

AIPULNION®

A/0版 2023/08印

模块电源选型手册

AC-DC 电源系列

DC-DC 电源系列

隔离收发模块系列

AIPULNION

爱浦电源 · 九大核心技术
炼造精品品质



爱浦公众号



源头工厂



敏捷定制



精密制造



国际认证



全球服务

China

中国 ▪ 模块电源制造商



About 关于我们 US

广州市爱浦电子科技有限公司创立于2004年，专业从事模块电源研发、生产、销售和电源解决方案的国家高新技术企业。目前，公司已经通过ISO9001:2015质量管理体系。爱浦电子拥有专业的生产设备：贴片机、回流焊、波峰焊、电源自动化测试设备、EMI实验室等；作为十九年品牌企业，爱浦电子拥有丰富的产品设计经验，已经申请了多项关键技术国家专利；到目前为止，我司产品系列分为1-700W的DC-DC模块电源，2-200W的AC-DC模块电源，通讯隔离收发模块。

- 我们的电源产品广泛应用于军工、铁路、电力、船舶、医疗、通信、工控、智能家居、物联网、充电桩、安防等领域；
- 服务网点遍布全国30个城市，能够为客户提供个性化、全方位、最直接的服务；
- 未来，我们将不断努力，提供更优质、环保、高性价比的产品与服务。

Founded in 2004, Guangzhou Aipu Electron Technology Co.,Ltd specializes in R&D, manufacturing, marketing and power supply solutions. As the high-tech enterprise, Aipu has acquired ISO 9001:2015 approval. We have professional production equipment, such as SMT machine, re-flow soldering machine, wave soldering machine, automatic testing machine and EMI test lab, etc. As the 19-year experience brand enterprise, Aipu has applied many technological patents for inventions. From now on, our main products included: 1-700W DC/DC Converter, 2-200W AC/DC Converter, CAN/485/232 Transceiver Module .

- Our products are widely applied to fields of military, railway, power industry, shipping, medical, communication, industrial control, smart home, internet of thing, charging pile, security etc.
- Our agents spread to 30 main cities of China, ensure to offer prompt service and support immediately and constantly to meet our clients' needs.
- In the future, we will continue to provide high quality, environmentally friendly, cost-effective products to customers from home and abroad.

▶ 资质证书 Certification



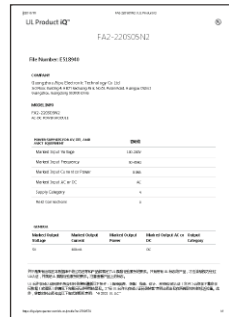
高新技术企业证书
The High and new technology enterprise certificate



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Contract-Credit Enterprise Certificate known to the public



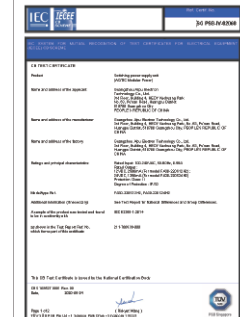
产品CE认证
Product CE Certification



产品UL认证
Product UL Certification



产品RoHS认证
Product RoHS Certification



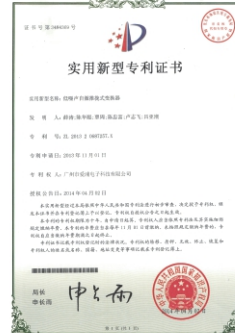
产品CB认证
Product CB Certification



产品REACH认证
Product REACH Certification



车规质量管理体系认证
IATF 16949 Certification



专利证书(部分)
The patent certificate



质量管理体系认证
ISO9001:2015
Quality Management System Certification

隔离收发模块

| 型号 | 波特率 | 同一网络连接节点数 | 页码 | 型号 | 波特率 | 同一网络连接节点数 | 页码 |
|----------------|-------------|-----------|----|-----------------|-------------|-----------|----|
| RS485-XXL/HSA | 100/500Kbps | 256 | 01 | PRSCAN-XXHSA | 1Mbps | 110 | 01 |
| RS485-XXL/HSAV | 100/500Kbps | 256 | 01 | RSCAN-XXHSSV | 1Mbps | 110 | 01 |
| RS485-XXL/HSSV | 100/500Kbps | 256 | 01 | RS485-XXL/HSAVC | 100/500Kbps | 128/32 | 03 |
| RS485-XXHSAVE | 500Kbps | 256 | 03 | RS485-XXHSSVE | 500Kbps | 256 | 04 |

DC-DC (1-25W) 定电压输入隔离模块

| 型号 | 功率(W) | 输入标压(V) | 页码 | 型号 | 功率(W) | 输入标压(V) | 页码 |
|----------------|-------|----------------|----|--------------------|-------|----------------|----|
| NN1/2-XXSXXANT | 1/2 | 3,3,5 | 05 | NN1-XXDXXANT | 1 | 5,12 | 06 |
| FN1-XXSXXAN | 1 | 3,3,5,12,15,24 | 07 | FN1-XXSXXBN | 1 | 3,3,5,12,15,24 | 08 |
| FN1-XXDXXBN | 1 | 5,12,15,24 | 09 | FN1-XXSXXXB3N | 1 | 3,3,5,12,15,24 | 10 |
| FN1-XXDXXB3N | 1 | 5,12,15,24 | 11 | FN2-XXSXXCN | 2 | 5,12,24 | 12 |
| FN2-XXDXXCN | 2 | 5,12,24 | 12 | FN2-XXSXXC3N | 2 | 5,12,24 | 13 |
| FN2-XXDXXC3N | 2 | 5,12,24 | 13 | FN1-XXSXXH6 | 1 | 5,12,24 | 14 |
| FN1-XXDXXH6 | 1 | 5,12,24 | 14 | FN2-XXSXXH6 | 2 | 5,12,24 | 15 |
| FN2-XXDXXH6 | 2 | 5,12,24 | 15 | FW1-XXSXXB/B3 | 1 | 5,12,24 | 16 |
| FW2-XXSXXC/C3 | 2 | 5,12,15,24 | 17 | NN2/3-XXSXXC3N/C4N | 2/3 | 5,12,24 | 18 |
| NNV25-XXSXXANT | 25 | 5 | 19 | NNV5-XXXXXB/B3N | 5 | 5 | 20 |
| FNV5-XXXXXA | 5 | 3,3,5,12,24 | 21 | NW2-XXDXXDR3 | 2 | 5,12,24 | 22 |
| NW1-XXDXXDR3 | 1 | 5,12,24 | 22 | NN2-XXSXXF3N | 2 | 5,12,24 | 23 |
| NN1-XXSXXF3N | 1 | 5,12,24 | 23 | NN2-XXXXXANR3 | 2 | 5,12,24 | 24 |
| NN1-XXXXXA3NR3 | 1 | 5 | 24 | NN2-XXSXXFN | 2 | 12,24 | 25 |
| NN2-XXSXXF | 2 | 12,24 | 25 | NN1-XXSXXMN | 1 | 5,12,15,24 | 26 |
| NN1-XXSXXM3N | 1 | 5 | 26 | NN1-XXSXXM | 1 | 5,12,24 | 26 |
| NN3-XXSXXCN | 3 | 5,12 | 27 | | | | |

DC-DC (1-10W) 宽电压输入隔离稳压输出

| 型号 | 功率(W) | 输入标压(V) | 页码 | 型号 | 功率(W) | 输入标压(V) | 页码 |
|-------------------|-------|---------|----|-------------------|-------|-----------------------|----|
| KW1-XXDXXER3/E3R3 | 1 | 24 | 28 | KW1-XXSXXER3/E3R3 | 1 | 24 | 28 |
| KW3-XXDXXER3/E3R3 | 3 | 24 | 29 | KW3-XXSXXER3/E3R3 | 3 | 24 | 29 |
| UD6-XXSXXE3/E23 | 6 | 24,48 | 30 | FK6/10-XXSXXE2C3 | 6/10 | FK6: 24 FK10:24,48 | 31 |
| FK1-48SXXE/E3 | 1 | 48 | 32 | FK3-48SXXE/E3 | 3 | 48 | 33 |

DC-DC 非隔离模块

| 型号 | 输出电流(mA) | 输入标压(V) | 页码 | 型号 | 输出电流(mA) | 输入标压(V) | 页码 |
|------------|----------|---------|----|------------|----------|---------|----|
| K78XX-500 | 500 | 12,24 | 34 | K78XX-1000 | 1000 | 24 | 34 |
| K78XX-2000 | 2000 | 12 | 35 | | | | |

DC-DC 模块电源 POWER MODULE



DC-DC (6-75W) 宽电压输入隔离稳压输出

| 型号 | 功率 (W) | 输入标压 (V) | 页码 | 型号 | 功率 (W) | 输入标压 (V) | 页码 |
|-------------------------------|----------|--------------|----|------------------------------|----------|--------------|----|
| FD6-A3(-T)(-TS) | 6 | 24,48 | 36 | PFD12-XXXXXA3(C)2(-T)-TS) | 12 | 24,48 | 37 |
| FD12-XXXXXA3(C)4(-T)(-TS) | 12 | 24,48 | 38 | FD6/12-110SXXA3N4(-T)(-TS) | 6/12 | 110 | 39 |
| FD12/20-110SXXA3(C)3(-T)(-TS) | 12/20 | 110 | 40 | FD6/12/20-XXSXXB2C5 | 6/12/20 | 24,48 | 41 |
| FD15-XXXXXA3(R)2(-T)(-TS) | 15 | 24,48 | 42 | (P)FD20-XXXXXA3(R)2(-T)(-TS) | 20 | 24,48 | 43 |
| FD30-A3(R)(-T)(-TS) | 30 | 24,48 | 44 | FD30/50-B3(C)(-T)(-TS) | 30/50 | 24,48 | 45 |
| FD20-B3(C)3(-T)(-TS) | 20 | 110 | 46 | FD30/40/50-B3(C)3(-T)(-TS) | 30/40/50 | 110 | 47 |
| BK15-500SXXH2N6 | 15 | 500 | 48 | BK25-150SXX12H2N4 | 25 | 150 | 48 |
| BK15/20/25-H1D4 | 15/20/25 | 500,600 | 49 | BK40-600SXXW2N4 | 40 | 600 | 50 |
| BK40-850SXXG2N6 | 40 | 850 | 51 | WD50-XXSXXK1 | 50 | 12,24,48,110 | 52 |
| WD75-XXSXXM1 | 75 | 12,24,48,110 | 53 | DD6-05SXXE3C2 | 6 | 5 | 54 |
| DD10-XXDXXE3C2 | 10 | 24,48 | 55 | DD10-XXSXXE3C(N)2 | 10 | 24,48 | 55 |
| DD30-36E0524G9N5 | 30 | 48 | 56 | | | | |

DC-DC (100-400W) 宽电压输入隔离稳压输出

| 型号 | 功率 (W) | 输入电压 (V) | 页码 | 型号 | 功率 (W) | 输入电压 (V) | 页码 |
|--------------|----------|--------------|----|-------------|--------|--------------|----|
| WD100-N1 | 100W | 12,24,48,110 | 57 | WD100-Q1 | 100W | 24,48,110 | 58 |
| VD150-N1 | 150W | 48,110 | 57 | WD150-N1 | 150W | 12,24,48,110 | 57 |
| WD150-Q1 | 150W | 24,48,110 | 58 | BK150-GA1N6 | 150W | 250-1500 | 59 |
| BK150-GB1N6 | 150W | 250-1500 | 60 | WD200-P1 | 200W | 12,24,48,110 | 61 |
| WD300-P1 | 300W | 24,48,110 | 61 | WD400-P1 | 400W | 24,48,110 | 61 |
| WD350~700-R1 | 350~700W | 48 | 62 | | | | |

AC-DC 模块电源

AC-DC (2-8W) 隔离模块

| 型号 | 功率 (W) | 输入电压 (VAC/DC) | 页码 | 型号 | 功率 (W) | 输入电压 (VAC/DC) | 页码 |
|-------------------------|--------|--|----|----------------|--------|----------------|----|
| FA2-N2 | 2 | 85-305/120-430 | 63 | FA3-A2N3 | 3 | 85-265/120-380 | 64 |
| FA3/5-B9D4 | 3/5 | FA3: 85-265/120-380 FA5: 90-265/127-380 | 65 | DA3-G9D4 | 3 | 85-305/120-430 | 66 |
| FA3-300SXXY2N3(-T)(-TS) | 3 | 90-528/100-745 | 67 | DA5-G9D4 | 5 | 85-305/120-430 | 68 |
| FA5-220E05XXC2D3 | 5 | 85-265/120-380 | 69 | FA5-220SXXG2D4 | 5 | 85-305/120-430 | 70 |
| FA5-Y2D4 | 5 | 90-265/120-380 | 71 | FA5-Y2N4 | 5 | 85-305/120-430 | 72 |
| FA6-D2 | 6 | 85-265/120-380 | 73 | DA5-300SXXG9N4 | 5 | 90-528/127-746 | 74 |
| DA5-300SXXGA9N4 | 5 | 85-418/100-591 | 75 | FA8-220SXXB9N3 | 8 | 85-305/120-430 | 76 |

AC-DC (10-25W) 高性能标准隔离模块

| 型号 | 功率(W) | 输入电压(VAC/DC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|---------------------|-------|----------------|----|--------------------------|-------|----------------|----|
| FA10-Y2D4 | 10 | 85-305/120-430 | 71 | FA10-Y2N4 | 10 | 85-305/120-430 | 72 |
| FA10-220SXXE2D4 | 10 | 85-305/100-430 | 77 | FA10-220E05XXE2D4 | 10 | 85-265/120-380 | 77 |
| DA10-220SXXG9N4 | 10 | 85-305/120-430 | 78 | DA10-P2D4 | 10 | 90-310/127-438 | 79 |
| DA10-300SXXG9N4 | 10 | 90-528/127-746 | 80 | FA10-C2N3 | 10 | 85-265/120-380 | 81 |
| UA10-P2D | 10 | 90-265/127-380 | 82 | FA15-220H05XXXF2D4 | 15 | 85-265/120-380 | 83 |
| FA15-220E05XXF2D4 | 15 | 85-265/120-380 | 84 | FA15-220SXXF2D4 | 15 | 85-265/120-380 | 84 |
| FA10-220SXXG2N4 | 15 | 85-305/120-430 | 85 | FA15-Y2N3 | 15 | 85-305/120-430 | 67 |
| DA20-F2D2 | 20 | 85-265/230-370 | 86 | FA20-F2D4 | 20 | 85-265/120-380 | 84 |
| FA20-P2D4 | 20 | 85-265/120-380 | 87 | FA20-300SXXH2D4(-T)(-TS) | 20 | 90-528/100-745 | 88 |
| FA20-220HXXXXXH2D4 | 20 | 85-265/120-370 | 88 | DA24-G2N3Y | 24 | 85-305/120-430 | 89 |
| FA25-H2D4 | 25 | 85-305/120-430 | 90 | UA25-220EXXXH2 | 25 | 85-265/120-380 | 90 |
| FA15-220SXXB9N3(-1) | 25 | 85-305/120-430 | 91 | FA15-220SXXG2N4 | 25 | 85-305/120-430 | 92 |
| DA20-220SXXG2N4 | 25 | 85-305/120-430 | 93 | FA20-220E05XXH2N4 | 25 | 85-265/120-370 | 94 |
| FA20-220H05XXH2D4 | 25 | 85-265/120-370 | 95 | | | | |

AC-DC (30-75W) 隔离模块

| 型号 | 功率(W) | 输入电压(VAC/DC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|----------------|-------|--|----|--------------------|-------|-----------------|-----|
| FA30-H2D4 | 30 | 85-305/120-430 | 90 | WA75-L1 | 75 | 100-265/140-380 | 96 |
| DA48-220S24B | 48 | 110-270/150-385 | 97 | FA40-H3N4 | 40 | 85-265/120-380 | 98 |
| FA40-W2D4/W2N4 | 40 | W2D4: 85-265/120-380 W2N4: 85-305/120-430 | 99 | DA45-220T05XXXG9N3 | 45 | 85-265/120-380 | 100 |

AC-DC (100-200W) 隔离模块

| 型号 | 功率(W) | 输入电压(VAC/DC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|------------|-------|-----------------|-----|----------|-------|-----------------|----|
| DA120-G1N4 | 120 | 85-900VAC | 101 | WA100-L1 | 100 | 100-265/140-380 | 96 |
| DA150-G9N3 | 150 | 85-264VAC | 102 | NA150-L1 | 150 | 165-265/200-380 | 96 |
| NA200-M1 | 200 | 165-265/230-370 | 103 | | | | |

AC-DC 滤波器模块

| 型号 | 输入电压(VAC) | 页码 | 型号 | 输入电压(VAC) | 页码 |
|-----------|-----------|-----|-----------|-----------|-----|
| LC-AC01F2 | 85-305 | 104 | LC-AC01P2 | 85-265 | 105 |



电力行业模块

AC-DC 电力行业模块

| 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|-------------------|-------|----------------|----|---------------------|-------|----------------|-----|
| FA2-220S05N2 | 2 | 85-305/120-430 | 63 | FA3-220SXXA2N3 | 3 | 85-265/120-380 | 64 |
| DA5-220S12G9D4 | 5 | 85-305/120-430 | 68 | FA6-220SXXD2 | 6 | 85-265/120-380 | 73 |
| FA10-220S24E2D4 | 10 | 85-305/120-430 | 77 | FA10-220SXXC2N3 | 10 | 85-265/120-380 | 81 |
| UA10-220S12P2D | 10 | 90-265/127-380 | 82 | FA15-220H051212F2D4 | 15 | 85-265/120-380 | 83 |
| FA15-220E0512F2D4 | 15 | 85-265/120-380 | 84 | FA15-220S12Y2N3 | 15 | 85-305/120-430 | 67 |
| DA20-220D12F2D2 | 20 | 85-265/230-370 | 86 | FA20-220S12F2D4 | 20 | 85-265/120-380 | 84 |
| DA24-220S12G2N3Y | 24 | 85-305/120-430 | 89 | FA25-220SXXH2D4 | 25 | 85-305/120-430 | 90 |
| FA40-220S24H3N4 | 40 | 85-265/120-380 | 98 | DA120-1000S28G1N4 | 120 | 85-900VAC | 101 |

DC-DC 电力行业模块

| 型号 | 功率(W) | 输入标压(VDC) | 页码 | 型号 | 功率(W) | 输入标压(VDC) | 页码 |
|-----------------|-------|------------------|----|------------------|-------|-----------|----|
| FN1-XXSXXAN | 1 | 3.3,5,9,12,15,24 | 07 | NN1-XXSXXANT | 1 | 3.3,5 | 05 |
| FN1-05D12BN | 1 | 5 | 09 | FN1-05S05B3N | 1 | 5 | 10 |
| KW1-24D12ER3 | 1 | 24 | 28 | FK1-48S05E | 1 | 48 | 32 |
| KW1-24S12E3R3 | 1 | 24 | 28 | FN2-05S05C3N | 2 | 5 | 13 |
| FN2-05D15C3N | 2 | 5 | 13 | FN2-XXSXXCN | 2 | 5,12,24 | 12 |
| FW2-05S05C | 2 | 5 | 17 | KW3-XXDXER3/E3R3 | 3 | 24 | 29 |
| NN3-12S12C3N | 3 | 12 | 18 | FK6-XXSXXE2C3 | 6 | 24 | 31 |
| FD6-XXSXXA3 | 6 | 24,48 | 36 | FK10-18SXXE2C3 | 10 | 24 | 31 |
| PFD12-XXSXXA3N2 | 12 | 24,48 | 37 | FD20-XXSXXA3C2 | 20 | 24,48 | 43 |
| FD30-XXSXXB3C | 30 | 24,48 | 45 | K7805-2000 | 25 | 12 | 35 |



轨道交通模块

AC-DC 轨道交通行业模块

| 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|-----------------|-------|----------------|----|----------------|-------|----------------|----|
| FA15-220S05F2D4 | 5 | 85-265/120-380 | 84 | UA10-220S12P2D | 3 | 90-265/127-380 | 82 |
| FA15-220S12Y2N3 | 5 | 85-305/120-430 | 67 | | | | |

DC-DC 轨道交通行业模块

| 型号 | 功率(W) | 输入标压(VDC) | 页码 | 型号 | 功率(W) | 输入标压(VDC) | 页码 |
|----------------------|-------|----------------|----|----------------------|-------|------------|----|
| FN1-XXSXXAN | 1 | 3.3,5,12,15,24 | 07 | FN1-XXDXXB3N | 1 | 5,12,15,24 | 11 |
| FW1-XXSXXB | 1 | 5,12,24 | 16 | FW1-XXSXXB3 | 1 | 5,12,24 | 16 |
| FK6-18S12E2C3 | 6 | 24 | 31 | FD12-110SXXA3(C)(N)3 | 12 | 110 | 40 |
| FD20-110S12A3C3 | 20 | 110 | 40 | FD20-110S24B3C3 | 20 | 110 | 46 |
| FD50-110SXXB3(C)(N)3 | 50 | 110 | 47 | FD50-XXSXXB3C | 50 | 24,48 | 45 |
| WD75-24S12M1 | 75 | 24 | 53 | WD75-110S12M1 | 75 | 110 | 53 |
| WD150-110S24Q1 | 150 | 24,48,110 | 58 | | | | |



充电桩模块

AC-DC 充电桩行业模块

| 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|-----------------|-------|----------------|----|-----------------|-------|----------------|----|
| FA5-220S05B9D4 | 5 | 90-265/127-380 | 65 | DA10-220S12P2D4 | 10 | 90-310/127-438 | 79 |
| FA10-220S05E2D4 | 10 | 85-305/100-430 | 77 | FA15-220S12F2D4 | 15 | 85-265/120-380 | 84 |
| FA15-220S12Y2N3 | 15 | 85-305/120-430 | 67 | FA25-220SXXH2D4 | 25 | 85-305/120-430 | 90 |
| FA30-220S12H2D4 | 30 | 85-305/120-430 | 90 | FA40-220S12W2N4 | 40 | 85-305/120-430 | 99 |

DC-DC 充电桩行业模块

| 型号 | 功率(W) | 输入标压(VDC) | 页码 | 型号 | 功率(W) | 输入标压(VDC) | 页码 |
|-----------------|-------|-----------|----|---------------|-------|-----------|----|
| NN1-05D12ANT | 1 | 5 | 06 | FN1-05S05AN | 1 | 5 | 07 |
| FN1-12D12B3N | 1 | 12 | 11 | KW3-24S05E3R3 | 3 | 24 | 29 |
| PFD12-18SXXA3C2 | 12 | 24 | 37 | | | | |

隔离收发模块 充电桩行业模块

| 型号 | 波特率 | 同一网络连接节点数 | 页码 | 型号 | 波特率 | 同一网络连接节点数 | 页码 |
|-------------|---------|-----------|----|--------------|-------|-----------|----|
| RS485-05HSA | 500Kbps | 256 | 01 | PRSCAN-05HSA | 1Mbps | 110 | 01 |

滤波器模块 充电桩行业模块

| 型号 | 输入电压(VAC) | 页码 | 型号 | 输入电压(VAC) | 页码 |
|-----------|-----------|-----|-----------|-----------|-----|
| LC-AC01F2 | 85-305 | 104 | LC-AC01P2 | 85-265 | 105 |



通信行业模块

AC-DC 通信行业模块

| 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|----------------|-------|----------------|----|----------------|-------|-----------------|----|
| FA3-220S05A2N3 | 3 | 85-265/120-380 | 64 | WA100-220S12L1 | 100W | 100-265/140-380 | 96 |
| UA10-220S05P2D | 10 | 90-265/127-380 | 82 | | | | |

