

POWER

ADO300 Series

300 Watt 1/8 Brick DC-DC Converter

Data Sheet

Total Power: 300 Watts
 (11.77 V @ 26 A)
 (5 V @ 60 A)
 (3.3 V @ 60 A)

Input Voltage: 36 - 75 Vdc

Single Output: 12 V, 5 V, 3.3 V



SPECIAL FEATURES

- 300 W continuous power
- Ultra high efficiency
- 36 - 75 Vdc Telecom input range
- Baseplate version for contact cooling or heatsink mounting
- Parallel and Droop current sharing
- Remote output sense
- Fully regulated output voltage
- No minimum load requirement
- Remote control function
- Low ripple and noise
- Fixed switching frequency
- High capacitive load capability
- Pre-bias start-up capability
- Excellent thermal performance
- High reliability
- RoHS 6 compliant
- UL94 V-0 materials
- Two-year warranty (consult factory for extended terms)

SAFETY

- EN62368
- CSA
- CE
- UL



Electrical Specifications

| Input | 12 V | 5 V | 3.3 V |
|---|--|------------------|------------------|
| Input voltage | 36 - 75 Vdc | | |
| Input surge | 95 V / 100 mSec | | |
| Input UVLO (typical) | Turn-on: 34 Vdc Turn-off: 32 Vdc Hysteresis: 2 Vdc | | |
| Efficiency | 95.5% (60% load) | 95.2% (50% load) | 93.7% (50% load) |
| I/O insulation | Basic insulation | | |
| I/O isolation | 1500 Vdc | | |
| Output | 12 V | 5 V | 3.3 V |
| Output voltage (Vin = 48 V) | 11.82 V | 5 V | 3.3 V |
| Output current maximum | 26 A | 60 A | 60A |
| Noise & ripple | 70 mV pk-pk typ. | 50 mV pk-pk typ. | 20 mV pk-pk typ. |
| Overtemperature protection | Baseplate: 110 °C typ. Open frame: 125 °C hot spot typ. | | |
| Overvoltage protection method / OCP operation | 115%-150% rated output voltage/hiccup and auto restart | | |
| Overcurrent protection method / OCP operation | 110%-150% rated output current /hiccup and auto restart | | |
| Control | 12 V | 5 V | 3.3 V |
| Enable | TTL compatible (negative logic) | | |
| Switching frequency | 150 KHz fixed frequency | | |
| Pre-bias start-up | 0% - 90% Vout | | |
| Parallel connection & droop share | Droop share | | |

Pin Assignments

| Pin # | Name | Function | Optional |
|-------|---------------|--------------------------|----------|
| 1 | +Vin | Positive input voltage | |
| 2 | Remote On/Off | Remote control | |
| 3 | -Vin | Negative input voltage | |
| 4 | -Vo | Negative output voltage | |
| 5 | -Sense | Remote sense negative | Yes |
| 6 | Trim/C1 | Voltage adjustment | Yes |
| 7 | +Sense | Remote sense positive | Yes |
| 8 | +Vo | Positive output voltages | |
| 9 | C2 | Digital | Yes |
| 10 | Sig_Gnd | Digital | Yes |
| 11 | Data | Digital | Yes |
| 12 | SMBAlert | Digital | Yes |
| 13 | Clock | Digital | Yes |
| 14 | Addr1 | Digital | Yes |
| 15 | Addr0 | Digital | Yes |

