

## ADH700 Series

700 Watt Half-Brick DC-DC Converter

### Data Sheet

**Total Power:** 700 Watt  
(50 V @ 14 A)  
**Input Voltage:** 36 - 65 Vdc  
**Single Output:** 50 V Nom

### SPECIAL FEATURES

- 700 W continuous power
- Ultra high efficiency 95% @ 50% load
- 36 - 65 Vdc Telecom input range
- Contact cooling or heatsink mounting
- Excellent thermal performance
- Remote output sense
- Fully regulated output voltage
- No minimum load requirement
- Remote control function
- Low ripple and noise
- Fixed switching frequency
- Trim function: 50% ~118%
- High reliability
- RoHS 6 compliant
- UL94 V-0 materials
- Output overcurrent protection
- Output shortcircuit protection
- Output overvoltage protection
- Overtemperature protection
- Industry standard half-brick
- Two year warranty (consult factory for extended terms)

### SAFETY

- EN62368
- IEC62368
- CSA
- CE
- UL



### Electrical Specifications

#### Input

|                                    |                                                                                  |
|------------------------------------|----------------------------------------------------------------------------------|
| Input voltage                      | 36 - 65 Vdc                                                                      |
| Input surge                        | 100 V / 100 mSec (Non-operation)                                                 |
| Input UVLO                         | Turn-on: 34 Vdc typical<br>Turn-off: 32 Vdc typical<br>Hysteresis: 2 Vdc typical |
| I/O insulation                     | Basic insulation                                                                 |
| I/O isolation                      | 2250 Vdc                                                                         |
| Efficiency (48 Vin, 25 °C ambient) | 95% @ 50% load<br>94.8% @ 100% load                                              |

#### Output

|                                               |                                              |
|-----------------------------------------------|----------------------------------------------|
| Output voltage (Vin = 48 V)                   | 50 V                                         |
| Output current maximum                        | 14 A                                         |
| Noise & ripple                                | 90 mV pk-pk typical                          |
| Overtemperature protection                    | 115 °C typical                               |
| Overvoltage protection method / OVP operation | 60 - 70 V window / Hiccup and auto restart   |
| Overcurrent protection method / OCP operation | 14.5 - 35 A window / Hiccup and auto restart |

#### Control

|                     |                         |
|---------------------|-------------------------|
| Enable              | TTL compatible          |
| Switching frequency | 280 KHz fixed frequency |

## Environmental Specifications

|                       |                   |
|-----------------------|-------------------|
| Operating temperature | -40° C to +85 °C  |
| Storage temperature   | -55 °C to +125 °C |
| MTBF                  | 2 million hours   |

## Ordering Information

| Model number     | Input voltage | Output voltage set point | Output current | Efficiency        |
|------------------|---------------|--------------------------|----------------|-------------------|
| ADH700-48S50-6L  | 36 - 65 Vdc   | 50 Vdc                   | 14 A           | 94.8% (100% load) |
| ADH700-48S50P-6L | 36 - 65 Vdc   | 50 Vdc                   | 14 A           | 94.8% (100% load) |

B = Baseplate

-6 = 3.8 mm pin length

P = Positive logic control

Digital interface option

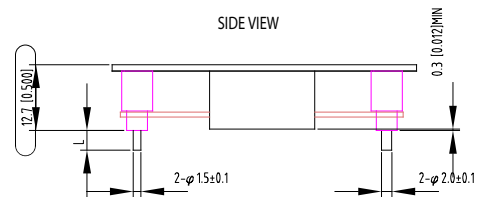
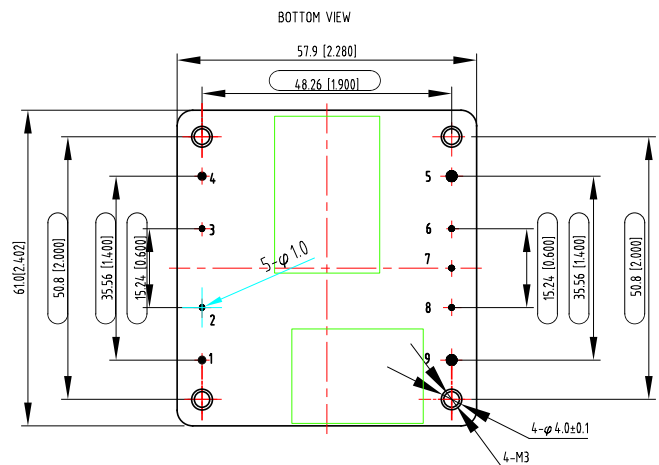
## Pin Length Options

| Device code suffix | L               |
|--------------------|-----------------|
| -4                 | 4.6 mm ± 0.5 mm |
| -6                 | 3.8 mm ± 0.5 mm |
| -8                 | 2.8 mm ± 0.5 mm |
| None               | 5.8 mm ± 0.5 mm |

## Pin Designations

| Pin | Function | Function                |
|-----|----------|-------------------------|
| 1   | Vin+     | Positive input voltage  |
| 2   | CNT      | Remote ON/OFF control   |
| 3   | Case     | Case                    |
| 4   | Vin-     | Negative input voltage  |
| 5   | Vo-      | Negative output sense   |
| 6   | S-       | Negative output sense   |
| 7   | Trim     | Output voltage trim     |
| 8   | S+       | Positive output sense   |
| 9   | Vo+      | Positive output voltage |

## Mechanical Drawing



UNIT: mm[inch]

L=3.80±0.25mm

TOLERANCE: X.Xmm±0.5mm[X.XX in.±0.02in.]

X.XXmm±0.25mm[X.XXX in.±0.01in.]

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