DC-DC 通信行业模块

| 型号 | 功率(W) | 输入标压(VDC) | 页码 | 型号 | 功率(W) | 输入标压(VDC) | 页码 |
|---------------|-------|----------------|----|-----------------|-------|-----------|----|
| FN1-XXSXXAN | 1 | 3.3,5,12,15,24 | 07 | NN1-XXSXXANT | 1 | 3.3,5 | 05 |
| FN1-05D12BN | 1 | 5 | 09 | FN1-05S05BN | 1 | 5 | 08 |
| FN1-05S09B3N | 1 | 5 | 10 | FN2-05S05CN | 2 | 5 | 12 |
| KW3-24S05ER3 | 3 | 24 | 29 | KW3-24D12ER3 | 3 | 24 | 29 |
| FD6-18D09A3 | 6 | 24 | 36 | PFD12-18S05A3C2 | 12 | 24 | 37 |
| K783V3-1000 | - | 24 | 34 | FD30-18S12B3 | 30 | 24 | 45 |
| FD50-XXSXXB3C | 50 | 24,48 | 45 | WD150-48S12Q1 | 150 | 48 | 58 |
| WD700-48S28R1 | 700 | 48 | 62 | | | | |



光伏专用模块

DC-DC 光伏行业模块

| 型号 | 功率(W) | 输入电压(VDC) | 页码 | 型号 | 功率(W) | 输入电压(VDC) | 页码 |
|-------------------|-------|-----------|----|-------------------|-------|-----------|----|
| BK15-600S05H1N4 | 15 | 200-1200 | 49 | BK15-500S12H2N6 | 15 | 100-1000 | 48 |
| BK25-150S12H2N4 | 25 | 64-280 | 48 | BK25-500SXXH1N4 | 25 | 100-1000 | 49 |
| BK25-600SXXH1N4 | 25 | 200-1200 | 49 | BK25-600D15H1N4 | 25 | 200-1200 | 49 |
| BK40-600S12W2N4 | 40 | 200-1200 | 50 | BK40-850S24G2N6 | 40 | 200-1500 | 51 |
| BK150-500S28BA1N6 | 150 | 250-1500 | 59 | BK150-800S24GB1N6 | 150 | 250-1500 | 60 |



物联网模块

AC-DC 物联网模块

| 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 | 型号 | 功率(W) | 输入电压(VAC/VDC) | 页码 |
|-----------------|-------|----------------|----|-----------------|-------|----------------|----|
| FA3-220S05A2N3 | 3 | 85-265/120-380 | 64 | DA3-220S05G9D4 | 1 | 85-305/120-430 | 66 |
| DA5-220S05G9D4 | 5 | 85-305/120-430 | 68 | FA5-220S12Y2N4 | 1 | 85-305/120-430 | 72 |
| DA10-220S12G9N4 | 10 | 85-305/120-430 | 78 | FA15-220S12F2D4 | 1 | 85-265/120-380 | 84 |
| FA25-220S12H2D4 | 25 | 85-305/120-430 | 90 | | | | |

DC-DC 物联网模块

| 型号 | 功率(W) | 输入标压(VDC) | 页码 | 型号 | 功率(W) | 输入标压(VDC) | 页码 |
|-----------------|-------|-----------|----|-----------------|-------|-----------|----|
| FN1-XXSXXAN | 1 | 3.3,5,12 | 07 | NN1-3V3S3V3ANT | 1 | 3.3 | 05 |
| FN2-05S05CN | 2 | 5 | 12 | KW3-24S05ER3 | 3 | 24 | 29 |
| FD6-18S05A3 | 6 | 24 | 36 | PFD12-36S12A3C2 | 12 | 48 | 37 |
| PFD20-18S05A3C2 | 20 | 24 | 43 | PFD20-36S12A3N2 | 20 | 48 | 43 |



◆ 产品特性 / Product Features

- RS485-XXHSAV波特率高达 High baud rate up to : 500Kbps
- RS485-XXLSAV波特率高达 High baud rate up to : 100Kbps
- RSCAN-XXHSA、RSCAN-XXHSSV波特率高达 High baud rate up to : 1Mbps
- 内置隔离电源 Integrated isolated DC/DC converter
- RS485-XXHSA同一网络可支持连接256个节点
The bus is able to support 256 nodes at maximum
- RSCAN-XXHSA同一网络可支持连接110个节点
The bus is able to support 110 nodes at maximum
- RS485-XXXSA两端隔离 Two-port isolation : 3750VAC
- RSCAN-XXHSA隔离电压 Isolation voltage : 2500VDC
- RSCAN-XXHSSV、RS485-XXXSSV隔离电压 Isolation voltage : 4000VDC
- 塑料外壳, 小型SMD封装和DIP封装自由选择, 符合UL94V-0级 小型 SIP封装
Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 总线保护 Bus protection
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.

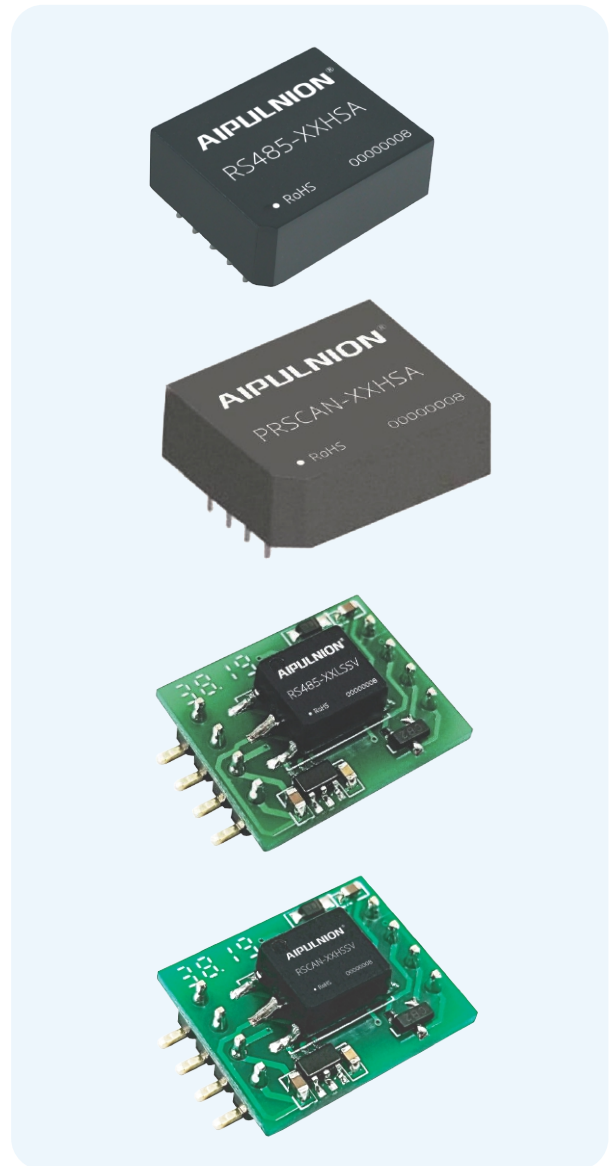
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | | 认证 Certificate |
|------------------|-----------------------|--------------------------------|------------------------------|-------------------|
| | 范围 Range (VDC) | 静态电流 Static current (mA) | 发送电流 Send current (mA) | |
| RS485-3V3HSA | 3.15-3.45 | 50 | 100 | 符合RoHS |
| RS485-05HSA | 4.75-5.25 | 40 | 80 | |
| RS485-3V3LSA | 3.15-3.45 | 50 | 100 | |
| RS485-05LSA | 4.75-5.25 | 40 | 80 | |
| RS485-3V3HSAV | 3.15-3.45 | 50 | 100 | |
| RS485-05HSAV | 4.75-5.25 | 40 | 80 | |
| RS485-3V3LSAV | 3.15-3.45 | 50 | 100 | |
| RS485-05LSAV | 4.75-5.25 | 40 | 80 | |
| RS485-3V3HSSV | 3.15-3.45 | 40 | 130 | |
| RS485-05HSSV | 4.75-5.25 | 50 | 130 | |
| RS485-3V3LSSV | 3.15-3.45 | 40 | 130 | |
| RS485-05LSSV | 4.75-5.25 | 50 | 130 | |
| PRSCAN-3V3HSA | 3.15-3.45 | 40 | 100 | |
| PRSCAN-05HSA | 4.75-5.25 | 30 | 80 | |
| RSCAN-3V3HSSV | 3.15-3.45 | 30 | 60 | |
| RSCAN-05HSSV | 4.75-5.25 | 40 | 70 | |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

◆ 产品实物图 / Product Photos

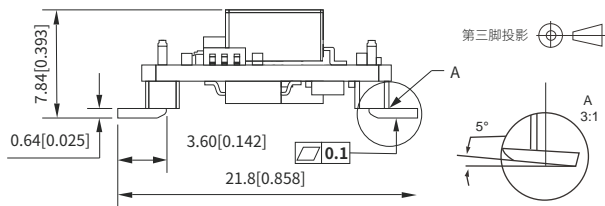
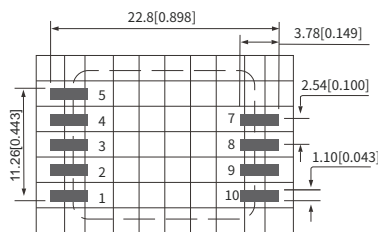
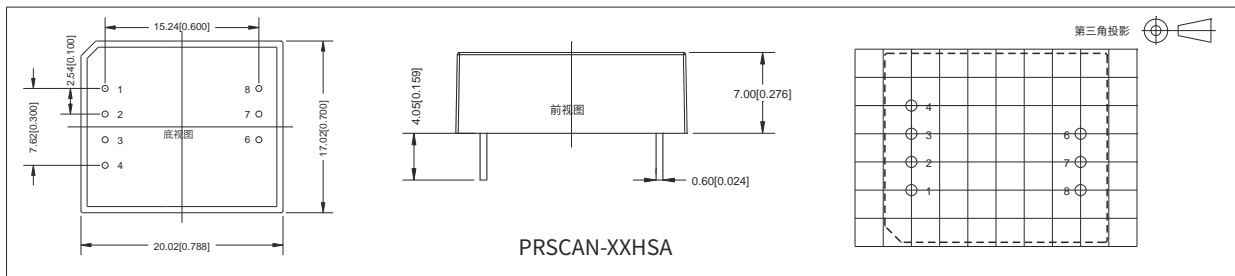
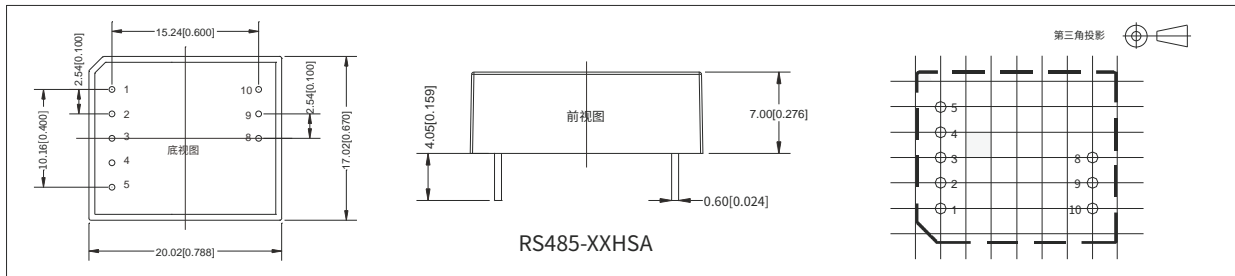


◆ 命名方式 / Nomination Method

PRS 485 - 05 H S A V
① ② ③ ④ ⑤ ⑥ ⑦

- ①: 产品系列: (P)RS为隔离收发模块系列。
- ②: 通信方式: “485”表示通信方式是485通信, “232”表示通信方式是232通信, “CAN”表示通信方式是CAN通信。
- ③: 输入电压: “5”表示输入电压5V, “3V3”表示输入电压3.3V。
- ④: 通信速率: “H”表示高速通信, 未标注为普通速率; “L”为低速。
- ⑤: 通道数量: “S”为单路, “D”为双路。
- ⑥: 插脚方式: “A”表示直插, “S”表示SMD。
- ⑦: 输出供电引脚: “V”表示输出带供电引脚, 无/“N”代表无供电引脚。

封装尺寸/Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 引脚定义 | | |
|------|---------------------|------------|
| 引脚 | 标识 | 功能 |
| 1 | +Vin | 输入电源正 |
| 2 | -Vin | 输入电源负 |
| 3 | TXD | 发送引脚 |
| 4 | RXD | 接收引脚 |
| 5 | CON | 发送、接收控制脚 |
| 7 | +V0 | 隔离电源输出正 |
| 8 | B | RS485H B引脚 |
| 9 | A | RS485H A引脚 |
| 10 | RGND | 隔离电源输出地 |
| 封装尺寸 | 21.80*14.80*7.20mm | |
| | 0.858*0.583*0.309mm | |
| 引脚型号 | RS485-XXSSV | |

| 引脚定义 | | |
|------|---------------------|------------|
| 引脚 | 标识 | 功能 |
| 1 | +Vin | 输入电源正 |
| 2 | -Vin | 输入电源负 |
| 3 | TXD | 发送引脚 |
| 4 | RXD | 接收引脚 |
| 5 | CON | 发送、接收控制脚 |
| 8 | B | RS485H B引脚 |
| 9 | A | RS485H A引脚 |
| 10 | RGND | 隔离电源输出地 |
| 封装尺寸 | 20.02*17.02*7.00mm | |
| | 0.788*0.670*0.276mm | |
| 引脚型号 | RS485-XXHSA(V) | |

| 引脚定义 | | |
|------|---------------------|---------|
| 引脚 | 标识 | 功能 |
| 1 | +Vin | 输入电源正 |
| 2 | -Vin | 输入电源负 |
| 3 | TXD | CAN发送引脚 |
| 4 | RXD | CAN接收引脚 |
| 6 | CANH | CAN H引脚 |
| 7 | CANL | CAN L引脚 |
| 8 | CGND | 隔离电源输出地 |
| 封装尺寸 | 20.02*17.02*7.00mm | |
| | 0.788*0.670*0.276mm | |
| 引脚型号 | PRSCAN-XXHSA | |

| 引脚定义 | | |
|------|---------------------|---------|
| 引脚 | 标识 | 功能 |
| 1 | VCC | 输入电源正 |
| 2 | GND | 输入电源地 |
| 3 | TXD | CAN发送引脚 |
| 4 | RXD | CAN接收引脚 |
| 5 | V0 | 隔离电源输出正 |
| 6 | CANH | CAN H引脚 |
| 7 | CANL | CAN L引脚 |
| 8 | CGND | 隔离电源输出地 |
| 封装尺寸 | 21.80*14.80*7.20mm | |
| | 0.858*0.583*0.309mm | |
| 引脚型号 | RSCAN-XXHSSV | |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
 Note:if the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

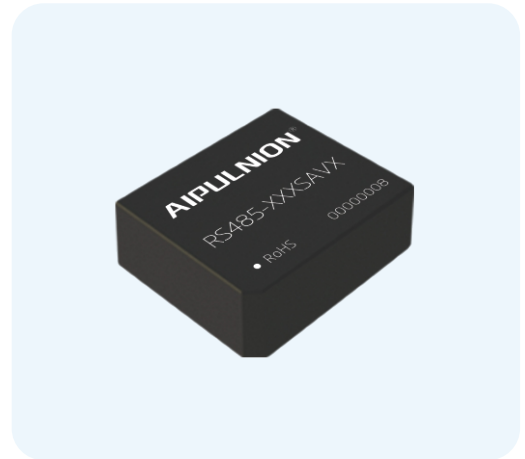


产品特性 / Product Features

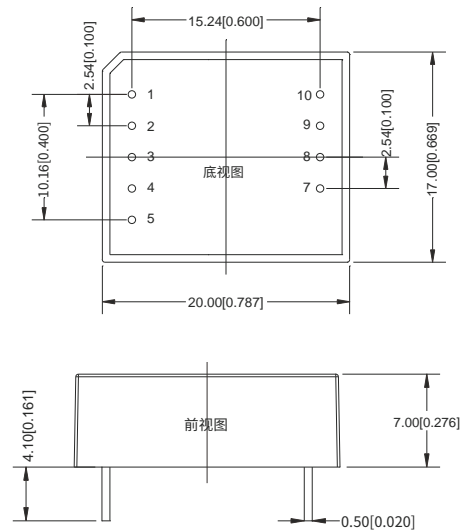
- RS485-XXSAVC/RS485-XXHSAVE波特率高达 High baud rate up to : 500Kbps
- RS485-XXLSAVC波特率高达 High baud rate up to : 115200bps
- 内置隔离电源 Integrated isolated DC/DC converter
- RS485-XXSAVC同一网络可支持连接128个节点
The bus is able to support 128 nodes at maximum
- RS485-XXLSAVC同一网络可支持连接32个节点
The bus is able to support 32 nodes at maximum
- RS485-XXHSAVE同一网络可支持连接256个节点
The bus is able to support 256 nodes at maximum
- 两端隔离 Two-port isolation : RS485-XXSAVC: 3000VAC RS485-XXHSAVE: 4000VDC
- 塑料外壳, 小型SMD封装和DIP封装自由选择, 符合UL94V-0级 小型 SIP封装
Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 自动切换收发状态 Receiving & Sending switch automatically
- 总线保护 Bus protection

● **应用领域:** 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

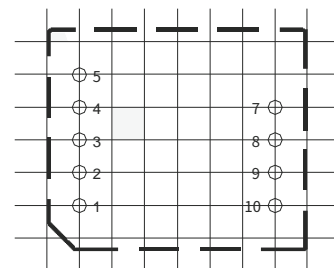
● **测试条件:** 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



封装尺寸 / Packing Dimension



第三角投影



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | | 认证 Certificate |
|------------------|-----------------------|--------------------------------|------------------------------|-------------------|
| | 范围值 Range (VDC) | 静态电流 Static current (mA) | 发送电流 Send current (mA) | |
| RS485-3V3HSAVC | 3.15-3.45 | 50 | 100 | 符合RoHS |
| RS485-05HSAVC | 4.75-5.25 | 40 | 80 | |
| RS485-3V3LSAVC | 3.15-3.45 | 50 | 100 | |
| RS485-05LSAVC | 4.75-5.25 | 40 | 80 | |
| RS485-3V3HSAVE | 3.15-3.45 | 50 | 100 | |
| RS485-05HSAVE | 4.75-5.25 | 40 | 80 | |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

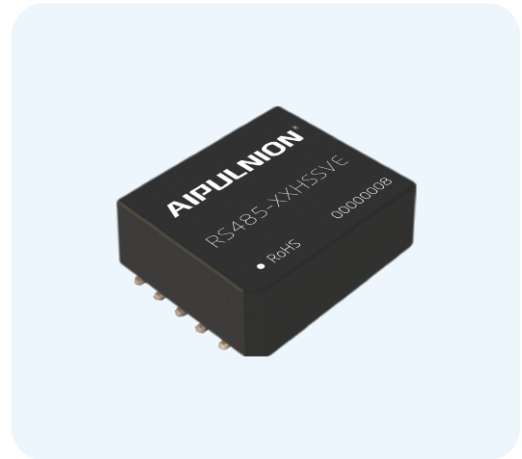
| 引脚定义 | | |
|------|---------------------|--------|
| 引脚 | 标识 | 功能 |
| 1 | VCC | 输入电源 |
| 2 | GND | 电源地 |
| 3 | TXD | 发送端 |
| 4 | RXD | 接收端 |
| 5 | NC | 空脚 |
| 7 | V0 | 隔离输出电源 |
| 8 | B | 信号脚 B |
| 9 | A | 信号脚 A |
| 10 | RGND | 隔离电源地 |
| 封装尺寸 | 20.00*17.00*7.00mm | |
| | 0.787*0.669*0.276mm | |
| 引脚型号 | RS485-XXSAVC | |

| 引脚定义 | | |
|------|---------------------|-----------|
| 引脚 | 标识 | 功能 |
| 1 | +VIN | 输入电源正 |
| 2 | -VIN | 输入电源负 |
| 3 | TXD | 发送脚 |
| 4 | RXD | 接收脚 |
| 5 | CON | 发送、接收控制引脚 |
| 7 | +V0 | 隔离电源输出正 |
| 8 | B | 引脚 B |
| 9 | A | 引脚 A |
| 10 | RGND | 隔离电源地 |
| 封装尺寸 | 20.00*17.00*7.00mm | |
| | 0.787*0.669*0.276mm | |
| 引脚型号 | RS485-XXHSAVE | |



产品特性 / Product Features

- 波特率高达 High baud rate up to : 500Kbps
- 内置隔离电源 Integrated isolated DC/DC converter
- 同一网络可支持连接256个节点
The bus is able to support 256 nodes at maximum
- 两端隔离 Two-port isolation : 4000VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 总线保护 Bus protection
- 塑料外壳, 小型SMD封装和DIP封装自由选择, 符合UL94V-0级 小型 SIP封装
Case:Plastic,meet UL94V-0,compact SIP packing
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表 / Product List

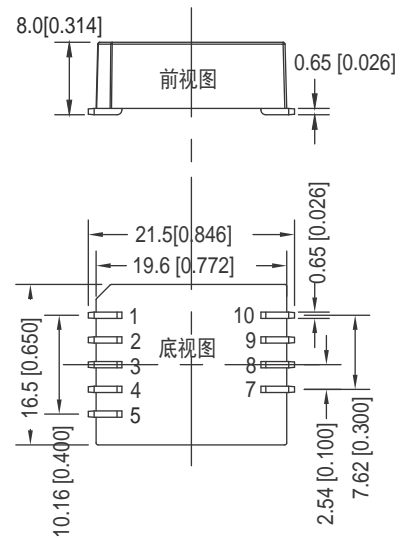


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | | 认证 Certificate |
|------------------|-----------------------|--------------------------------|------------------------------|-------------------|
| | 范围值 Range (VDC) | 静态电流 Static current (mA) | 发送电流 Send current (mA) | |
| RS485-3V3HSSVE | 3.15-3.45 | 50 | 100 | 符合RoHS |
| RS485-05HSSVE | 4.75-5.25 | 40 | 80 | |

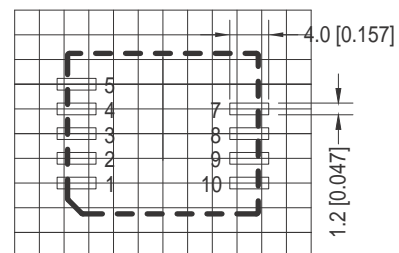
注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

| 引脚定义 | | |
|------|---------------------|-----------|
| 引脚 | 标识 | 功能 |
| 1 | VCC | 电源输入 |
| 2 | GND | 电源地 |
| 3 | TXD | 数据发送端 |
| 4 | RXD | 数据接收端 |
| 5 | CON | 收发状态切换控制脚 |
| 7 | V _{OUT} | 隔离电源输出 |
| 8 | B | 引脚 B |
| 9 | A | 引脚 A |
| 10 | RGND | 隔离电源地 |
| 封装尺寸 | 20.00*17.00*7.00mm | |
| 引脚型号 | 0.787*0.669*0.276mm | |
| | RS485-XXHSSVE | |

封装尺寸 / Packing Dimension



第三角投影



单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing) : 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance) : ±0.5mm
 未注明引脚直径公差 (Pin section tolerances) : ±0.10mm



