br>K- 0.110" | F- RoHS 6/6<br>(Lead Free)<br>Space - RoHS 5/6 | A - Standard Functions<br>B= no thread<br>heatsink mounting hole |

## MODEL LIST

| MODEL NAME     | INPUT   |       | OUTPUT |       | EFF @ 100% LOAD |
|----------------|---------|-------|--------|-------|-----------------|
| H48SN28012NRFA | 36V~75V | 12.5A | 28V    | 12.5A | 91%             |

## MECHANICAL DRAWING



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

Delta offers a two (2) year limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.

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