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 |

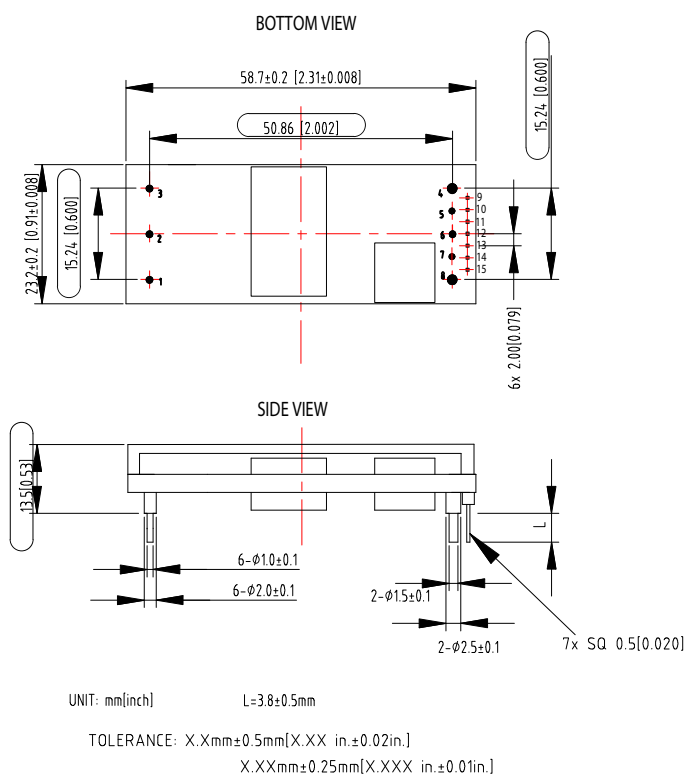
Environmental Specifications

| | |
|-----------------------|-------------------|
| Operating temperature | -40 to +85 °C |
| Storage temperature | -55 to +125 °C |
| MTBF | 1.5 million hours |

ADO300-48S12-6LI Mechanical Drawing - Open Frame Module



ADO300-48S12B-6LI Mechanical Drawing - Baseplate



Notes:

1. Dimensions within the box are critical dimensions.
2. No pin 9-15 for ADO300-48S12B-6LI; ADO300-48S12-6LI with pin 9-15.
3. Different output voltage ADO300 products have slight differences in the mechanical drawing. Please check the specified product's Technical Reference Note for more details.
4. All specifications are subject to change without notice. Mechanical drawings are for reference only.

Ordering Information

| Model number | Input voltage | Output voltage set point | Output current | Efficiency |
|--------------------|---------------|--------------------------|----------------|-------------------|
| ADO300-48S12-6L | 36 - 75 Vdc | 11.77 Vdc | 26 A | 95.2% (full load) |
| ADO300-48S12B-6L | 36 - 75 Vdc | 11.77 Vdc | 26 A | 95.2% (full load) |
| ADO300-48S12-6LI | 36 - 75 Vdc | 11.77 Vdc | 26 A | 95.2% (full load) |
| ADO300-48S12B-6LI | 36 - 75 Vdc | 11.77 Vdc | 26 A | 95.2% (full load) |
| ADO300-48S05-6L | 36 - 75 Vdc | 5.0 Vdc | 60 A | 94.6% (full load) |
| ADO300-48S05-6LI | 36 - 75 Vdc | 5.0 Vdc | 60 A | 94.6% (full load) |
| ADO300-48S05B-6L | 36 - 75 Vdc | 5.0 Vdc | 60 A | 94.6% (full load) |
| ADO300-48S05B-6LI | 36 - 75 Vdc | 5.0 Vdc | 60 A | 94.6% (full load) |
| ADO300-48S05PB-6L | 36 - 75 Vdc | 5.0 Vdc | 60 A | 94.6% (full load) |
| ADO300-48S3V3-6L | 36 - 75 Vdc | 3.3 Vdc | 60 A | 93% (full load) |
| ADO300-48S3V3-6LI | 36 - 75 Vdc | 3.3 Vdc | 60 A | 93% (full load) |
| ADO300-48S3V3B-6L | 36 - 75 Vdc | 3.3 Vdc | 60 A | 93% (full load) |
| ADO300-48S3V3B-6LI | 36 - 75 Vdc | 3.3 Vdc | 60 A | 93% (full load) |

Default = Negative remote control

P = Positive remote control

B = Baseplate

-6 = 3.8 mm pin length

I = PMBus interface version

WORLDWIDE OFFICES

Americas

2900 S.Diablo Way
Tempe, AZ 85282
USA
+1 888 412 7832

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
+44 (0) 1384 842 211

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
+852 2176 3333



www.artesyn.com

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For more information: www.artesyn.com/power
For support: productsupport.ep@artesyn.com



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.