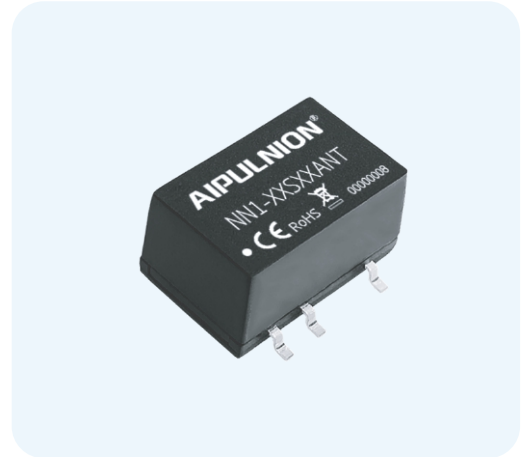
产品特性/Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至5mA No load input current as low as 5mA
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery

- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域

Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List



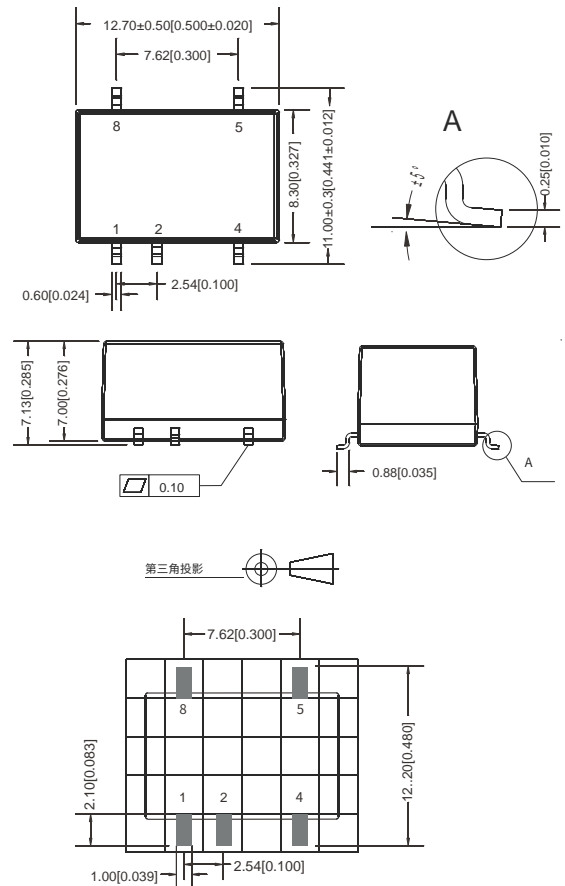
| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压电流 Output voltage/current | | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|------------------------|-------------------------|----------------------------------|----|-----|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) | | | | |
| | | | | MIN | MAX | | | |
| NN1-3V3S3V3ANT | 2.97-3.63 | 5 | 3.3 | 30 | 303 | 76 | | |
| NN1-3V3S05ANT | | | 5 | 20 | 200 | 82 | | |
| NN1-3V3S09ANT | | | 9 | 11 | 111 | 85 | | |
| NN1-3V3S12ANT | | | 12 | 8 | 83 | 87 | | |
| NN1-3V3S15ANT | | | 15 | 7 | 67 | 87 | | |
| NN1-3V3S24ANT | | | 24 | 4 | 42 | 85 | | |
| NN1-05S3V3ANT | | | 4.5-5.5 | 5 | 3.3 | 20 | 303 | 82 |
| NN1-05S05ANT | | | | | 5 | 20 | 200 | 86 |
| NN1-05S09ANT | | | | | 9 | 11 | 111 | 89 |
| NN1-05S12ANT | | | | | 12 | 8 | 83 | 89 |
| NN1-05S15ANT | 15 | 7 | | | 67 | 89 | | |
| NN1-05S24ANT | 24 | 4 | | | 42 | 88 | | |
| NN2-05S3V3ANT | 4.5-5.5 | 35 | 3.3 | 60 | 600 | 80 | | |
| NN2-05S05ANT | | | 5 | 40 | 400 | 84 | | |
| NN2-05S09ANT | | | 9 | 22 | 222 | 86 | | |
| NN2-05S12ANT | | | 12 | 17 | 167 | 88 | | |
| NN2-05S15ANT | | | 15 | 13 | 133 | 88 | | |
| NN2-05S24ANT | | | 24 | 8 | 83 | 88 | | |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 8 |
|--------------------------------|-----------------------|------|-----|------|-----|
| 单路 Single | -Vin | +Vin | GND | +Vo | NC |
| 功能 | 输入负极 | 输入正极 | 输出地 | 输出正极 | 无功能 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| ANT | 12.70*11.00*7.13mm | | | | |
| | 0.500*0.441*0.285inch | | | | |

NC: 不能与任何外部电路连接

封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm



产品特性/Product Features

- 定电压输入, 隔离非稳压双路输出 Fixed input voltage, isolated&unregulated double output
- 空载输入电流低 Low no-load input current
- 效率高达85% Transfer efficiency up to 85%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-50°C~+85°C
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List



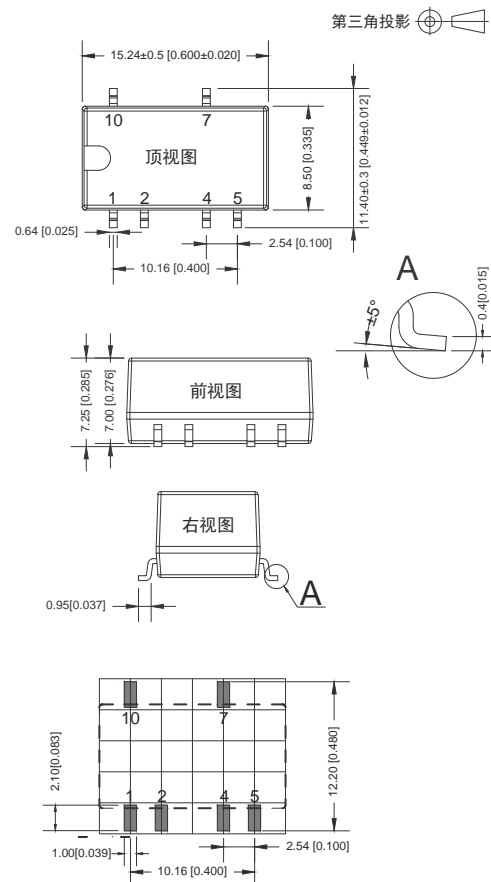
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| NN1-05D12ANT | 4.5-5.5 | ±12 | ±42 | 84 |
| NN1-12D12ANT | 10.8-13.2 | ±12 | ±42 | 85 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 7 | 10 |
|---------------------------------|-----------------------|------|-------|------|------|-----|
| 双路 Dual | GND | +Vin | 0V | -Vo | +Vo | NC |
| 功能 | 输入电源地 | 输入正极 | 输出公共端 | 输出负极 | 输出正极 | 无功能 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | |
| ANT | 15.24*7.50*6.50mm | | | | | |
| | 0.600*0.296*0.256inch | | | | | |

NC: 不能与任何外部电路连接

封装尺寸/Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至8mA No load input current as low as 8mA
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+105°C
 - 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



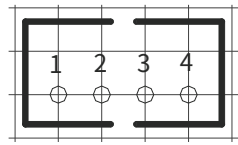
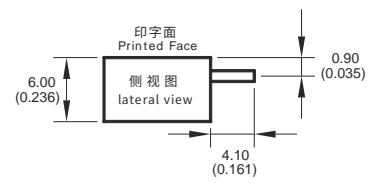
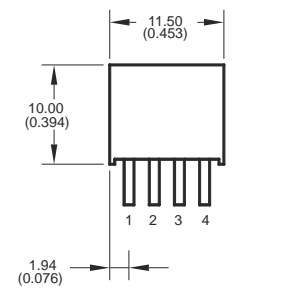
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FN1-3V3S3V3AN | 2.97-3.63 | 30 | 3.3 | 303 | 72 |
| FN1-3V3S05AN | | | 5 | 200 | 76 |
| FN1-3V3S12AN | | 45 | 12 | 83 | 80 |
| FN1-05S3V3AN | 4.5-5.5 | 25 | 3.3 | 300 | 72 |
| FN1-05S05AN | | | 17 | 5 | 200 |
| FN1-05S09AN | | 20 | 9 | 110 | 80 |
| | | | 12 | 83 | 80 |
| | | | 15 | 67 | 80 |
| FN1-05S15AN | | 24 | 42 | 80 | |
| FN1-12S3V3AN | | 10.8-13.2 | 15 | 3.3 | 300 |
| FN1-12S05AN | 11 | | | 5 | 200 |
| FN1-12S09AN | 15 | | 9 | 110 | 80 |
| FN1-12S12AN | 16 | | 12 | 83 | 80 |
| FN1-12S15AN | 13 | | 15 | 67 | 80 |
| FN1-12S24AN | 15 | | 24 | 42 | 80 |
| FN1-15S05AN | 13.5-16.5 | 10 | 5 | 200 | 80 |
| FN1-15S12AN | | | 12 | 12 | 83 |
| FN1-15S15AN | | 10 | 15 | 67 | 80 |
| FN1-24S3V3AN | 21.6-26.4 | 7 | 3.3 | 300 | 72 |
| FN1-24S05AN | | | 5 | 200 | 80 |
| FN1-24S09AN | | | 9 | 110 | 80 |
| FN1-24S12AN | | 8 | 12 | 83 | 80 |
| | | | 15 | 67 | 80 |
| FN1-24S15AN | | 24 | 42 | 80 | |
| FN1-24S24AN | | | | | |

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Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|-----------------------|------|------|------|
| 单路 Single | -Vin | +Vin | -Vo | +Vo |
| 功能 | 输入负极 | 输入正极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| A | 11.50*6.00*10.00mm | | | |
| | 0.453*0.236*0.394inch | | | |



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至8mA No load input current as low as 8mA
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+105°C
 - 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

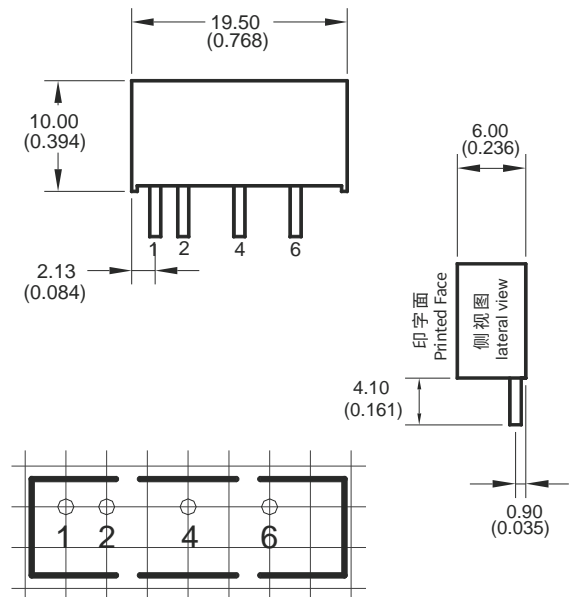


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FN1-3V3S3V3BN | 2.97-3.63 | 40 | 3.3 | 303 | 72 |
| FN1-3V3S05BN | | 30 | 5 | 200 | 78 |
| FN1-05S3V3BN | 4.5-5.5 | 19 | 3.3 | 303 | 74 |
| FN1-05S05BN | | 19 | 5 | 200 | 80 |
| FN1-05S09BN | | 23 | 9 | 111 | 80 |
| FN1-05S12BN | | 22 | 12 | 83 | 80 |
| FN1-05S15BN | | 25 | 15 | 67 | 80 |
| FN1-05S24BN | | 33 | 24 | 42 | 80 |
| FN1-12S3V3BN | | 10.8-13.2 | 16 | 3.3 | 303 |
| FN1-12S05BN | 10 | | 5 | 200 | 80 |
| FN1-12S09BN | 15 | | 9 | 111 | 80 |
| FN1-12S12BN | 14 | | 12 | 83 | 80 |
| FN1-12S15BN | 13 | | 15 | 67 | 80 |
| FN1-12S24BN | 14 | | 24 | 42 | 80 |
| FN1-15S05BN | 13.5-16.5 | 11 | 5 | 200 | 80 |
| FN1-15S12BN | | 12 | 12 | 83 | 80 |
| FN1-15S15BN | | 11 | 15 | 67 | 80 |
| FN1-15S24BN | | 12 | 24 | 42 | 80 |
| FN1-24S3V3BN | 21.6-26.4 | 7 | 3.3 | 303 | 74 |
| FN1-24S05BN | | | 5 | 200 | 80 |
| FN1-24S09BN | | | 9 | 111 | 80 |
| FN1-24S12BN | | | 12 | 83 | 80 |
| FN1-24S15BN | | | 15 | 67 | 80 |
| FN1-24S24BN | | | 24 | 42 | 80 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

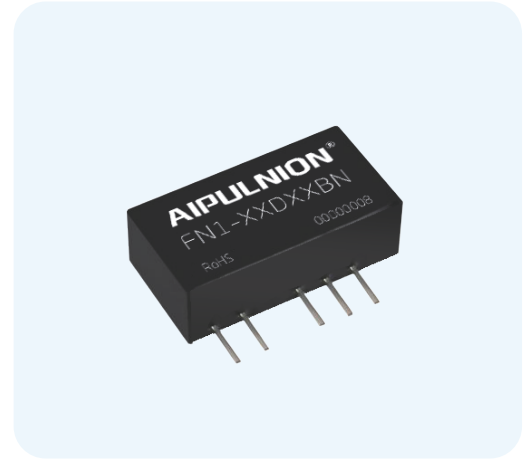
| 管脚号码 Pin-out | 1 | 2 | 4 | 6 |
|---------------------------------|-----------------------|------|------|------|
| 单路 Single | +Vin | -Vin | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| B | 19.50*6.00*10.00mm | | | |
| | 0.768*0.236*0.394inch | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至8mA No load input current as low as 8mA
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+105°C
 - 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

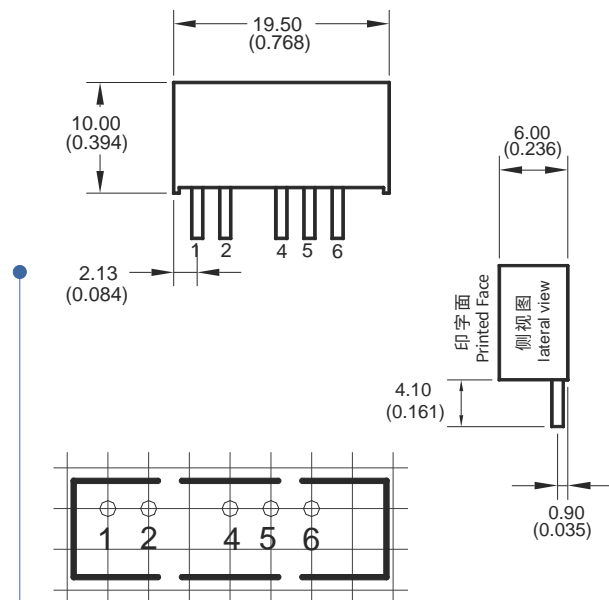


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FN1-05D05BN | 4.5-5.5 | 30 | ±5 | ±100 | 80 |
| FN1-05D09BN | | 26 | ±9 | ±56 | 80 |
| FN1-05D12BN | | 27 | ±12 | ±42 | 80 |
| FN1-05D15BN | | 31 | ±15 | ±33 | 80 |
| FN1-05D24BN | | 30 | ±24 | ±21 | 80 |
| FN1-12D05BN | 10.8-13.2 | 9 | ±5 | ±100 | 80 |
| FN1-12D09BN | | 16 | ±9 | ±56 | 80 |
| FN1-12D12BN | | 14 | ±12 | ±42 | 80 |
| FN1-12D15BN | | 12 | ±15 | ±33 | 80 |
| FN1-12D24BN | | 16 | ±24 | ±21 | 80 |
| FN1-15D05BN | 13.5-16.5 | 11 | ±5 | ±100 | 80 |
| FN1-15D12BN | | 15 | ±12 | ±42 | 80 |
| FN1-15D15BN | | 14 | ±15 | ±33 | 80 |
| FN1-24D05BN | 21.6-26.4 | 22 | ±5 | ±100 | 80 |
| FN1-24D09BN | | 7 | ±9 | ±56 | 80 |
| FN1-24D12BN | | 8 | ±12 | ±42 | 80 |
| FN1-24D15BN | | 9 | ±15 | ±33 | 80 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension



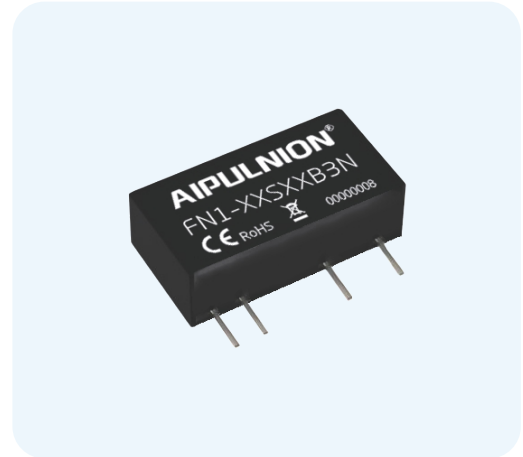
单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 6 |
|--------------------------------|-----------------------|------|------|-----|------|
| 双路 Dual | +Vin | -Vin | -Vo | COM | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| B | 19.50*6.00*10.00mm | | | | |
| | 0.768*0.236*0.394inch | | | | |



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达81% Transfer efficiency up to 81%
- 隔离电压 (Isolation voltage) : 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.

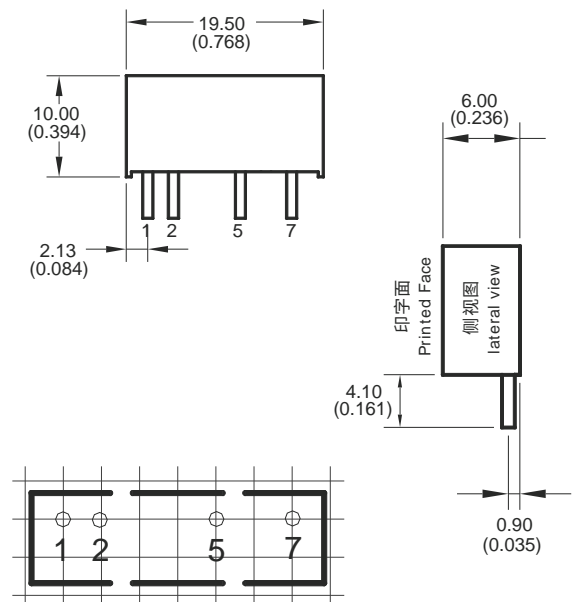


◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|----|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) | |
| FN1-3V3S3V3B3N | 2.97-3.63 | 25 | 3.3 | 303 | 73 | |
| FN1-3V3S05B3N | | | 5 | 200 | 78 | |
| FN1-3V3S24B3N | | | 24 | 42 | 78 | |
| FN1-05S3V3B3N | 4.5-5.5 | 20 | 3.3 | 303 | 73 | |
| FN1-05S05B3N | | | 5 | 200 | 80 | |
| FN1-05S09B3N | | | 9 | 111 | 80 | |
| FN1-05S12B3N | | | 12 | 83 | 80 | |
| FN1-05S15B3N | | | 15 | 67 | 81 | |
| FN1-05S24B3N | | | 24 | 42 | 81 | |
| FN1-12S3V3B3N | 10.8-13.2 | 20 | 3.3 | 303 | 75 | |
| FN1-12S05B3N | | | 5 | 200 | 80 | |
| FN1-12S09B3N | | | 9 | 111 | 80 | |
| FN1-12S12B3N | | | 12 | 83 | 80 | |
| FN1-12S15B3N | | | 15 | 67 | 81 | |
| FN1-12S24B3N | | | 24 | 42 | 81 | |
| FN1-15S05B3N | 13.5-16.5 | 12 | 5 | 200 | 80 | |
| FN1-15S09B3N | | | 9 | 111 | 80 | |
| FN1-15S12B3N | | 10 | 12 | 83 | 80 | |
| FN1-15S15B3N | | | 12 | 15 | 67 | 81 |
| FN1-15S24B3N | | | | 24 | 42 | 80 |
| FN1-24S3V3B3N | 21.6-26.4 | 8 | 3.3 | 303 | 75 | |
| FN1-24S05B3N | | 6 | 5 | 200 | 79 | |
| FN1-24S09B3N | | 8 | 9 | 111 | 80 | |
| FN1-24S12B3N | | | 12 | 83 | 81 | |
| FN1-24S15B3N | | | 15 | 67 | 81 | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

| | | | | |
|--------------------------------|-----------------------|------|------|------|
| 管脚号码 Pin-out | 1 | 2 | 5 | 7 |
| 单路 Single | +Vin | -Vin | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| B | 19.50*6.00*10.00mm | | | |
| | 0.768*0.236*0.394inch | | | |

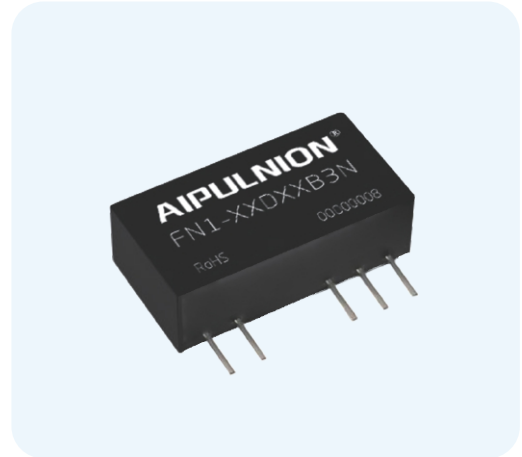
注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至8mA No load input current as low as 8mA
 - 效率高达81% Transfer efficiency up to 81%
 - 隔离电压 (Isolation voltage) : 3000VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+105°C
 - 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

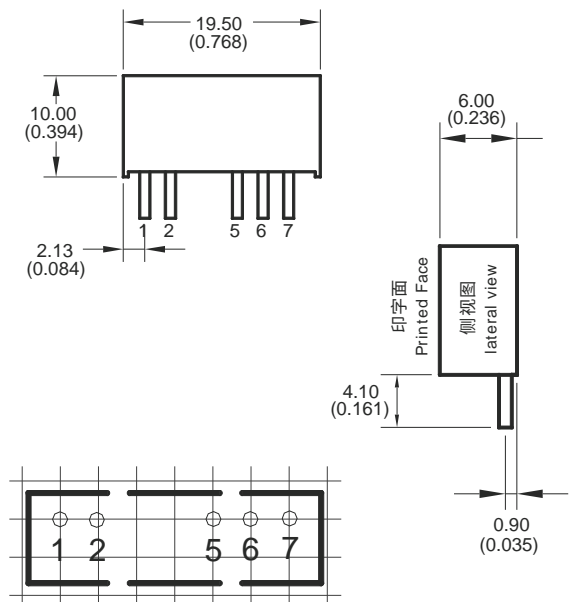


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FN1-05D05B3N | 4.5-5.5 | 17 | ±5 | ±100 | 80 |
| FN1-05D09B3N | | 23 | ±9 | ±56 | 80 |
| FN1-05D12B3N | | 25 | ±12 | ±42 | 80 |
| FN1-05D15B3N | | 28 | ±15 | ±33 | 81 |
| FN1-05D24B3N | | 33 | ±24 | ±21 | 81 |
| FN1-12D05B3N | 10.8-13.2 | 12 | ±5 | ±100 | 80 |
| FN1-12D09B3N | | 14 | ±9 | ±56 | 81 |
| FN1-12D12B3N | | 6 | ±12 | ±42 | 81 |
| FN1-12D15B3N | | 16 | ±15 | ±33 | 81 |
| FN1-12D24B3N | | 16 | ±24 | ±21 | 80 |
| FN1-15D05B3N | 13.5-16.5 | 12 | ±5 | ±100 | 80 |
| FN1-15D15B3N | | 13 | ±15 | ±31 | 81 |
| FN1-15D24B3N | | 12 | ±24 | ±21 | 78 |
| FN1-24D05B3N | 21.6-26.4 | 8 | ±5 | ±100 | 80 |
| FN1-24D09B3N | | | ±9 | ±56 | 80 |
| FN1-24D12B3N | | | ±12 | ±42 | 81 |
| FN1-24D15B3N | | | ±15 | ±33 | 79 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension

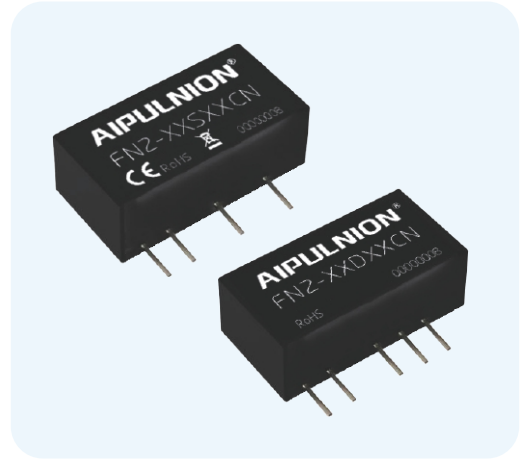


单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 5 | 6 | 7 |
|---------------------------------|-----------------------|------|------|-----|------|
| 双路 Dual | +Vin | -Vin | -Vo | COM | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| B | 19.50*6.00*10.00mm | | | | |
| | 0.768*0.236*0.394inch | | | | |

◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至10mA No load input current as low as 10mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery (仅双路输出 Only dual output)
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

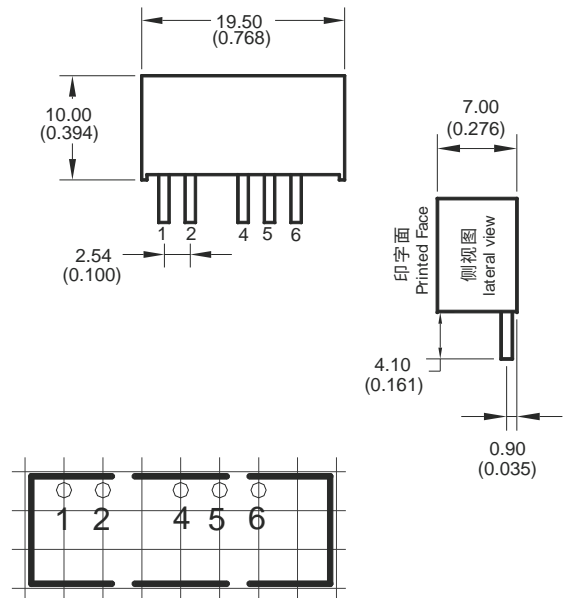


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| FN2-05S3V3CN | 4.5-5.5 | 50 | 3.3 | 400 | 79 |
| FN2-05S05CN | | | 5 | 400 | 84 |
| FN2-05S09CN | | | 9 | 220 | 79 |
| FN2-05S12CN | | | 12 | 167 | 84 |
| FN2-05S15CN | | | 15 | 133 | 84 |
| FN2-05S24CN | | | 24 | 83 | 84 |
| FN2-12S05CN | 10.8-13.2 | 20 | 5 | 400 | 80 |
| FN2-12S09CN | | | 9 | 220 | 82 |
| FN2-12S12CN | | | 12 | 167 | 84 |
| FN2-12S15CN | | | 15 | 133 | 84 |
| FN2-12S24CN | | | 24 | 83 | 84 |
| FN2-24S3V3CN | 21.6-26.4 | 10 | 3.3 | 400 | 79 |
| FN2-24S05CN | | | 5 | 400 | 80 |
| FN2-24S09CN | | | 9 | 220 | 86 |
| FN2-24S12CN | | | 12 | 167 | 84 |
| FN2-24S15CN | | | 15 | 133 | 86 |
| FN2-24S24CN | | | 24 | 83 | 86 |
| FN2-05D05CN | 4.5-5.5 | 50 | ±5 | ±200 | 80 |
| FN2-05D09CN | | 50 | ±9 | ±110 | 84 |
| FN2-05D12CN | | 28 | ±12 | ±83 | 84 |
| FN2-05D15CN | | 50 | ±15 | ±67 | 82 |
| FN2-12D05CN | 10.8-13.2 | 18 | ±5 | ±200 | 80 |
| FN2-12D09CN | | | ±9 | ±110 | 82 |
| FN2-12D12CN | | | ±12 | ±83 | 84 |
| FN2-12D15CN | | | ±15 | ±67 | 84 |
| FN2-24D05CN | 21.6-26.4 | 10 | ±5 | ±200 | 80 |
| FN2-24D09CN | | | ±9 | ±110 | 86 |
| FN2-24D12CN | | | ±12 | ±83 | 84 |
| FN2-24D15CN | | | ±15 | ±67 | 84 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

注意: 电源模块的各引脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

封装尺寸 / Packing Dimension

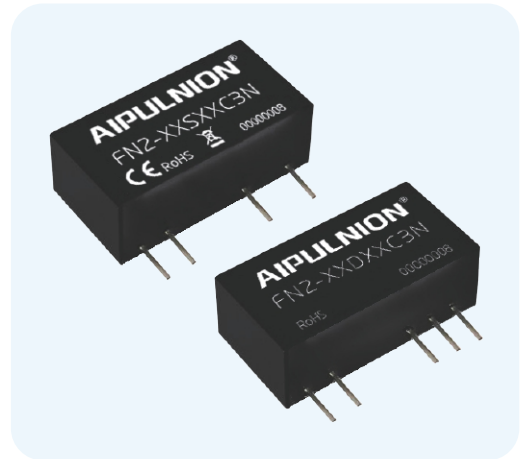


单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 6 |
|----------------------------------|-----------------------|-----|------|-----|------|
| 单路 Single | +Vin | GND | -Vo | NP | +Vo |
| 单路功能 | 输入正极 | 输入地 | 输出负极 | 空脚 | 输出正极 |
| 双路 Dual | +Vin | GND | -Vo | COM | +Vo |
| 双路功能 | 输入正极 | 输入地 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code / Dimension | L*W*H | | | | |
| C | 19.50*7.00*10.00mm | | | | |
| | 0.768*0.276*0.394inch | | | | |

◆ 产品特性/Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated&unregulated output
- 空载输入电流低至10mA No load input current as low as 10mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+105°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery (仅双路输出Only dual output)
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



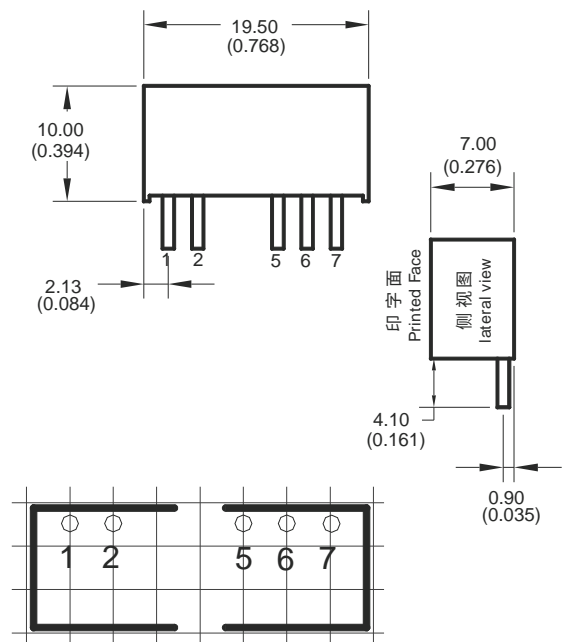
◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| FN2-05S3V3C3N | 4.5-5.5 | 50 | 3.3 | 600 | 72 |
| FN2-05S05C3N | | 24 | 5 | 400 | 80 |
| FN2-05S09C3N | | 50 | 9 | 220 | 84 |
| FN2-05S12C3N | | 50 | 12 | 167 | 83 |
| FN2-05S15C3N | | 26 | 15 | 133 | 82 |
| FN2-05S24C3N | | 50 | 24 | 83 | 84 |
| FN2-12S05C3N | 10.8-13.2 | 20 | 5 | 400 | 82 |
| FN2-12S09C3N | | | 9 | 220 | 81 |
| FN2-12S12C3N | | | 12 | 167 | 84 |
| FN2-12S15C3N | | | 15 | 133 | 85 |
| FN2-12S24C3N | | | 24 | 83 | 84 |
| FN2-24S3V3C3N | 21.6-26.4 | 10 | 3.3 | 600 | 87 |
| FN2-24S05C3N | | 6 | 5 | 400 | 80 |
| FN2-24S09C3N | | 7 | 9 | 220 | 86 |
| FN2-24S12C3N | | 6 | 12 | 167 | 84 |
| FN2-24S15C3N | | 10 | 15 | 133 | 86 |
| FN2-24S24C3N | | 10 | 24 | 83 | 86 |
| FN2-05D05C3N | 4.5-5.5 | 35 | ±5 | ±200 | 80 |
| FN2-05D09C3N | | | ±9 | ±111 | 84 |
| FN2-05D12C3N | | | ±12 | ±83 | 83 |
| FN2-05D15C3N | | | ±15 | ±67 | 83 |
| FN2-12D05C3N | 10.8-13.2 | 20 | ±5 | ±200 | 80 |
| FN2-12D09C3N | | | ±9 | ±111 | 82 |
| FN2-12D12C3N | | | ±12 | ±83 | 84 |
| FN2-12D15C3N | | | ±15 | ±67 | 84 |
| FN2-24D05C3N | 21.6-26.4 | 10 | ±5 | ±200 | 80 |
| FN2-24D09C3N | | | ±9 | ±111 | 84 |
| FN2-24D12C3N | | | ±12 | ±83 | 84 |
| FN2-24D15C3N | | | ±15 | ±67 | 84 |

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 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

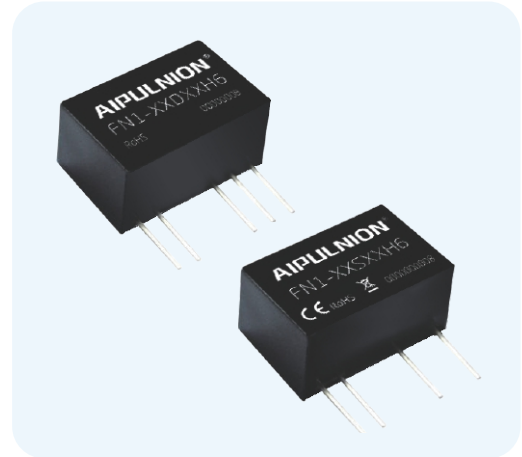
| 管脚号码 Pin-out | 1 | 2 | 5 | 6 | 7 |
|---------------------------------|-----------------------|------|------|-----|------|
| 单路 Single | +Vin | -Vin | -Vo | NP | +Vo |
| 单路功能 | 输入正极 | 输入负极 | 输出负极 | 空脚 | 输出正极 |
| 双路 Dual | +Vin | -Vin | -Vo | COM | +Vo |
| 双路功能 | 输入正极 | 输入负极 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| C | 19.50*7.00*10.00mm | | | | |
| | 0.768*0.276*0.394inch | | | | |

◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至10mA No load input current as low as 10mA
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 6000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C ~ +105°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery

● 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
 Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

● 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
 Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



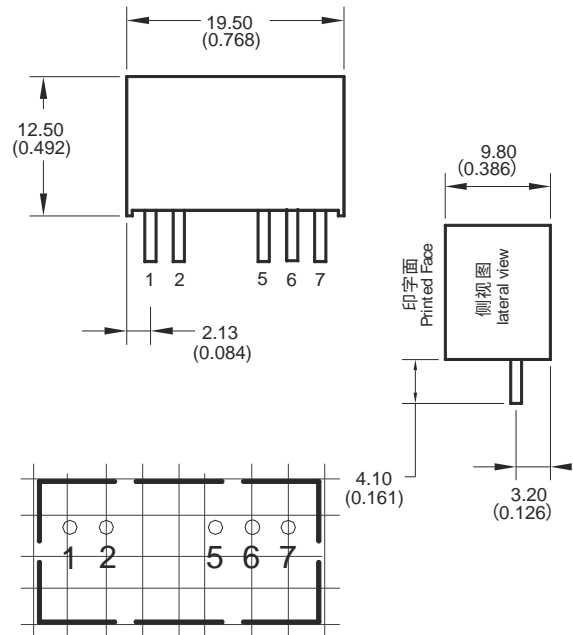
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FN1-05S3V3H6 | 4.5-5.5 | 20 | 3.3 | 200 | 71 |
| FN1-05S05H6 | | 20 | 5 | 111 | 80 |
| FN1-05S12H6 | | 40 | 12 | 83 | 74 |
| FN1-05S15H6 | | 40 | 15 | 67 | 74 |
| FN1-05S24H6 | | 23 | 24 | 200 | 80 |
| FN1-12S05H6 | 10.8-13.2 | 10 | 5 | 111 | 75 |
| FN1-12S12H6 | | 13 | 12 | 83 | 83 |
| FN1-12S15H6 | | 20 | 15 | 67 | 79 |
| FN1-24S05H6 | 21.6-26.4 | 7 | 5 | 200 | 80 |
| FN1-24S12H6 | | 10 | 12 | 111 | 76 |
| FN1-24S15H6 | | 10 | 15 | 83 | 76 |
| FN1-05D05H6 | 4.5-5.5 | 40 | ±5 | ±100 | 76 |
| FN1-05D09H6 | | 40 | ±9 | ±56 | 78 |
| FN1-05D12H6 | | 25 | ±12 | ±42 | 82 |
| FN1-05D15H6 | | 40 | ±15 | ±33 | 74 |
| FN1-12D05H6 | | 10.8-13.2 | 10 | ±5 | ±100 |
| FN1-12D09H6 | 20 | | ±9 | ±56 | 78 |
| FN1-12D12H6 | 20 | | ±12 | ±42 | 71 |
| FN1-12D15H6 | 20 | | ±15 | ±33 | 73 |
| FN1-24D05H6 | 21.6-26.4 | 10 | ±5 | ±100 | 73 |
| FN1-24D09H6 | | 10 | ±9 | ±56 | 77 |
| FN1-24D12H6 | | 10 | ±12 | ±42 | 74 |
| FN1-24D15H6 | | 80 | ±15 | ±33 | 84 |

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 注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54 mm (0.1 inch)
 未注尺寸公差 (General tolerance): ±0.5 mm

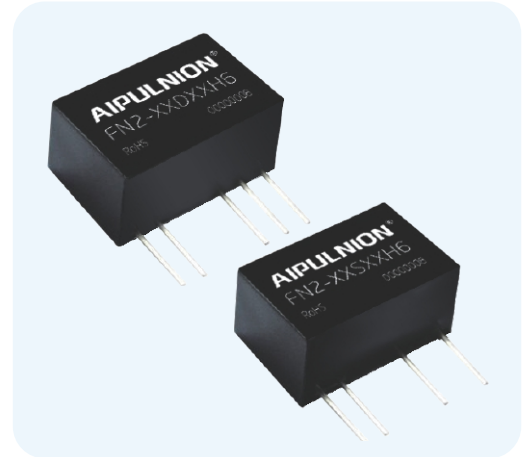
| 管脚号码 Pin-out | 1 | 2 | 5 | 6 | 7 |
|---------------------------------|-----------------------|------|------|-----|------|
| 单路 Single | +Vin | -Vin | -Vo | NP | +Vo |
| 单路功能 | 输入正极 | 输入负极 | 输出负极 | 空脚 | 输出正极 |
| 双路 Dual | +Vin | -Vin | -Vo | COM | +Vo |
| 双路功能 | 输入正极 | 输入负极 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| H | 19.50*9.80*12.50mm | | | | |
| | 0.768*0.386*0.492inch | | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至15mA No load input current as low as 15mA
 - 效率高达88% Transfer efficiency up to 88%
 - 隔离电压 (Isolation voltage) : 6000VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+105°C
 - 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
 Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
 Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

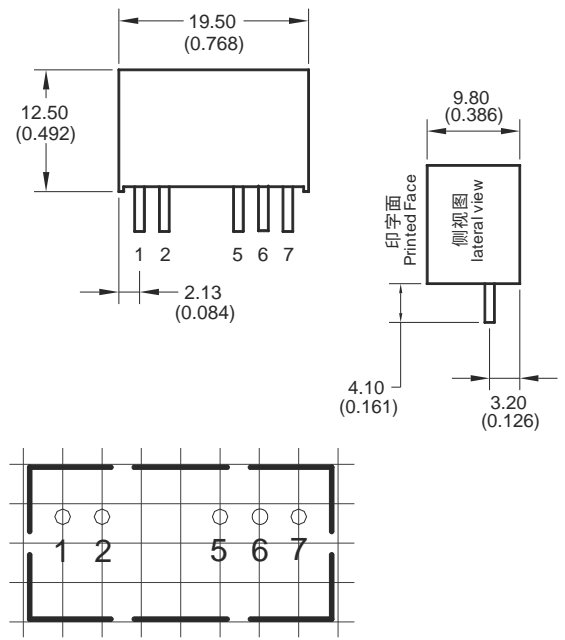


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| FN2-05S05H6 | 4.5-5.5 | 22 | 5 | 400 | 81 |
| FN2-05S12H6 | | 50 | 12 | 167 | 77 |
| FN2-05S15H6 | | 50 | 15 | 133 | 77 |
| FN2-05S24H6 | | 50 | 24 | 83 | 79 |
| FN2-12S05H6 | 10.8-13.2 | 11 | 5 | 400 | 82 |
| FN2-12S12H6 | | 13 | 12 | 167 | 88 |
| FN2-12S15H6 | | 17 | 15 | 133 | 86 |
| FN2-24S05H6 | 21.6-26.4 | 8 | 5 | 400 | 81 |
| FN2-24S12H6 | | 5 | 12 | 167 | 86 |
| FN2-24S15H6 | | 15 | 15 | 133 | 82 |
| FN2-24S24H6 | | 11 | 24 | 83 | 85 |
| FN2-05D05H6 | 4.5-5.5 | 28 | ±5 | ±200 | 76 |
| FN2-05D12H6 | | 31 | ±12 | ±83 | 81 |
| FN2-05D15H6 | | 80 | ±15 | ±67 | 78 |
| FN2-12D05H6 | 10.8-13.2 | 12 | ±5 | ±200 | 83 |
| FN2-12D09H6 | | 35 | ±9 | ±110 | 78 |
| FN2-12D12H6 | | 35 | ±12 | ±83 | 78 |
| FN2-12D15H6 | | 14 | ±15 | ±67 | 86 |
| FN2-24D05H6 | 21.6-26.4 | 15 | ±5 | ±200 | 77 |
| FN2-24D12H6 | | 15 | ±12 | ±83 | 80 |
| FN2-24D15H6 | | 10 | ±15 | ±67 | 86 |

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注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 5 | 6 | 7 |
|---------------------------------|-----------------------|------|------|-----|------|
| 单路 Single | +Vin | -Vin | -Vo | NP | +Vo |
| 单路功能 | 输入正极 | 输入负极 | 输出负极 | 空脚 | 输出正极 |
| 双路 Dual | +Vin | -Vin | -Vo | COM | +Vo |
| 双路功能 | 输入正极 | 输入负极 | 输出负极 | 公共端 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| H | 19.50*9.80*12.50mm | | | | |
| | 0.768*0.386*0.492inch | | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性/Product Features

- 定电压输入, 隔离稳压输出 Fixed input voltage, Isolated voltage regulator output
- 空载输入电流低至11mA No load input current as low as 11mA
- 效率高达79% Transfer efficiency up to 79%
- 隔离电压 (Isolation voltage) : B: 1500VDC / B3: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification

- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

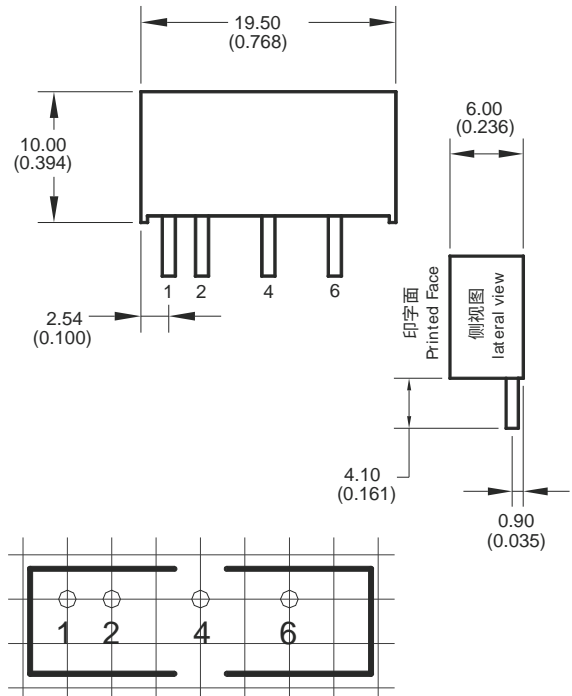


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| FW1-05S05B | 4.75-5.25 | 30 | 5 | 200 | 72 |
| FW1-05S12B | | | 12 | 83 | 78 |
| FW1-05S15B | | | 15 | 67 | 77 |
| FW1-05S24B | | | 24 | 42 | 73 |
| FW1-12S05B | 11.4-12.6 | 15 | 5 | 200 | 77 |
| FW1-12S12B | | | 12 | 83 | 77 |
| FW1-12S15B | | | 15 | 67 | 74 |
| FW1-12S24B | | | 24 | 42 | 67 |
| FW1-24S05B | 22.8-25.2 | 10 | 5 | 200 | 74 |
| FW1-24S12B | | | 12 | 83 | 76 |
| FW1-24S15B | | | 15 | 67 | 77 |
| FW1-24S24B | | | 24 | 42 | 67 |
| FW1-05S05B3 | 4.75-5.25 | 29 | 5 | 200 | 71 |
| FW1-05S12B3 | | 23 | 12 | 83 | 78 |
| FW1-05S15B3 | | 30 | 15 | 67 | 77 |
| FW1-05S24B3 | | 40 | 24 | 42 | 73 |
| FW1-12S05B3 | 11.4-12.6 | 10 | 5 | 200 | 77 |
| FW1-12S12B3 | | 10 | 12 | 83 | 79 |
| FW1-12S15B3 | | 11 | 15 | 67 | 74 |
| FW1-24S05B3 | 22.8-25.2 | 7 | 5 | 200 | 74 |
| FW1-24S12B3 | | 11 | 12 | 83 | 76 |
| FW1-24S15B3 | | 8 | 15 | 67 | 77 |
| FW1-24S24B3 | | 13 | 24 | 42 | 67 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 4 | 6 |
|--------------------------------|-----------------------|------|------|------|
| 单路 Single | +Vin | -Vin | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| B | 19.50*6.00*10.00mm | | | |
| | 0.768*0.236*0.394inch | | | |

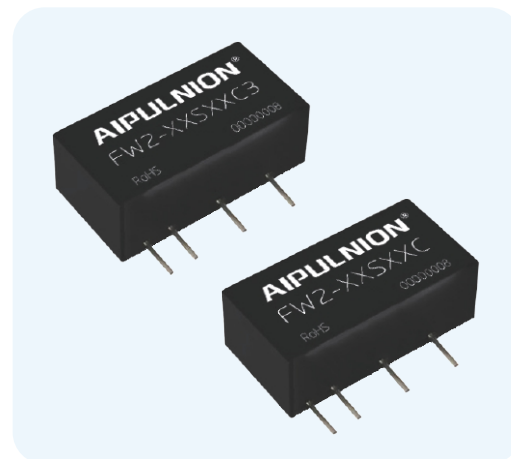
注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性/Product Features

- 定电压输入, 隔离稳压输出 Fixed input voltage, Isolated voltage regulator output
- 空载输入电流低至11mA No load input current as low as 11mA
- 效率高达80% Transfer efficiency up to 80%
- 隔离电压 (Isolation voltage) : C: 1000VDC / C3: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery

- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



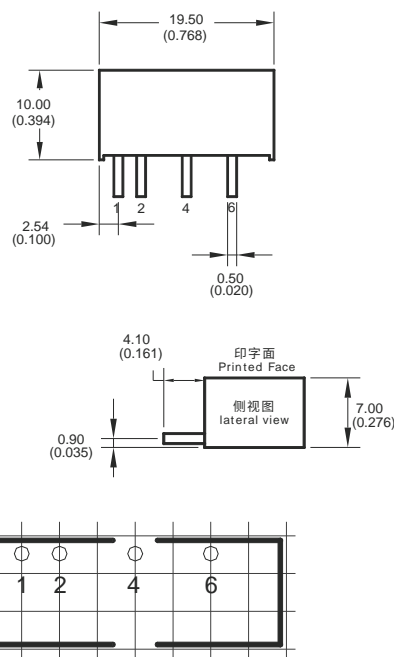
◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| FW2-05S05C | 4.75-5.25 | 27 | 5 | 400 | 68 |
| FW2-05S12C | | 26 | 12 | 167 | 78 |
| FW2-12S05C | 11.4-12.6 | 12 | 5 | 400 | 74 |
| FW2-12S12C | | 11 | 12 | 167 | 82 |
| FW2-15S05C | 14.25-15.75 | 16 | 5 | 400 | 70 |
| FW2-15S15C | | 9 | 15 | 100 | 75 |
| FW2-24S05C | 22.8-25.2 | 8 | 5 | 400 | 73 |
| FW2-24S12C | | 7 | 12 | 167 | 79 |
| FW2-24S15C | | 11 | 15 | 133 | 80 |
| FW2-05S05C3 | 4.75-5.25 | 27 | 5 | 400 | 68 |
| FW2-05S12C3 | | 26 | 12 | 167 | 78 |
| FW2-12S05C3 | 11.4-12.6 | 12 | 5 | 400 | 74 |
| FW2-12S12C3 | | 11 | 12 | 167 | 82 |
| FW2-15S05C3 | 14.25-15.75 | 16 | 5 | 400 | 70 |
| FW2-24S05C3 | | 9 | 5 | 167 | 73 |
| FW2-24S12C3 | 22.8-25.2 | 7 | 12 | 400 | 79 |
| FW2-24S15C3 | | 8 | 15 | 133 | 80 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Dimension



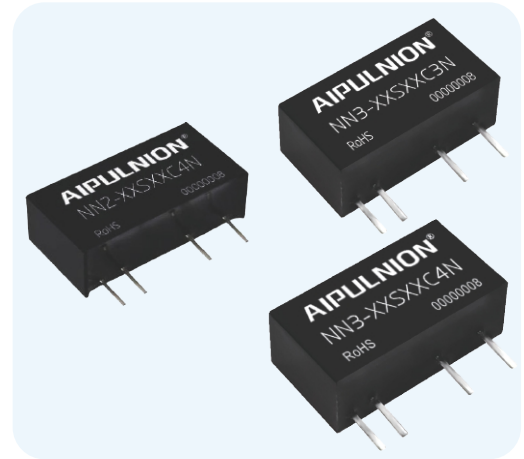
单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5 mm

| 管脚号码 Pin-out | 1 | 2 | 4 | 6 |
|--------------------------------|-----------------------|------|------|------|
| 单路 Single | +Vin | -Vin | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code Dimension | L*W*H | | | |
| C | 19.50*7.00*10.00mm | | | |
| | 0.768*0.276*0.394inch | | | |



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至12mA No load input current as low as 12mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : C3N:3000VDC, C4N:4000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: NN2: -40~+105°C, NN3: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

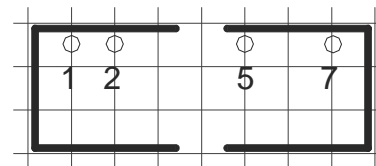
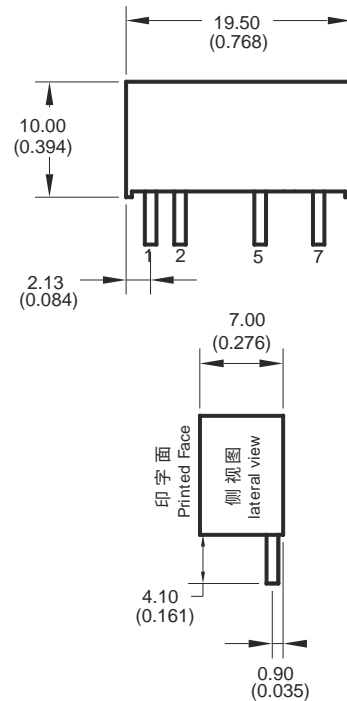


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|------------------------|-----------------------------------|-------------------------|---------------------------|
| | 范围值 Range | 输出空载 Output no load | 电压 Voltage | 电流 (mA) Current (mA) | (%TYP) |
| | (VDC) | (mA) | (VDC) | MAX | |
| NN3-05S05C3N | 4.5-5.5 | 5 | 5 | 600 | 83 |
| NN2-05S24C4N | | 16 | 24 | 83 | 86 |
| NN3-12S05C3N | 10.8-13.2 | 12 | 5 | 600 | 82 |
| NN3-12S12C3N | | 12 | 12 | 250 | 86 |
| NN3-24S24C4N | 21.6-26.4 | 24 | 24 | 125 | 86 |
| NN3-12S05C4N | 10.8-13.2 | 12 | 5 | 600 | 82 |
| NN3-12S12C4N | | 12 | 12 | 250 | 86 |

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 Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power / module's input power.

| 管脚号码 Pin-out | 1 | 2 | 5 | 7 |
|--------------------------------|-----------------------|-----|------|------|
| 单路 Single | +Vin | GND | -Vo | +Vo |
| 功能 | 输入正极 | 输入地 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| C | 19.50*7.00*10.00mm | | | |
| | 0.768*0.276*0.394inch | | | |

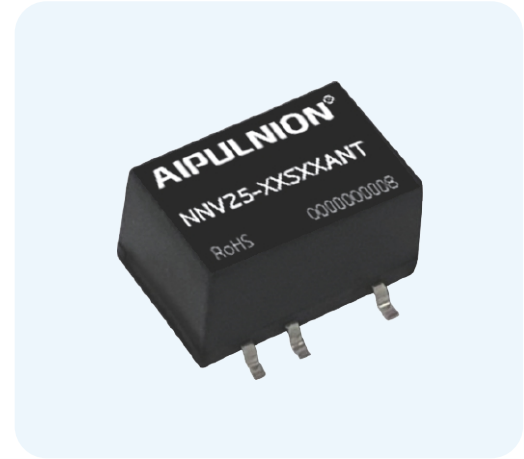
封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.25mm

◆ 产品特性/Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至5mA No load input current as low as 5mA
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -50°C~+115°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



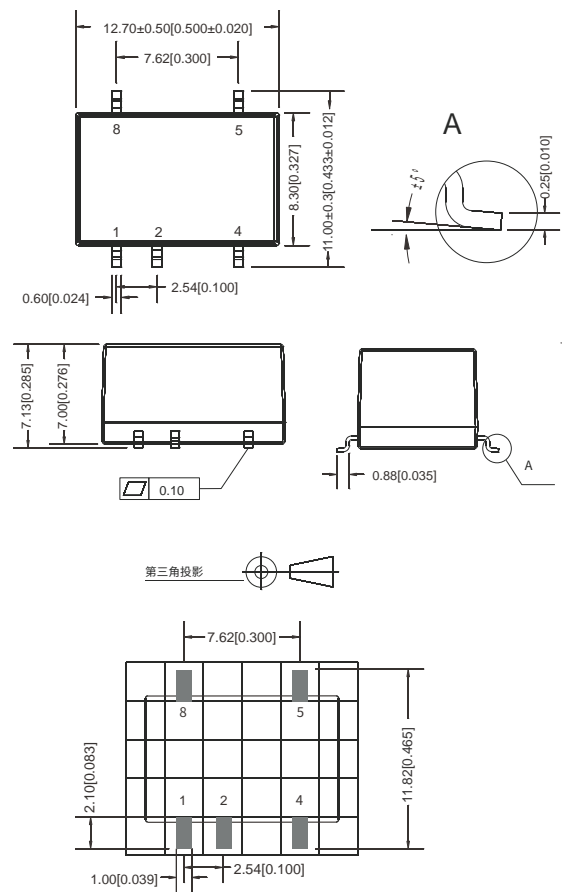
| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|------------------------|-------------------------|----------------------------------|-----|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) | MIN | MAX | |
| | NNV25-05S05ANT | 4.5-5.5 | 5 | 5 | 5 | 50 | 82 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 8 |
|--------------------------------|-----------------------|------|-----|------|-----|
| 单路 Single | -Vin | +Vin | GND | +Vo | NC |
| 功能 | 输入负极 | 输入正极 | 输出地 | 输出正极 | 无功能 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| ANT | 12.70*11.00*7.13mm | | | | |
| | 0.500*0.441*0.285inch | | | | |

NC:不能与任何外部电路连接

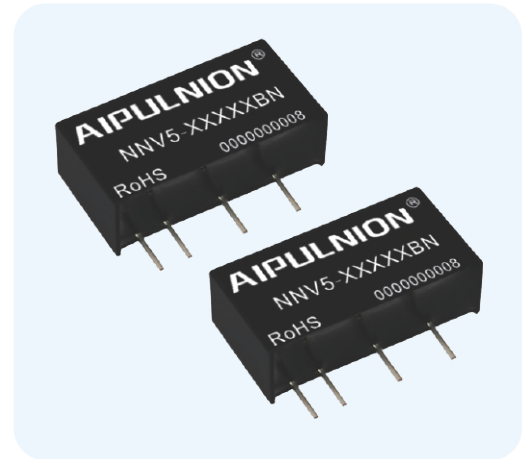
封装尺寸/Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.25mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated&unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达83% Transfer efficiency up to 83%
- 隔离电压 (Isolation voltage) : BN: 1500VDC / B3N: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 可满载工作环境温度 Operating Temp:-40°C~+85°C
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

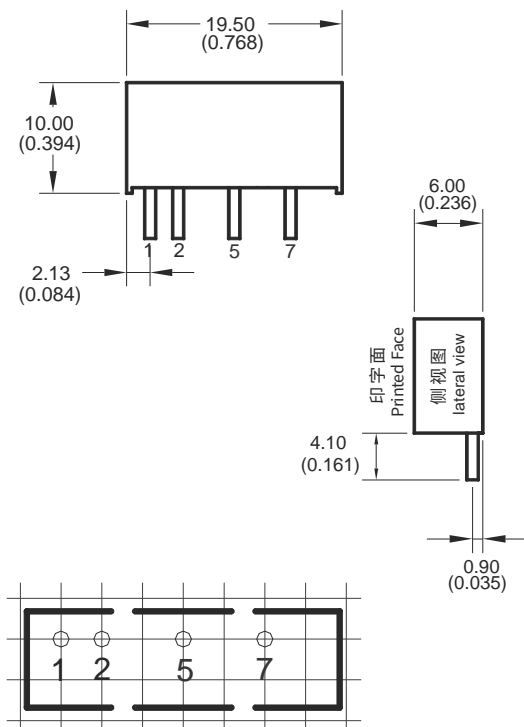


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| NNV5-05S05B3N | 4.5-5.5 | 6 | 5 | 100 | 83 |
| NNV5-05S05BN | | 6 | 5 | 100 | 83 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 5 | 7 |
|---------------------------------|-----------------------|-----|------|------|
| 单路 Single | +Vin | GND | -Vo | +Vo |
| 功能 | 输入正极 | 输入地 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| B | 19.50*6.00*10.00mm | | | |
| | 0.768*0.236*0.394inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.50mm

◆ 产品特性/ Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至7mA No load input current as low as 7mA
 - 效率高达75% Transfer efficiency up to 75%
 - 隔离电压 (Isolation voltage) : 1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+85°C
 - 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/ Product List

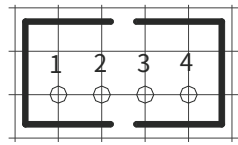
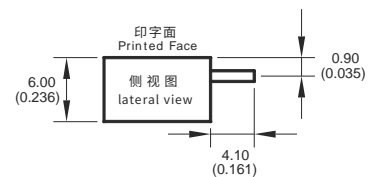
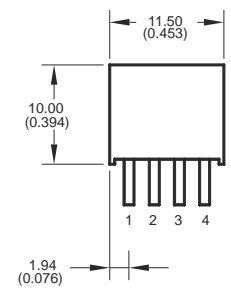


| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|------------------------|-------------------------|----------------------------------|--|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) | (%TYP) | | |
| | | | MAX | MAX | | | |
| FNV5-3V3S3V3A | 2.97-3.63 | 45 | 3.3 | 150 | 70 | | |
| FNV5-3V3S05A | | | 5 | 100 | 70 | | |
| FNV5-3V3S12A | | | 12 | 42 | 70 | | |
| FNV5-05S3V3A | 4.5-5.5 | 30 | 3.3 | 150 | 74 | | |
| FNV5-05S05A | | | 5 | 100 | 75 | | |
| FNV5-05S09A | | | 9 | 55 | 75 | | |
| FNV5-05S12A | | | 12 | 42 | 76 | | |
| FNV5-05S15A | | | 15 | 33 | 77 | | |
| FNV5-05S24A | | | 24 | 21 | 72 | | |
| FNV5-12S3V3A | 10.8-13.2 | 13 | 3.3 | 150 | 74 | | |
| FNV5-12S05A | | | 5 | 100 | 74 | | |
| FNV5-12S09A | | | 9 | 55 | 74 | | |
| FNV5-12S12A | | | 12 | 42 | 75 | | |
| FNV5-12S15A | | | 15 | 33 | 75 | | |
| FNV5-12S24A | | | 24 | 21 | 71 | | |
| FNV5-24S3V3A | 21.6-26.4 | 7 | 3.3 | 150 | 70 | | |
| FNV5-24S05A | | | 5 | 100 | 74 | | |
| FNV5-24S09A | | | 9 | 55 | 75 | | |
| FNV5-24S12A | | | 12 | 42 | 75 | | |
| FNV5-24S15A | | | 15 | 33 | 76 | | |
| FNV5-24S24A | | | 24 | 21 | 76 | | |

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Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸/ Packing Dimension



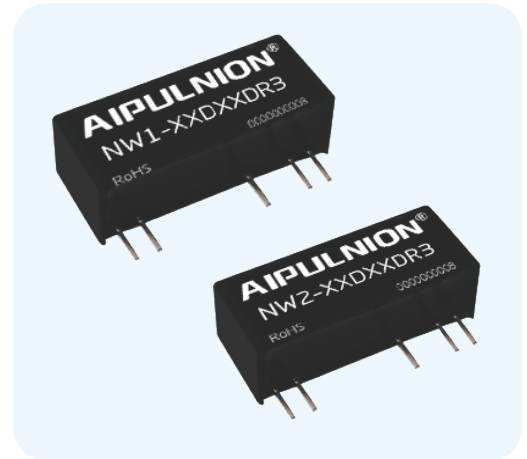
单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|-----------------------|------|------|------|
| 单路 Single | GND | +Vin | -Vo | +Vo |
| 功能 | 输入地 | 输入正极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| A | 11.50*6.00*10.00mm | | | |
| | 0.453*0.236*0.394inch | | | |



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至4mA No load input current as low as 4mA
- 效率高达83% Transfer efficiency up to 83%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



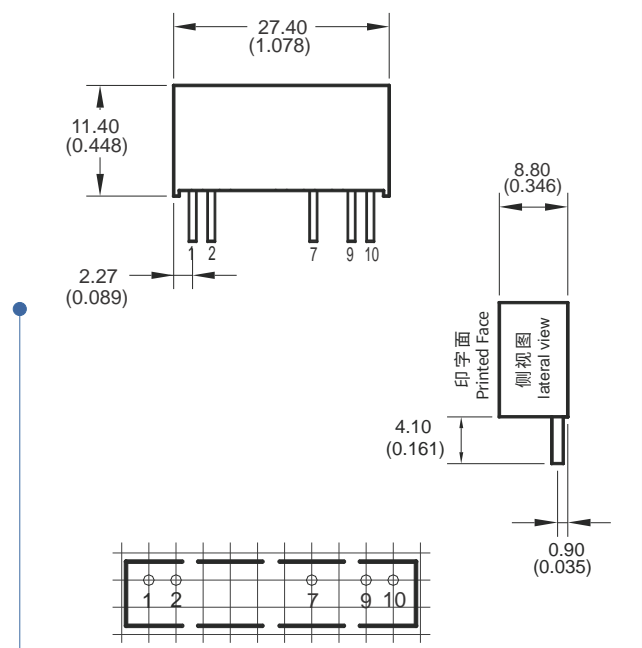
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| NW1-05D05DR3 | 4.75-5.25 | 11 | ±5 | ±100 | 77 |
| NW1-05D09DR3 | | 14 | ±9 | ±56 | 80 |
| NW1-05D12DR3 | | 17 | ±12 | ±42 | 82 |
| NW1-05D15DR3 | | 25 | ±15 | ±33 | 80 |
| NW1-12D05DR3 | 11.4-12.6 | 5 | ±5 | ±100 | 80 |
| NW1-12D09DR3 | | 6 | ±9 | ±56 | 83 |
| NW1-12D12DR3 | | 8 | ±12 | ±42 | 81 |
| NW1-12D15DR3 | | 11 | ±15 | ±33 | 83 |
| NW1-24D05DR3 | 22.8-25.2 | 4 | ±5 | ±100 | 80 |
| NW1-24D12DR3 | | 6 | ±12 | ±42 | 82 |
| NW1-24D15DR3 | | 8 | ±15 | ±33 | 83 |
| NW2-05D05DR3 | 4.75-5.25 | 11 | ±5 | ±200 | 77 |
| NW2-05D09DR3 | | 14 | ±9 | ±111 | 77 |
| NW2-05D12DR3 | | 17 | ±12 | ±83 | 77 |
| NW2-05D15DR3 | | 25 | ±15 | ±67 | 77 |
| NW2-05D05DR3 | 11.4-12.6 | 4 | ±5 | ±200 | 77 |
| NW2-05D09DR3 | | 8 | ±9 | ±111 | 77 |
| NW2-05D12DR3 | | 9 | ±12 | ±83 | 80 |
| NW2-05D15DR3 | | 11 | ±15 | ±67 | 79 |
| NW2-05D05DR3 | 22.8-25.2 | 4 | ±5 | ±200 | 76 |
| NW2-05D12DR3 | | 6 | ±12 | ±83 | 77 |
| NW2-05D15DR3 | | 8 | ±15 | ±67 | 80 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension



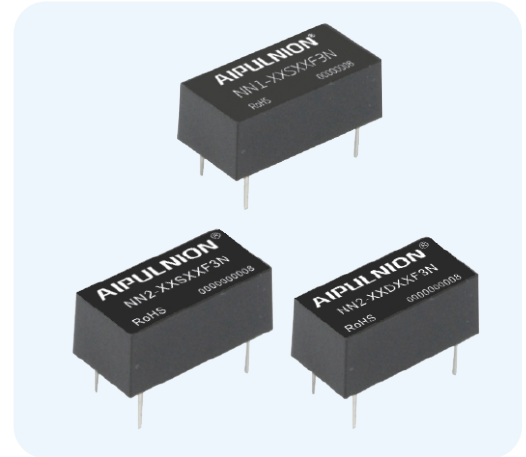
单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm(0.1inch)
未注尺寸公差 (General tolerance) : ±0.25 mm

| 管脚号码 Pin-out | 1 | 2 | 4 | 5 | 6 |
|--------------------------------|----------------------|-----|------|------|-----|
| 双路 Dual | +Vin | GND | +Vo | -Vo | 0V |
| 功能 | 输入正极 | 输入地 | 输出正极 | 输出负极 | 公共端 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| D | 27.40*8.80*11.40mm | | | | |
| | 1.08*0.346*0.449inch | | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



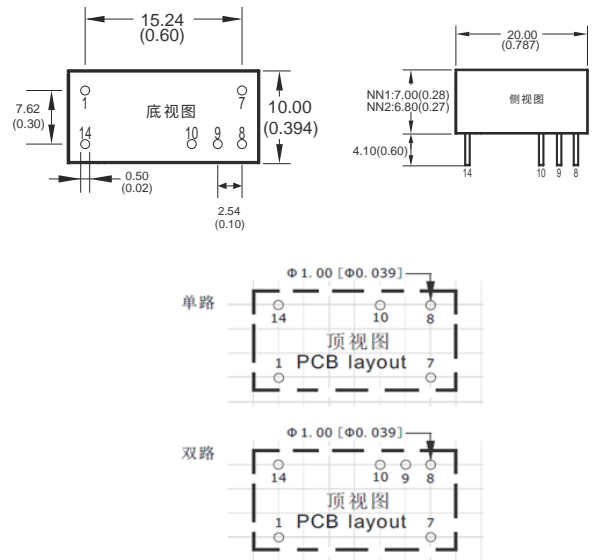
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| NN1-05S3V3F3N | 4.5-5.5 | 20 | 3.3 | 303 | 75 |
| NN1-05S05F3N | | 20 | 5 | 200 | 80 |
| NN1-12S05F3N | 10.8-13.2 | 15 | 5 | 200 | 80 |
| NN1-24S05F3N | 21.6-26.4 | 7 | 5 | 200 | 79 |
| NN2-05S05F3N | 4.5-5.5 | 8 | 5 | 400 | 80 |
| NN2-05S12F3N | | 18 | 12 | 167 | 80 |
| NN2-05S15F3N | | 20 | 15 | 133 | 80 |
| NN2-12S05F3N | 10.8-13.2 | 10 | 5 | 400 | 84 |
| NN2-12S12F3N | | 10 | 12 | 167 | 86 |
| NN2-12S15F3N | | 10 | 15 | 133 | 83 |
| NN2-24S05F3N | 21.6-26.4 | 8 | 5 | 400 | 82 |
| NN2-24S12F3N | | 8 | 12 | 167 | 86 |
| NN2-24S15F3N | | 8 | 15 | 133 | 83 |
| NN2-05D05F3N | 4.5-5.5 | 8 | ±5 | ±200 | 80 |
| NN2-05D12F3N | | 18 | ±12 | ±83 | 80 |
| NN2-05D15F3N | | 20 | ±15 | ±67 | 80 |
| NN2-12D05F3N | 10.8-13.2 | 10 | ±5 | ±200 | 84 |
| NN2-12D12F3N | | 10 | ±12 | ±83 | 86 |
| NN2-12D15F3N | | 10 | ±15 | ±67 | 83 |
| NN2-24D05F3N | 21.6-26.4 | 8 | ±5 | ±200 | 82 |
| NN2-24D12F3N | | 8 | ±12 | ±83 | 86 |
| NN2-24D15F3N | | 8 | ±15 | ±67 | 83 |

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Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.25mm

| 管脚号码 Pin-out | 1 | 7 | 8 | 9 | 10 | 14 |
|--------------------------------|---|-----|------|-------|------|------|
| 单路 Single | GND | NC | +Vo | NP | -Vo | +Vin |
| 功能 | 输入地 | 无功能 | 输出正极 | 无此脚 | 输出负极 | 输入正 |
| 双路 Dual | GND | NC | +Vo | COM | -Vo | +Vin |
| 功能 | 输入地 | 无功能 | 输出正极 | 输出公共端 | 输出负极 | 输入正 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| F | NN1: 20.00*10.00*7.00mm / NN2: 20.00*10.00*6.80mm | | | | | |
| | NN1: 0.787*0.394*0.276inch / NN2: 0.787*0.394*0.270inch | | | | | |



◆ 产品特性 / Product Features

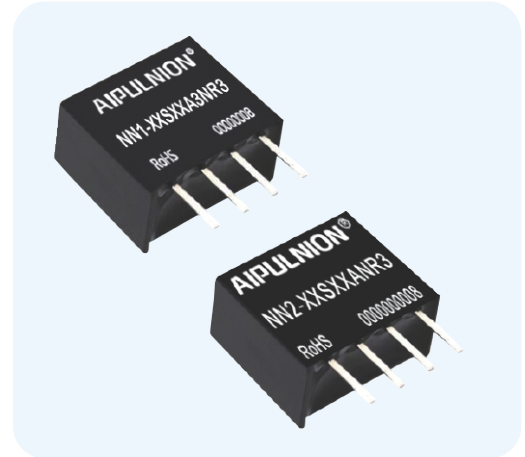
- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : ANR3: 1500VDC/ A3NR3: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery

- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域

Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得

Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|------------------------|--------------------------------|-----------------------------------|--|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | | | |
| NN1-05S3V3A3NR3 | 4.5-5.5 | 8 | 3.3 | 300 | 78 | | |
| NN1-05S05A3NR3 | | | 5 | 200 | 85 | | |
| NN1-05S09A3NR3 | | 10 | 9 | 110 | 86 | | |
| NN1-05S12A3NR3 | | 12 | 83 | 86 | | | |
| NN1-05S15A3NR3 | | 18 | 15 | 67 | 86 | | |
| NN1-05S24A3NR3 | | 25 | 24 | 42 | 86 | | |
| NN2-05S05A3NR3 | 4.5-5.5 | 6 | 5 | 400 | 80 | | |
| NN2-05S12A3NR3 | | 18 | 12 | 167 | 80 | | |
| NN2-12S3V3A3NR3 | 10.8-13.2 | 10 | 3.3 | 400 | 82 | | |
| NN2-12S05A3NR3 | | | 5 | 400 | 84 | | |
| NN2-12S12A3NR3 | | | 12 | 167 | 86 | | |
| NN2-12S15A3NR3 | | | 15 | 133 | 83 | | |
| NN2-24S05A3NR3 | 21.6-26.4 | 8 | 5 | 400 | 82 | | |
| NN2-24S12A3NR3 | | | 12 | 167 | 86 | | |
| NN2-24S15A3NR3 | | | 15 | 133 | 83 | | |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。

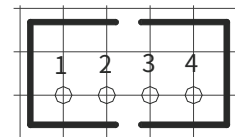
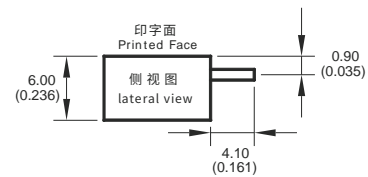
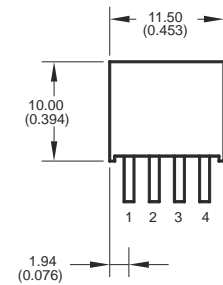
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率 (%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|------|------|------|
| 单路 Single | GND | +Vin | -Vo | +Vo |
| 功能 | 输入地 | 输入正极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| A | 11.50*6.00*10.00mm | | | |
| | 0.453*0.236*0.394inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm

印刷板俯视图 (Printed board vertical view)

栅格间距 (lattice spacing): 2.54mm (0.1inch)

未注尺寸公差 (General tolerance): ±0.5mm

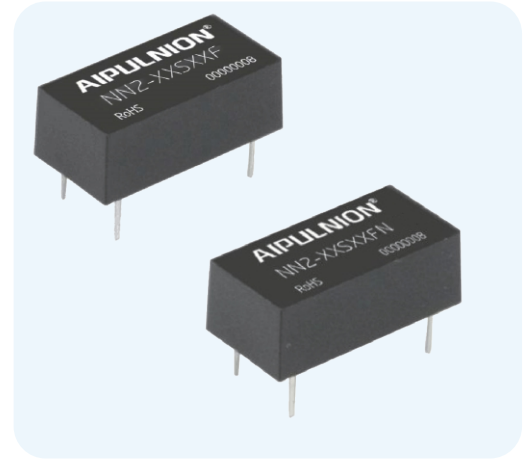
注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。

Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
 - 空载输入电流低至8mA No load input current as low as 8mA
 - 效率高达86% Transfer efficiency up to 86%
 - 隔离电压 (Isolation voltage) :1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 DIP封装 Case: Plastic, meet UL94V-0, compact DIP packing
 - 工作环境温度 Operating Temp: -40°C~+85°C
 - 部分有保护功能: FN: 有短路保护, 可自恢复 FN: Protection: Short circuit, self-recovery
- **应用领域:** 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
 Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- **测试条件:** 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
 Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | |
| | NN2-12S12F | 10.8-13.2 | 10 | 12 | |
| NN2-24S05F | 21.6-26.4 | 8 | 5 | 400 | 83 |
| NN2-24S15F | | 8 | 15 | 133 | 86 |
| NN2-12S12FN | 10.8-13.2 | 33 | 12 | 167 | 85 |
| NN2-24S05FN | 21.6-26.4 | 8 | 5 | 400 | 80 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。

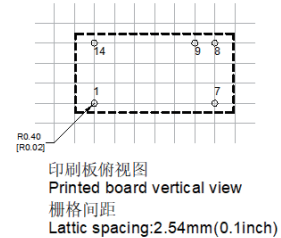
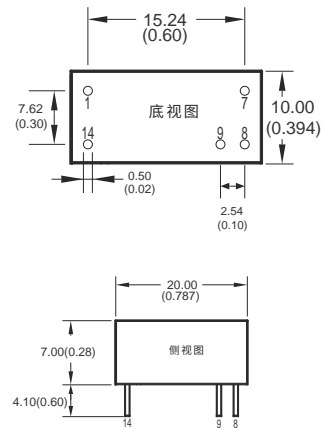
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power / module's input power.

| 管脚号码 Pin-out | 1 | 7 | 8 | 9 | 14 |
|----------------------------------|-----------------------|-----|------|------|------|
| 单路 Single | GND | NC | -Vo | +Vo | +Vin |
| 功能 | 输入地 | 无功能 | 输出负极 | 输出正极 | 输入正极 |
| 封装代号 Packing Code / Dimension | L*W*H | | | | |
| F | 20.00*10.00*7.00mm | | | | |
| | 0.787*0.394*0.276inch | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.25mm

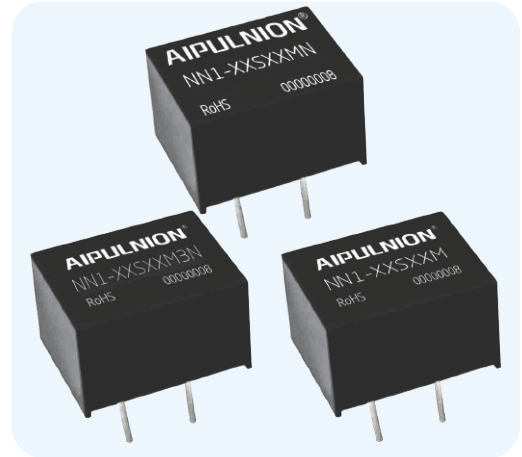


产品特性/ Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated & unregulated output
- 空载输入电流低至5mA No load input current as low as 5mA
- 效率高达89% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : M(N) : 1500VDC / M3N : 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 DIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C ~ +85°C
- M(3)N: 保护功能: 有短路保护, 可自恢复 M(3)N: Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域

Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
- Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



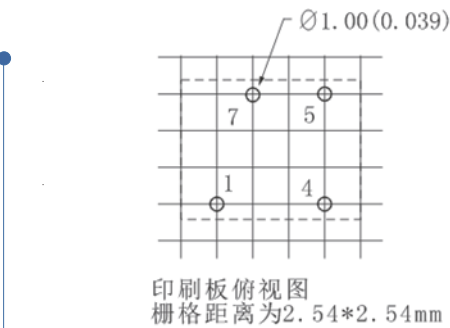
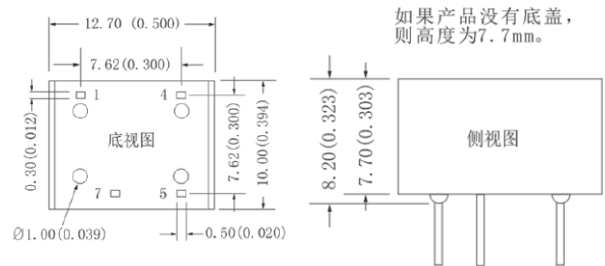
产品列表/ Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|------------------------|-----------------------|-----------------------------------|----|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | | | |
| NN1-05S05M | 4.5-5.5 | 40 | 5 | 200 | 77 | | |
| NN1-05S09M | | | 9 | 110 | 78 | | |
| NN1-05S12M | | | 12 | 83 | 78 | | |
| NN1-05S15M | | | 15 | 67 | 78 | | |
| NN1-12S05M | 10.8-13.2 | 18 | 5 | 200 | 79 | | |
| NN1-12S09M | | | 9 | 110 | 80 | | |
| NN1-12S12M | | | 12 | 83 | 80 | | |
| NN1-12S15M | | | 15 | 67 | 80 | | |
| NN1-24S05M | 21.6-26.4 | 10 | 5 | 200 | 77 | | |
| NN1-24S09M | | | 9 | 110 | 78 | | |
| NN1-24S12M | | | 12 | 83 | 77 | | |
| NN1-24S15M | | | 15 | 67 | 78 | | |
| NN1-05S3V3MN | 4.5-5.5 | 8 | 3.3 | 300 | 78 | | |
| NN1-05S05MN | | 6 | 5 | 200 | 84 | | |
| NN1-05S09MN | | 12 | 9 | 110 | 85 | | |
| NN1-05S12MN | | 15 | 12 | 83 | 85 | | |
| NN1-05S15MN | | 18 | 15 | 67 | 85 | | |
| NN1-05S24MN | 26 | 24 | 42 | 86 | | | |
| NN1-12S3V3MN | 10.8-13.2 | 6 | 3.3 | 300 | 82 | | |
| NN1-12S05MN | | | 5 | 200 | 85 | | |
| NN1-12S09MN | | | 9 | 110 | 85 | | |
| NN1-12S12MN | | | 12 | 83 | 86 | | |
| NN1-12S15MN | | | 15 | 67 | 85 | | |
| NN1-12S24MN | 15 | 24 | 42 | 84 | | | |
| NN1-15S05MN | 13.5-16.5 | 6 | 5 | 200 | 84 | | |
| NN1-15S12MN | | | 9 | 110 | 85 | | |
| NN1-15S15MN | | | 8 | 15 | 67 | 86 | |
| NN1-24S3V3MN | 21.6-26.4 | 15 | 3.3 | 300 | 82 | | |
| NN1-24S05MN | | | 5 | 200 | 86 | | |
| NN1-24S09MN | | | 9 | 110 | 86 | | |
| NN1-24S12MN | | | 12 | 83 | 86 | | |
| NN1-24S15MN | | | 15 | 67 | 81 | | |
| NN1-24S24MN | 24 | 42 | 84 | | | | |
| NN1-05S3V3M3N | 4.5-5.5 | 8 | 3.3 | 300 | 78 | | |
| NN1-05S05M3N | | | 5 | 200 | 84 | | |
| NN1-05S09M3N | | | 9 | 110 | 86 | | |
| NN1-05S12M3N | | | 12 | 83 | 86 | | |
| NN1-05S15M3N | 18 | 15 | 67 | 86 | | | |

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 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/ Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 4 | 5 | 7 |
|---------------------------------|-----------------------|------|------|------|
| 单路 Single | GND | +Vin | +Vo | -Vo |
| 功能 | 输入地 | 输入正极 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| M | 12.70*10.00*8.20mm | | | |
| | 0.500*0.394*0.323inch | | | |



◆ 产品特性/Product Features

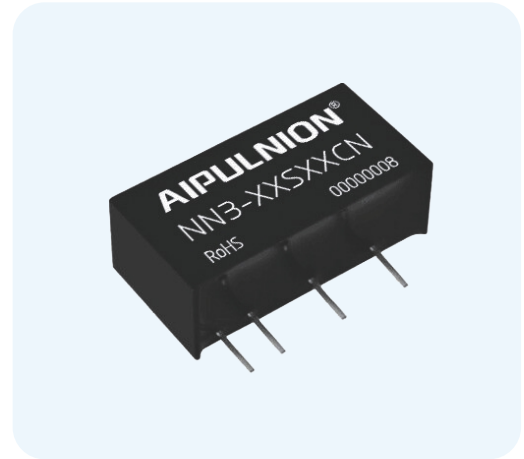
- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated&unregulated output
- 空载输入电流低至12mA No load input current as low as 8mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery

- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域

Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得

Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|------------------------|----------------------------------|-------------------------|---------------------------|
| | 范围值 Range | 输出空载 Output no load | 电压 Voltage | 电流 (mA) Current (mA) | (%TYP) |
| | (VDC) | (mA) | (VDC) | MAX | |
| NN3-05S05CN | 4.5-5.5 | 5 | 5 | 600 | 84 |
| NN3-05S09CN | | 15 | 9 | 333 | 83 |
| NN3-05S12CN | | 15 | 12 | 250 | 85 |
| NN3-05S24CN | | 15 | 24 | 125 | 84 |
| NN3-12S05CN | 10.8-13.2 | 12 | 5 | 600 | 82 |
| NN3-12S12CN | | 12 | 12 | 250 | 86 |

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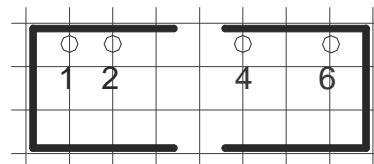
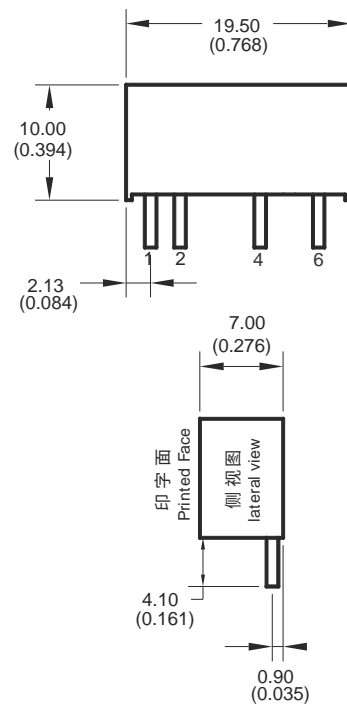
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 4 | 6 |
|--------------------------------|-----------------------|-----|------|------|
| 单路 Single | +Vin | GND | -Vo | +Vo |
| 功能 | 输入正极 | 输入地 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| C | 19.50*7.00*10.00mm | | | |
| | 0.768*0.276*0.394inch | | | |

封装尺寸/Packing Dimension

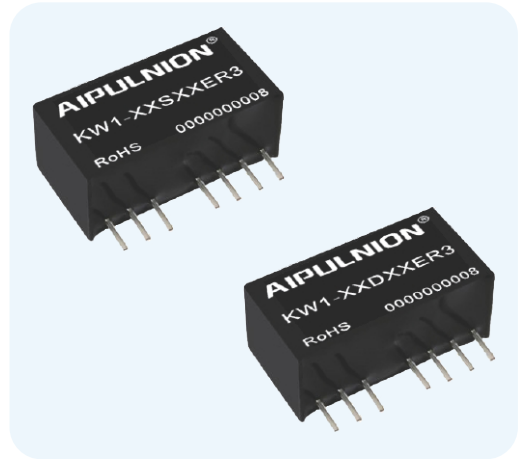


单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing) : 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance) : ±0.25mm



◆ 产品特性/Product Features

- 宽电压输入(4:1), 隔离稳压输出 Wide input voltage range (4:1), isolated®ulated output
- 空载输入电流低至5mA No load input current as low as 5mA
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : ER3: 1500VDC / E3R3: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



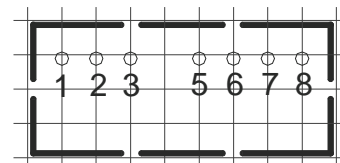
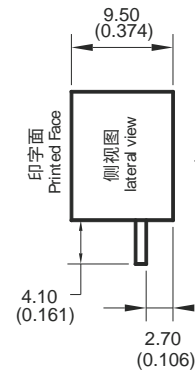
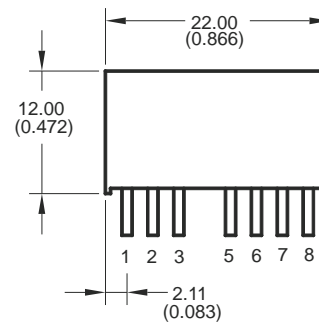
◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|--------------------|-----------------------|--------------------------------|----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| KW1-24S3V3ER3/E3R3 | 9-36 | 3 | 3.3 | 303 | 75 |
| KW1-24S05ER3/E3R3 | | 3 | 5 | 200 | 79 |
| KW1-24S09ER3/E3R3 | | 4 | 9 | 111 | 80 |
| KW1-24S12ER3/E3R3 | | 4 | 12 | 83 | 82 |
| KW1-24S15ER3/E3R3 | | 5 | 15 | 67 | 80 |
| KW1-24S24ER3/E3R3 | | 5 | 24 | 42 | 82 |
| KW1-24D05ER3/E3R3 | 9-36 | 3 | ±5 | ±200 | 77 |
| KW1-24D09ER3/E3R3 | | 3 | ±9 | ±56 | 80 |
| KW1-24D12ER3/E3R3 | | 4 | ±12 | ±42 | 82 |
| KW1-24D15ER3/E3R3 | | 5 | ±15 | ±33 | 80 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Demension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm

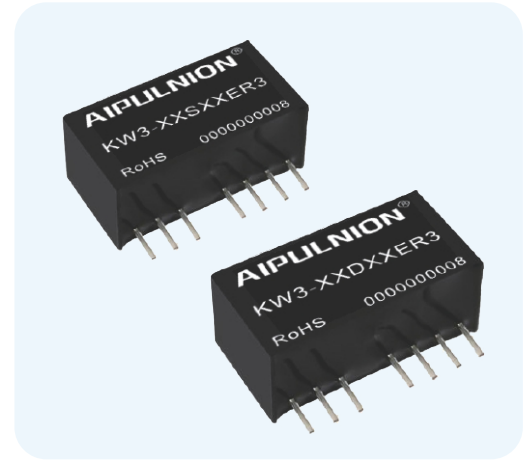
| 管脚号码 Pin-out | 1 | 2 | 3 | 5 | 6 | 7 | 8 |
|---------------------------------|-----------------------|------|------|-----|------|-----|------|
| 单路 Single | GND | +Vin | Ctrl | NC | +Vo | 0V | CS |
| 单路功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 外接电容 |
| 双路 Dual | GND | +Vin | Ctrl | NC | +Vo | 0V | -Vo |
| 双路功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | | |
| E | 22.00*9.50*12.00mm | | | | | | |
| | 0.866*0.374*0.472inch | | | | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 宽电压输入, 隔离稳压输出 Wide input voltage range isolated®ulated output
- 空载输入电流低至4mA No load input current as low as 4mA
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : ER3: 1500VDC / E3R3: 3000VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 部分型号通过CE、RoHS认证 Some models have passed CE, RoHS certification
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定,所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

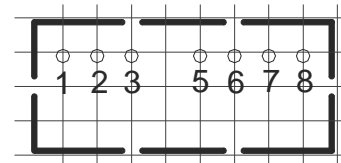
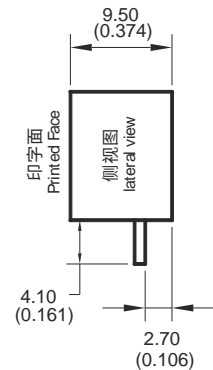
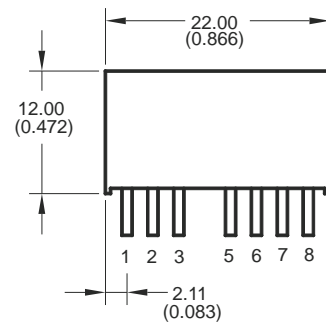


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|--------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| KW3-24S3V3ER3/E3R3 | 9-36 | 4 | 3.3 | 728 | 75 |
| KW3-24S05ER3/E3R3 | | 4 | 5 | 600 | 80 |
| KW3-24S09ER3/E3R3 | | 4 | 9 | 333 | 80 |
| KW3-24S12ER3/E3R3 | | 4 | 12 | 250 | 83 |
| KW3-24S15ER3/E3R3 | | 5 | 15 | 200 | 84 |
| KW3-24S24ER3/E3R3 | | 5 | 24 | 125 | 83 |
| KW3-24D05ER3/E3R3 | | 4 | ±5 | ±300 | 80 |
| KW3-24D09ER3/E3R3 | | 4 | ±9 | ±167 | 80 |
| KW3-24D12ER3/E3R3 | | 4 | ±12 | ±125 | 83 |
| KW3-24D15ER3/E3R3 | | 5 | ±15 | ±100 | 84 |
| KW3-05S05ER3/E3R3 | 4.5-9 | 6 | 5 | 600 | 74 |
| KW3-05S09ER3/E3R3 | | 6 | 9 | 333 | 77 |
| KW3-05S12ER3/E3R3 | | 6 | 12 | 250 | 77 |
| KW3-05S15ER3/E3R3 | | 8 | 15 | 200 | 77 |
| KW3-05S24ER3/E3R3 | | 8 | 24 | 125 | 78 |
| KW3-05D05ER3/E3R3 | | 6 | ±5 | ±300 | 74 |
| KW3-05D09ER3/E3R3 | | 6 | ±9 | ±167 | 77 |
| KW3-05D12ER3/E3R3 | | 6 | ±12 | ±125 | 77 |
| KW3-05D15ER3/E3R3 | | 8 | ±15 | ±100 | 78 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 5 | 6 | 7 | 8 |
|---------------------------------|-----------------------|------|------|-----|------|-----|------|
| 单路 Single | GND | +Vin | Ctrl | NC | +Vo | 0V | CS |
| 单路功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 外接电容 |
| 双路 Dual | GND | +Vin | Ctrl | NC | +Vo | 0V | -Vo |
| 双路功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | | |
| E | 22.00*9.50*12.00mm | | | | | | |
| | 0.866*0.374*0.472inch | | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm



◆ 产品特性/Product Features

- 超宽电压输入 Ultra wide input voltage rang(4:1)
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) E3:1500VDC E23: 3000VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输入欠压, 输出过压, 短路, 过流保护
Protection:nput under-voltage, output over-current,short-circuit
- 长期短路保护,可自恢复 Long - term short - circuit protection, self - recovery

- 应用领域: 工业控制、仪器仪表、通信、电力、物联网等领域
Application Field:Instrumentation, communication, electric power, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|----|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) | |
| UD6-18S3V3E3 | 9-36 | 20 | 3.3 | 1200 | 76 | |
| UD6-18S05E3 | | | 5 | 1200 | 80 | |
| UD6-18S09E3 | | | 9 | 667 | 82 | |
| UD6-18S12E3 | | | 12 | 500 | 82 | |
| UD6-18S15E3 | | | 25 | 15 | 400 | 82 |
| UD6-18S24E3 | | | | 24 | 250 | 82 |
| UD6-36S3V3E3 | 18-75 | 10 | 3.3 | 1200 | 76 | |
| UD6-36S05E3 | | | 5 | 1200 | 80 | |
| UD6-36S09E3 | | | 9 | 667 | 82 | |
| UD6-36S12E3 | | | 12 | 500 | 82 | |
| UD6-36S15E3 | | | 13 | 15 | 400 | 84 |
| UD6-36S24E3 | | | | 24 | 250 | 84 |
| UD6-18S3V3E23 | 9-36 | 20 | 3.3 | 1200 | 76 | |
| UD6-18S05E23 | | | 5 | 1200 | 80 | |
| UD6-18S09E23 | | | 9 | 667 | 82 | |
| UD6-18S12E23 | | | 12 | 500 | 82 | |
| UD6-18S15E23 | | | 25 | 15 | 400 | 82 |
| UD6-18S24E23 | | | | 24 | 250 | 82 |
| UD6-36S3V3E23 | 18-75 | 10 | 3.3 | 1200 | 76 | |
| UD6-36S05E23 | | | 5 | 1200 | 80 | |
| UD6-36S09E23 | | | 9 | 667 | 82 | |
| UD6-36S12E23 | | | 12 | 500 | 82 | |
| UD6-36S15E23 | | | 13 | 15 | 400 | 84 |
| UD6-36S24E23 | | | | 24 | 250 | 84 |

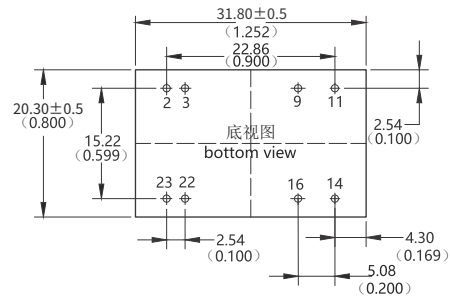
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。

Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

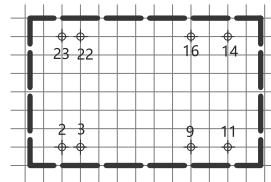
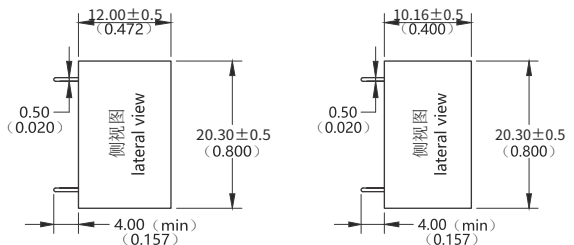
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Dimension



侧视图: 左为E3, 右为E23



单位 (Unit): mm

栅格间距 (lattice spacing): 2.54mm (0.1inch)

未注尺寸公差 (General tolerance): ±0.5mm

未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 2, 3 | 22, 23 | 14 | 16 | 9 | 11 |
|---------------------------------|---|--------|------|-----|-----|-----|
| 单路 Single | -Vin | +Vin | +Vo | GND | NP | NC |
| 单路功能 Single Function | 输入负极 | 输入正极 | 输出正极 | 输出地 | 无此脚 | 无功能 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | |
| E3 | 31.80*20.30*12.00mm 1.252*0.800*0.472inch | | | | | |
| E23 | 31.80*20.30*10.16mm 1.252*0.800*0.400inch | | | | | |

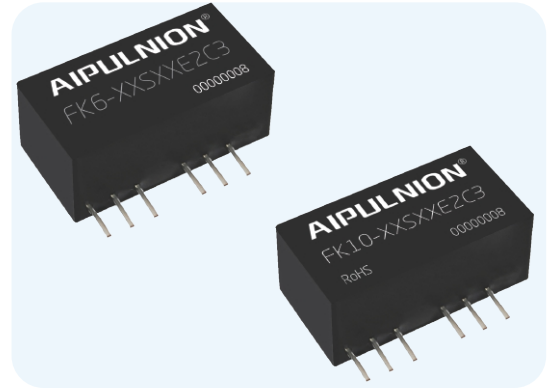
注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。

Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性/Product Features

- 超宽电压输入 Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.05W Low standby power consumption to 0.05W
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压 (Isolation voltage) : FK6:3000VDC / FK10:2250VDC
- 塑料外壳,符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输入欠压保护, 输出过流、短路保护 Protection:Input under-voltage, output over-current,short-circuit
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



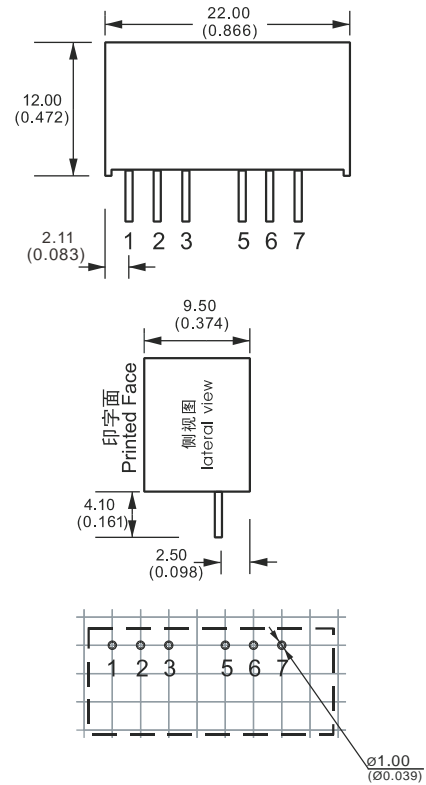
◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|-----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FK6-18S3V3E2C3 | 9-36 | 5 | 3.3 | 1350 | 78 |
| FK6-18S05E2C3 | | | 5 | 1200 | 82 |
| FK6-18S09E2C3 | | | 9 | 667 | 84 |
| FK6-18S12E2C3 | | | 12 | 500 | 86 |
| FK6-18S15E2C3 | | | 15 | 400 | 87 |
| FK6-18S24E2C3 | | | 24 | 250 | 85 |
| FK6-18S48E2C3 | | | 48 | 125 | 86 |
| FK10-18S3V3E2C3 | 9-36 | 33 | 3.3 | 2400 | 84 |
| FK10-18S05E2C3 | | 40 | 5 | 2000 | 87 |
| FK10-18S09E2C3 | | 10 | 9 | 1111 | 87 |
| FK10-18S12E2C3 | | | 12 | 834 | 88 |
| FK10-18S15E2C3 | | | 15 | 667 | 88 |
| FK10-18S24E2C3 | | | 24 | 416 | 88 |
| FK10-36S3V3E2C3 | | 18-72 | 33 | 3.3 | 2400 |
| FK10-36S05E2C3 | 40 | | 5 | 2000 | 87 |
| FK10-36S09E2C3 | 10 | | 9 | 1111 | 87 |
| FK10-36S12E2C3 | | | 12 | 834 | 88 |
| FK10-36S15E2C3 | | | 15 | 667 | 88 |
| FK10-36S24E2C3 | | | 24 | 416 | 88 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸/Packing Dimension



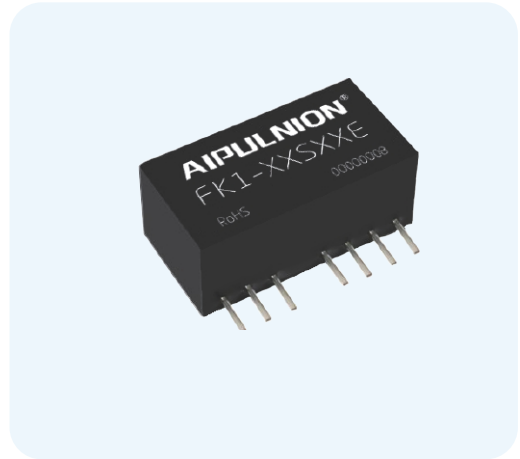
单位(Unit):mm
 栅格间距 (lattice spacing):2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.25mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 5 | 6 | 7 |
|---------------------------------|-----------------------|------|-------|-----|------|-----|
| 单路 Single | -Vin | +Vin | Ctrl | NC | +Vo | GND |
| 单路功能 | 输入负极 | 输入正极 | 远程控制脚 | 无功能 | 输出正极 | 输出地 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | |
| E | 22.00*9.50*12.00mm | | | | | |
| | 0.866*0.374*0.472inch | | | | | |



◆ 产品特性/Product Features

- 宽电压输入(2:1),隔离稳压输出 Wide input voltage range (2:1),isolated®ulated output
- 空载输入电流低至2mA No load input current as low as 2mA
- 效率高达86% Transfer efficiency up to 80%
- 隔离电压(Isolation voltage) : E: 1500VDC / E3: 3000VDC
- 塑料外壳,符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 应用领域:仪器仪表表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

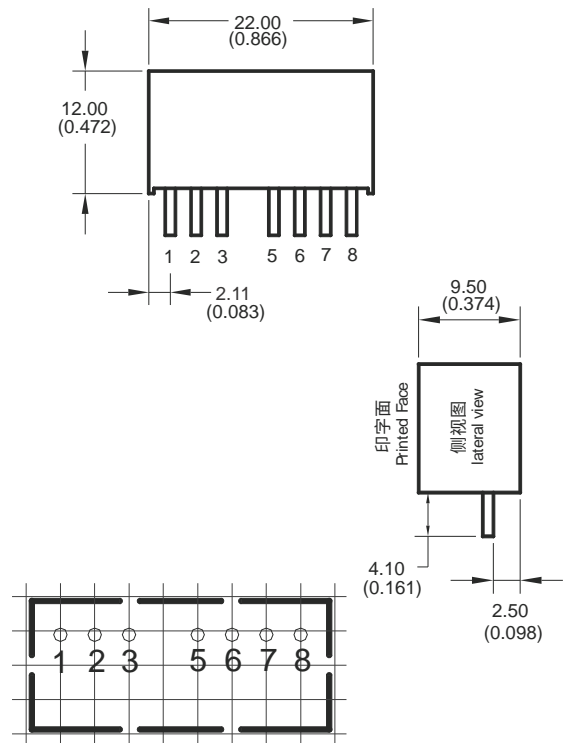


| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|------------------------|-----------------------|-------------------------|-----------------------------------|--|-------------------------------------|
| | 范围值 Range | 输出空载 Output no load | 电压 Voltage | 电流 (mA) Current (mA) | | | |
| | (VDC) | (mA) | (VDC) | MAX | | | |
| FK1-48S05E | 36-75 | 2 | 5 | 200 | 78 | | |
| FK1-48S12E | | 4 | 12 | 83 | 80 | | |
| FK1-48S15E | | 4 | 15 | 67 | 79 | | |
| FK1-48S05E3 | 36-75 | 5 | 5 | 200 | 78 | | |
| FK1-48S12E3 | | 5 | 12 | 83 | 82 | | |
| FK1-48S15E3 | | 5 | 15 | 67 | 82 | | |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 5 | 6 | 7 | 8 |
|--------------------------------|-----------------------|------|------|-----|------|-----|------|
| 单路 Single | GND | +Vin | Ctrl | NC | +Vo | 0V | CS |
| 功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 外接电容 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | | |
| E | 22.00*9.50*12.00mm | | | | | | |
| | 0.866*0.374*0.472inch | | | | | | |

封装尺寸/Packing Dimension

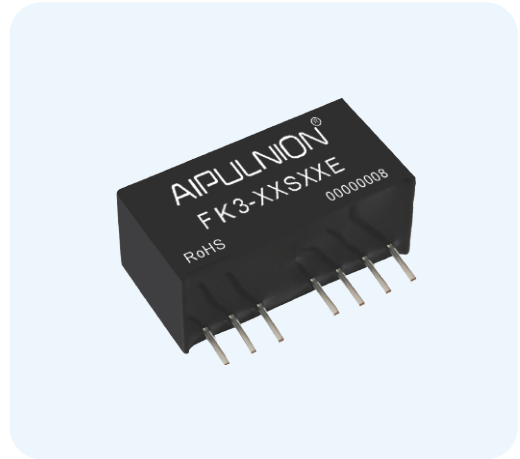


单位(Unit):mm
 印刷板俯视图(Printed board vertical view)
 栅格间距(lattice spacing):2.54mm(0.1inch)
 未注尺寸公差(General tolerance):±0.5mm



◆ 产品特性/Product Features

- 宽电压输入(2:1),隔离稳压输出 Wide input voltage range (2:1),isolated®ulated output
- 空载输入电流低至2mA No load input current as low as 2mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压(Isolation voltage) : E: 1500VDC / E3: 3000VDC
- 塑料外壳,符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

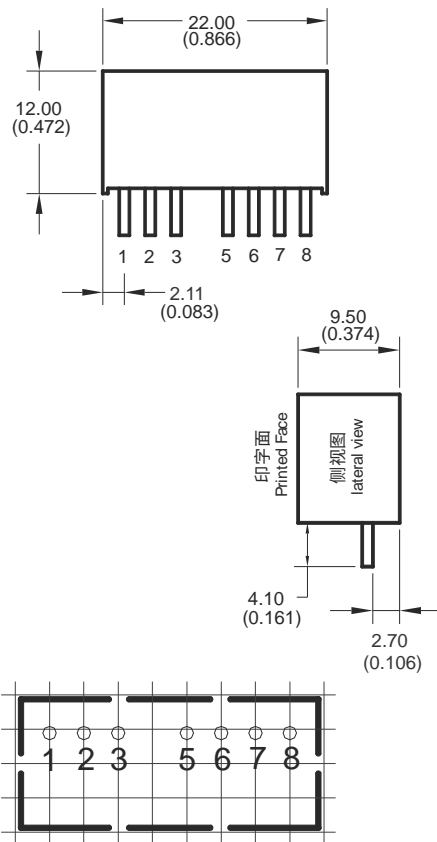


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|-----------------------------------|--------------------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 (mA) Current (mA) MAX | (%TYP) |
| FK3-48S05E | 36-75 | 2 | 5 | 600 | 82 |
| FK3-48S12E | | 1 | 12 | 250 | 86 |
| FK3-48S15E | | 6 | 15 | 200 | 84 |
| FK3-48S24E | | 6 | 24 | 125 | 86 |
| FK3-48S05E3 | | 2 | 5 | 600 | 82 |
| FK3-48S12E3 | | 1 | 12 | 250 | 86 |
| FK3-48S15E3 | | 6 | 15 | 200 | 84 |
| FK3-48S24E3 | | 6 | 24 | 125 | 86 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 5 | 6 | 7 | 8 |
|--------------------------------|-----------------------|------|------|-----|------|-----|------|
| 单路 Single | GND | +Vin | Ctrl | NC | +Vo | 0V | CS |
| 功能 | 输入地 | 输入正极 | 控制脚 | 无功能 | 输出正极 | 输出地 | 外接电容 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | | |
| E | 22.00*9.50*12.00mm | | | | | | |
| | 0.866*0.374*0.472inch | | | | | | |

封装尺寸/Packing Dimension



单位(Unit):mm
印刷板俯视图(Printed board vertical view)
栅格间距(lattice spacing):2.54mm(0.1inch)
未注尺寸公差(General tolerance):±0.5mm

◆ 产品特性 / Product Features

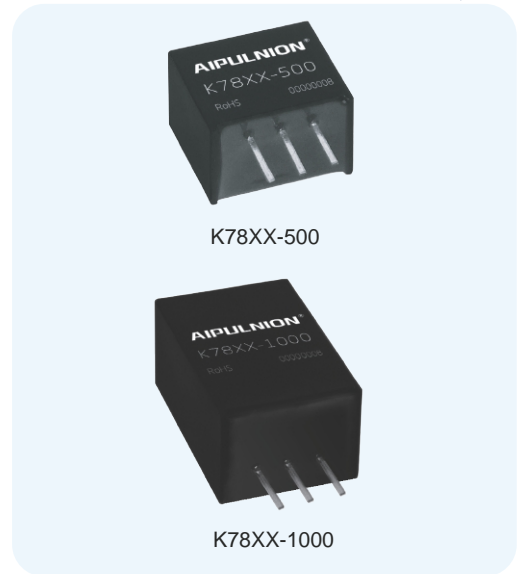
- 宽电压输入, 非隔离输出 Wide input voltage range, non-isolated output
- 低纹波、噪声 Low ripple & noise
- 效率高达97% Transfer efficiency up to 97%
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 工作环境温度 Operating Temp: -40°C~+105°C
- 保护功能: 短路保护、过热保护 Protection: Short circuit, over temperature

- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域

Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.

- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得

Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

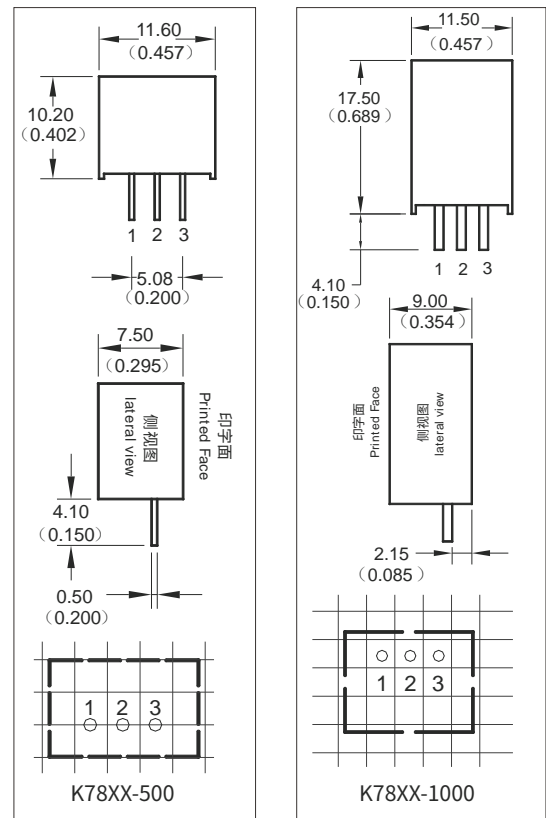


| 产品型号 Part no. | 静态电流 Static current (mA) | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | |
|------------------|--------------------------------|-----------------------|----------------------------------|-----------------------|---------------------------|----------|
| | | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | Vin(min) | Vin(max) |
| K783V3-500 | 5 | 4.74-28 | 3.3 | 500 | 90 | 80 |
| K7805-500 | | | 5 | | 93 | 84 |
| K7812-500 | | | 12 | | 95 | 92 |
| K7815-500 | | | 15 | | 96 | 93 |
| K783V3-1000 | | 1000 | 4.75-28 | 3.3 | 90 | 83 |
| K7805-1000 | | | | 5 | 93 | 84 |
| K7812-1000 | | | | 12 | 96 | 94 |
| K7815-1000 | | | | 15 | 97 | 94 |

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 注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 |
|---------------------------------|-----------------------|-----|------|
| 单路 Single | +Vin | GND | +Vo |
| 功能 | 输入正极 | 公共地 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | |
| K78XX-500 | 11.60*7.50*10.20mm | | |
| | 0.457*0.295*0.402inch | | |
| K78XX-1000 | 11.50*9.00*17.50mm | | |
| | 0.453*0.354*0.689inch | | |

封装尺寸 / Packing Dimension



单位 (Unit) : mm

印刷版俯视图 (Printed board vertical view)

栅格间距 (Lattice spacing) : 2.54mm(0.1inch)

未标注尺寸公差 (General tolerance) : ±0.25mm

◆ 产品特性 / Product Features

- 宽电压输入, 非隔离输出 Wide input voltage range, non-isolated output
 - 低纹波、噪声 Low ripple & noise
 - 效率高达96% Transfer efficiency up to 96%
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装
Case: Plastic, meet UL94V-0, compact SIP packing
 - 工作环境温度 Operating Temp: -40°C~+85°C
 - 保护功能: 短路保护、过热保护 Protection: Short circuit, over temperature
- 应用领域: 光伏发电和高压变频场合等领域
Application Field: Photovoltaic Power Generation and high voltage frequency conversion applications.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

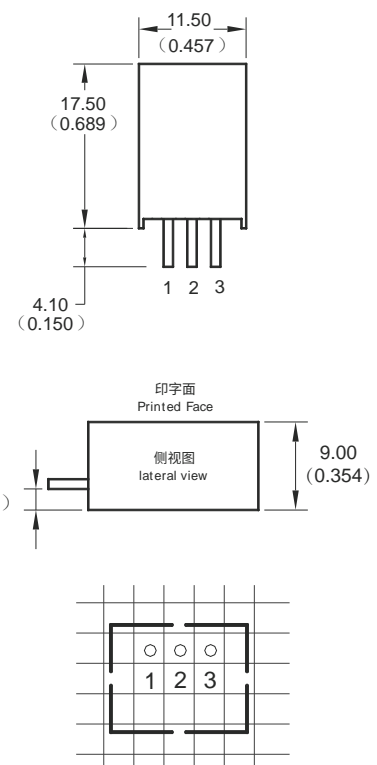


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | |
|------------------|-----------------------|----------------------------------|---------------|---------------------------|----------|
| | 范围值 Range | 电压 Voltage | 电流 Current | Vin(min) | Vin(max) |
| | (VDC) | (VDC) | (mA) | | |
| K783V3-2000 | 4.75-18 | 3.3 | 2000 | 85 | 87 |
| K7805-2000 | 7-18 | 5 | | 87 | 91 |
| K7812-2000 | 13.5-18 | 12 | | 92 | 96 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 |
|---------------------------------|-----------------------|-----|------|
| 单路 Single | +Vin | GND | +Vo |
| 功能 | 输入正极 | 公共地 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | |
| K78XX-2000 | 11.50*9.00*17.50mm | | |
| | 0.453*0.354*0.689inch | | |

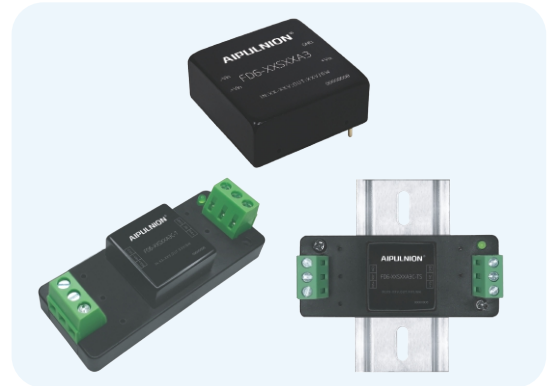
封装尺寸 / Packing Dimension



单位 (Unit) : mm
印刷版俯视图 (Printed board vertical view)
栅格间距 (Lattice spacing) : 2.54mm(0.1inch)
未标注尺寸公差 (General tolerance) : ±0.25mm

产品特性/Product Features

- 超宽电压输入 Ultra wide input voltage rang(4:1)
- 电磁兼容EMC: 裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 1500VDC
- 金属外壳, 输出纹波低 Metal case, low output ripple
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 输入欠压保护, 输出过流、短路保护 Protection: Input under-voltage, output over-current, short-circuit
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List

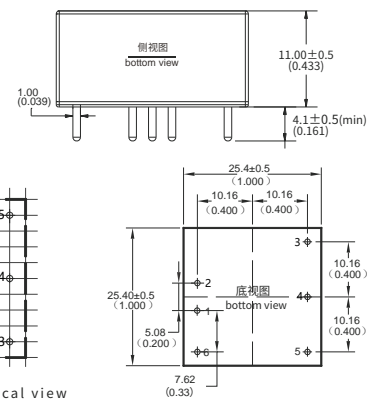


| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|------------------------|-----------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | | | |
| FD6-18S3V3A3 | 9-36 | 25 | 3.3 | 1200 | 75 | | |
| FD6-18S05A3 | | | 5 | 1200 | 76 | | |
| FD6-18S09A3 | | | 9 | 667 | 79 | | |
| FD6-18S12A3 | | | 12 | 500 | 80 | | |
| FD6-18S15A3 | | | 15 | 400 | 80 | | |
| FD6-18S24A3 | | | 24 | 250 | 82 | | |
| FD6-36S3V3A3 | 18-75 | 10 | 3.3 | 1200 | 76 | | |
| FD6-36S05A3 | | | 5 | 1200 | 81 | | |
| FD6-36S09A3 | | | 9 | 667 | 82 | | |
| FD6-36S12A3 | | | 12 | 500 | 84 | | |
| FD6-36S15A3 | | | 15 | 400 | 84 | | |
| FD6-36S24A3 | | | 24 | 250 | 84 | | |
| FD6-18D3V3A3 | 9-36 | 15 | 3 | ±3.3 | ±600 | 78 | |
| FD6-18D05A3 | | | ±5 | ±600 | 84 | | |
| FD6-18D09A3 | | | ±9 | ±333 | 86 | | |
| FD6-18D12A3 | | | ±12 | ±250 | 86 | | |
| FD6-18D15A3 | | | ±15 | ±200 | 84 | | |
| FD6-18D24A3 | | | ±24 | ±125 | 86 | | |
| FD6-36D3V3A3 | 18-75 | 10 | ±3.3 | ±600 | 82 | | |
| FD6-36D05A3 | | | ±5 | ±600 | 84 | | |
| FD6-36D09A3 | | | ±9 | ±333 | 86 | | |
| FD6-36D12A3 | | | ±12 | ±250 | 86 | | |
| FD6-36D15A3 | | | ±15 | ±200 | 86 | | |
| FD6-36D24A3 | | | ±24 | ±125 | 86 | | |

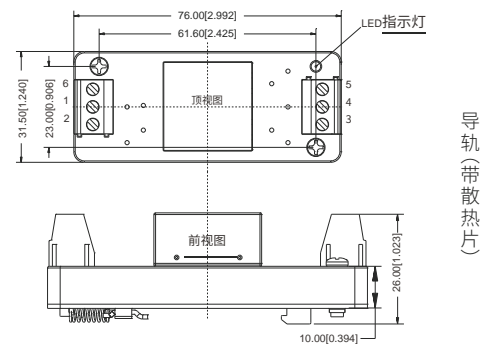
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 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2: 表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3: "-H"为带散热片, "-T(H)"为接线式(带散热片)封装, "-TS(H)"为导轨式(带散热片)封装, 导轨宽度35mm。
 Note 3: Suffix with "-H" suffix is with heat sink, "-T(H)" suffix for chassis mounting(with heat sink), "-TS(H)" suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

封装尺寸/Packing Dimension

FD6-A3(C)封装尺寸: 25.40*25.40*11.00mm



FD6-A3-TS封装尺寸: 76.00*31.50*30.80mm



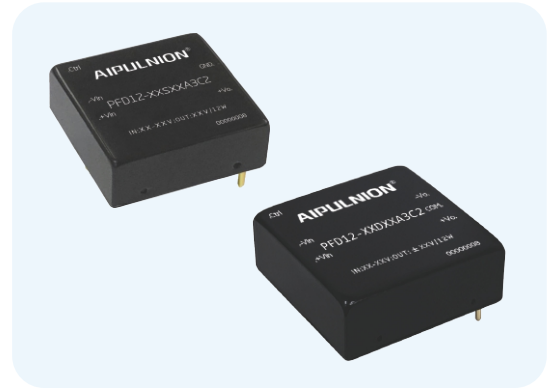
单位 (Unit): mm
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|-----------------|------|------|------|-----|------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND |
| 单路功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 |
| 双路 Dual | -Vin | +Vin | +Vo | COM | -Vo |
| 双路功能 | 输入负极 | 输入正极 | 输出正极 | 公共端 | 输出负极 |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.15W Low standby power consumption to 0.15W
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : 1500VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|--------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| PFD12-18S3V3A3(C)2 | 9-36 | 2 | 3.3 | 2400 | 81 |
| PFD12-18S05A3(C)2 | | | 5 | 2000 | 83 |
| PFD12-18S06A3(C)2 | | | 6 | 2000 | 85 |
| PFD12-18S09A3(C)2 | | | 9 | 1333 | 86 |
| PFD12-18S12A3(C)2 | | | 12 | 1000 | 87 |
| PFD12-18S15A3(C)2 | | | 15 | 800 | 88 |
| PFD12-18S17A3(C)2 | | | 17 | 706 | 88 |
| PFD12-18S20A3(C)2 | | | 20 | 600 | 86 |
| PFD12-18S24A3(C)2 | | | 24 | 500 | 88 |
| PFD12-36S3V3A3(C)2 | | | 18-75 | 2 | 3.3 |
| PFD12-36S05A3(C)2 | 5 | 2000 | | | 83 |
| PFD12-36S5V5A3(C)2 | 5.5 | 2181 | | | 84 |
| PFD12-36S09A3(C)2 | 9 | 1333 | | | 86 |
| PFD12-36S12A3(C)2 | 12 | 1000 | | | 87 |
| PFD12-18D05A3(C)2 | 9-36 | 10 | ±5 | ±1200 | 84 |
| PFD12-18D09A3(C)2 | | | ±9 | ±667 | 85 |
| PFD12-18D12A3(C)2 | | | ±12 | ±500 | 87 |
| PFD12-18D15A3(C)2 | | | ±15 | ±400 | 88 |
| PFD12-18D24A3(C)2 | | | ±24 | ±250 | 87 |
| PFD12-36D05A3(C)2 | | | ±5 | ±1200 | 84 |
| PFD12-36D09A3(C)2 | | | ±9 | ±667 | 85 |
| PFD12-36D12A3(C)2 | | | ±12 | ±500 | 87 |
| PFD12-36D15A3(C)2 | | | ±15 | ±400 | 88 |
| PFD12-36D24A3(C)2 | | | ±24 | ±250 | 87 |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

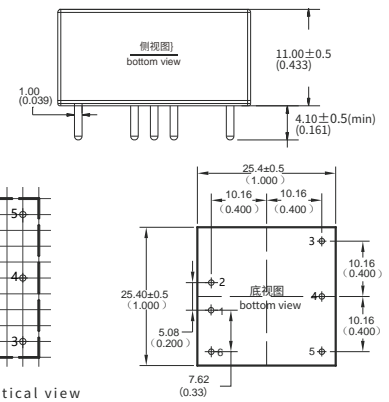
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

注3:后缀带"C"为产品带Ctrl控制功能;单路输出产品不带控制脚后缀为"N2","-"为接插式封装,"-TS"为导轨式封装,导轨宽度31.5mm。

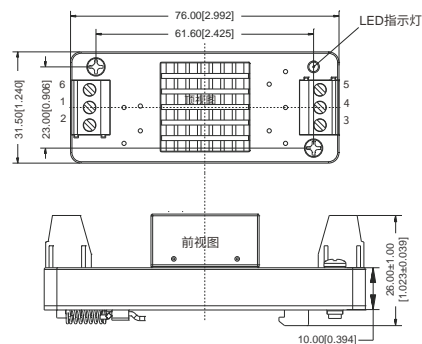
Note 3: Suffix with "C" means it with CTRL control function; Single output product without control pin suffix "N2"; "-" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 31.5mm.

封装尺寸 / Packing Dimension

PFD12-A3(C)封装尺寸:25.40*25.40*11.00mm



PFD12-A3-TS封装尺寸:76.00*31.50*26.00mm



单位 (Unit): mm

栅格间距 (lattice spacing): 2.54mm(0.1inch)

未注尺寸公差 (General tolerance): ±0.5mm

未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|------|------|------|-----|------|-------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 单路功能 Single function | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |
| 双路 Dual | -Vin | +Vin | +Vo | COM | -Vo | CTRL |
| 双路功能 Dual function | 输入负极 | 输入正极 | 输出正极 | 公共端 | 输出负极 | 远程控制脚 |

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.02W Low standby power consumption to 0.02W
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : 2150VAC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

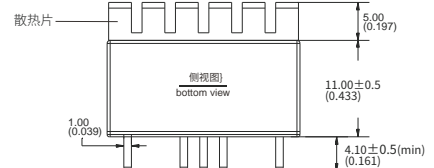


| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|-----------------------|------------------------|-----------------------|---------------|-----------------------------------|--|-------------------------------------|
| | 范围值 Range | 输出空载 Output no load | 电压 Voltage | 电流 Current | | | |
| | (VDC) | (mA) | (VDC) | (mA) | | | |
| FD12-18S3V3A3(C)4 | 9-36 | 2 | 3.3 | 2400 | 81 | | |
| FD12-18S05A3(C)4 | | | 5 | 2000 | 83 | | |
| FD12-18S09A3(C)4 | | | 9 | 1333 | 85 | | |
| FD12-18S12A3(C)4 | | | 12 | 1000 | 87 | | |
| FD12-18S15A3(C)4 | | | 15 | 800 | 88 | | |
| FD12-18S24A3(C)4 | | | 24 | 500 | 88 | | |
| FD12-36S3V3A3(C)4 | 18-75 | 2 | 3.3 | 2400 | 78 | | |
| FD12-36S05A3(C)4 | | | 5 | 2000 | 83 | | |
| FD12-36S09A3(C)4 | | | 9 | 1333 | 86 | | |
| FD12-36S12A3(C)4 | | | 12 | 1000 | 87 | | |
| FD12-36S15A3(C)4 | | | 15 | 800 | 89 | | |
| FD12-36S24A3(C)4 | | | 24 | 500 | 88 | | |

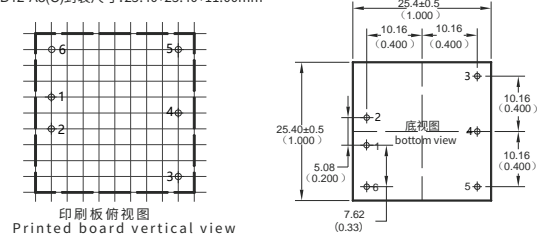
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(% TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3:后缀带“C”为产品带Ctrl控制功能;不带控制脚后缀为“N”, -H为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热)封装,导轨宽度35mm。
 Note 3: Suffix with “C” means it with CTRL control function; Without control pin suffix “N2”;“-H” suffix is with heat sink,“-T(H)” suffix for chassis mounting(with heat sink);“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

封装尺寸 / Packing Dimension

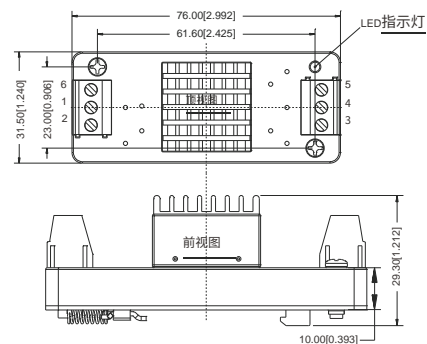
FD12-A3-H封装尺寸:25.40*25.40*16.00mm



FD12-A3(C)封装尺寸:25.40*25.40*11.00mm



FD12-A3-TS(H)封装尺寸:76.00*31.50*30.80mm



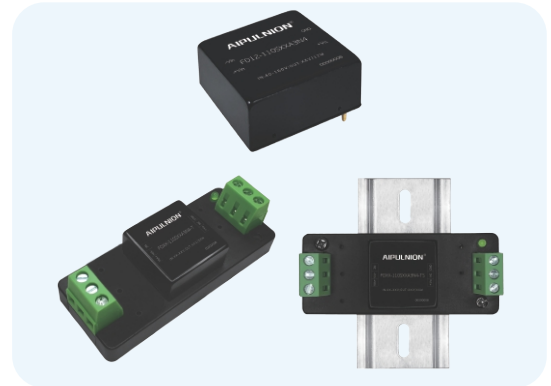
单位 (Unit) :mm
 栅格间距 (lattice spacing) :2.54mm(0.1inch)
 未注尺寸公差 (General tolerance) :±0.5mm
 未注明引脚直径公差 (Pin section tolerances) :±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|------|-----|------|-------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 单路功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |
| 双路 Dual | -Vin | +Vin | +Vo | COM | -Vo | CTRL |
| 双路功能 | 输入负极 | 输入正极 | 输出正极 | 公共端 | 输出负极 | 远程控制脚 |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
 Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.05W Low standby power consumption to 0.05W
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : FD6: 2150VAC FD12: 2100VAC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:输入欠压保护,输出过流、短路保护
Protection:Input under-voltage,output over-current,short-circuit
- 应用领域:铁路、工业控制、仪器仪表、通信、电力、物联网等领域
Application Field: Railway, industrial control, instrumentation, communication, power, IInternet of Things.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) | | |
|------------------|-----------------------|--------------------------------|------------------------|-----------------------|-----------------------------------|------|-------------------------------------|--|--|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | | | | | |
| FD6-110S3V3A3N4 | 40-160 | 2 | 3.3 | 1818 | 77 | | | | |
| FD6-110S05A3N4 | | | 5 | 1200 | 81 | | | | |
| FD6-110S09A3N4 | | | 9 | 667 | 82 | | | | |
| FD6-110S12A3N4 | | | 12 | 500 | 85 | | | | |
| FD6-110S15A3N4 | | | 15 | 400 | 85 | | | | |
| FD6-110S24A3N4 | | | 24 | 250 | 86 | | | | |
| FD12-110S3V3A3N4 | | | 40-160 | 2 | 3.3 | 2400 | 80 | | |
| FD12-110S05A3N4 | | | | | 5 | 2400 | 82 | | |
| FD12-110S09A3N4 | | | | | 9 | 1333 | 85 | | |
| FD12-110S12A3N4 | | | | | 12 | 1000 | 87 | | |
| FD12-110S15A3N4 | 15 | 800 | | | 89 | | | | |
| FD12-110S24A3N4 | 24 | 500 | | | 89 | | | | |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。

Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

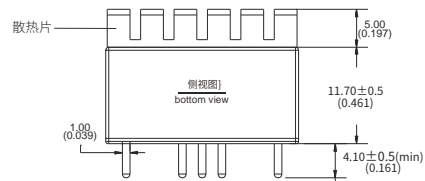
注3:后缀带“C”为产品带Ctrl控制功能;不带控制脚后缀为“N”;-H为带散热片,-T(H)为接线式(带散热片)封装,-TS(H)为导轨式(带散热片)封装,导轨宽度35mm。

Note 3: Suffix with “C” means it with CTRL control function; Without control pin suffix “N2”;“-H” suffix is with heat sink,“-T(H)” suffix for chassis mounting(with heat sink),“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

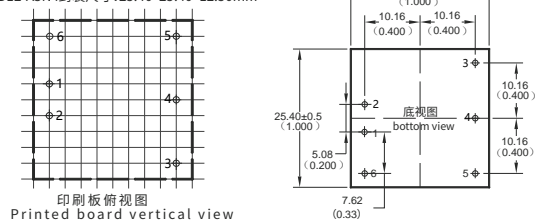
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|------|----|-----|-------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |

封装尺寸 / Packing Dimension

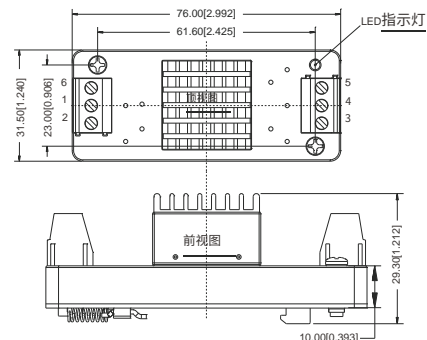
FD6-A3N4-H封装尺寸:25.40*25.40*16.70mm
FD12-A3N4-H封装尺寸:25.40*25.40*17.50mm



FD6-A3N4封装尺寸:25.40*25.40*11.70mm
FD12-A3N4封装尺寸:25.40*25.40*12.50mm



FD12-A3-TS(H)封装尺寸:76.00*31.50*30.80mm



单位 (Unit) : mm

栅格间距 (lattice spacing) : 2.54mm (0.1inch)

未注尺寸公差 (General tolerance) : ±0.5mm

未注明脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.01W Low standby power consumption to 0.01W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VAC
- 金属外壳、输出纹波低 Metal case, low output ripple
- 工作环境温度 Operating Temp.: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 铁路、工业控制、仪器仪表、通信、电力、物联网等领域
Application Field: Railway Industry Industrial control, instrumentation, communication, electric power, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | | |
|--------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|------|----|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) | | |
| FD12-110S3V3A3(C)3 | 40-160 | 1 | 3.3 | 2400 | 77 | | |
| FD12-110S05A3(C)3 | | | 5 | 2400 | 82 | | |
| FD12-110S09A3(C)3 | | | 9 | 1333 | 85 | | |
| FD12-110S12A3(C)3 | | | 12 | 1000 | 87 | | |
| FD12-110S15A3(C)3 | | | 15 | 800 | 87 | | |
| FD12-110S24A3(C)3 | | | 24 | 500 | 89 | | |
| FD12-110D3V3A3(C)3 | | | ±3.3 | ±1200 | 80 | | |
| FD12-110D05A3(C)3 | | | ±5 | ±1200 | 82 | | |
| FD12-110D09A3(C)3 | | | ±9 | ±667 | 83 | | |
| FD12-110D12A3(C)3 | | | ±12 | ±500 | 84 | | |
| FD12-110D15A3(C)3 | | | ±15 | ±400 | 85 | | |
| FD12-110D24A3(C)3 | | | ±24 | ±250 | 86 | | |
| FD20-110S3V3A3(C) | | | 20 | 20 | 3.3 | 4000 | 86 |
| FD20-110S05A3(C) | | | | | 5 | 4000 | 86 |
| FD20-110S09A3(C) | 9 | 2222 | | | 88 | | |
| FD20-110S12A3(C) | 12 | 1667 | | | 89 | | |
| FD20-110S15A3(C) | 15 | 1333 | | | 89 | | |
| FD20-110S24A3(C) | 24 | 833 | | | 89 | | |
| FD20-110S28A3(C) | 2 | 2 | 28 | 714 | 90 | | |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

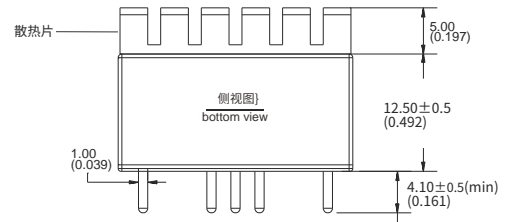
注2: 表格中为满载效率 (% TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (% TYP) is ±2%, full load output efficiency = total output power/module's input power.

注3: 后缀带“C”为产品带Ctrl控制功能;“-H”为带散热片;“-T(H)”为接线式(带散热)片封装;“-TS(H)”为导轨式(带散热)封装, 导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-H” suffix is with heat sink, “-T(H)” suffix for chassis mounting(with heat sink), “-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

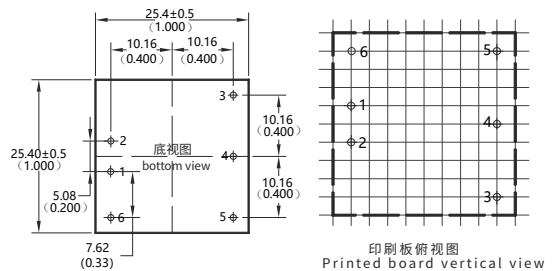
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|------|----|-----|-------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |

封装尺寸 / Packing Dimension

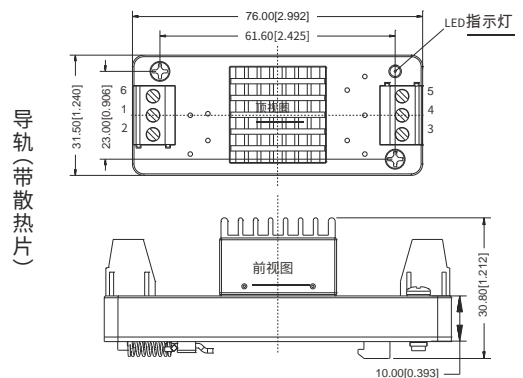
FDXX-110SXXA3-H封装尺寸: 25.40*25.40*18.00mm



FDXX-110SXXA3(C)封装尺寸: 25.40*25.40*12.50mm



FDXX-110SXXA3-TS(H)封装尺寸: 76.00*31.50*30.80mm



单位 (Unit): mm
 栅格间距 (latic spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明针脚直径公差 (Pin section tolerances): ±0.10mm



◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Urtual wide input voltage rang(4:1)
- 低待机功耗低至0.05W Low standby power consumption to 0.05W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 5000VDC
- 金属外壳、输出纹波低 Metal case,low output ripple
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:输入欠压保护,输出过流、短路保护
Protection:Input under-voltage, output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



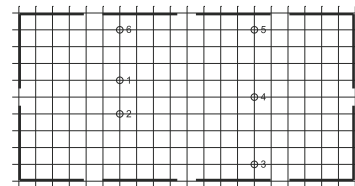
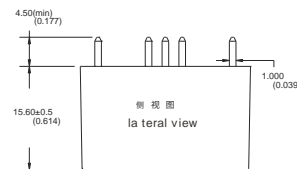
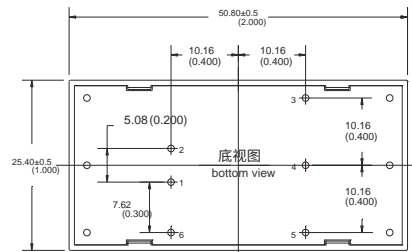
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输入电流 Input current | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|-----------------------------|------------------------|-----------------------|----------------------------------|--|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | | | |
| FD6-18S3V3B2C5 | 9-36 | 30 | 3.3 | 1818 | | | 81 |
| FD6-18S05B2C5 | | | 5 | 1200 | | | 82 |
| FD6-18S09B2C5 | | | 9 | 667 | | | 85 |
| FD6-18S12B2C5 | | | 12 | 500 | | | 87 |
| FD6-18S15B2C5 | | | 15 | 400 | | | 88 |
| FD6-18S24B2C5 | | | 24 | 250 | | | 87 |
| FD6-36S3V3B2C5 | 18-75 | 30 | 3.3 | 1818 | | | 81 |
| FD6-36S05B2C5 | | | 5 | 1200 | | | 82 |
| FD6-36S09B2C5 | | | 9 | 667 | | | 85 |
| FD6-36S12B2C5 | | | 12 | 500 | | | 87 |
| FD6-36S15B2C5 | | | 15 | 400 | | | 88 |
| FD6-36S24B2C5 | | | 24 | 250 | | | 87 |
| FD12-18S3V3B2C5 | 9-36 | 30 | 3.3 | 2400 | | | 87 |
| FD12-18S05B2C5 | | | 5 | 2400 | | | 89 |
| FD12-18S09B2C5 | | | 9 | 1333 | | | 90 |
| FD12-18S12B2C5 | | | 12 | 1000 | | | 90 |
| FD12-18S15B2C5 | | | 15 | 800 | | | 90 |
| FD12-18S24B2C5 | | | 24 | 500 | | | 90 |
| FD12-36S3V3B2C5 | 18-75 | 30 | 3.3 | 2400 | | | 86 |
| FD12-36S05B2C5 | | | 5 | 2400 | | | 88 |
| FD12-36S09B2C5 | | | 9 | 1333 | | | 90 |
| FD12-36S12B2C5 | | | 12 | 1000 | | | 90 |
| FD12-36S15B2C5 | | | 15 | 800 | | | 90 |
| FD12-36S24B2C5 | | | 24 | 500 | | | 90 |
| FD20-18S3V3B2C5 | 9-36 | 50 | 3.3 | 4000 | | | 86 |
| FD20-18S05B2C5 | | | 5 | 4000 | | | 88 |
| FD20-18S09B2C5 | | | 9 | 2222 | | | 89 |
| FD20-18S12B2C5 | | | 12 | 1667 | | | 89 |
| FD20-18S15B2C5 | | | 15 | 1333 | | | 90 |
| FD20-18S24B2C5 | | | 24 | 833 | | | 90 |
| FD20-36S3V3B2C5 | 18-75 | 30 | 3.3 | 4000 | | | 86 |
| FD20-36S05B2C5 | | | 5 | 4000 | | | 88 |
| FD20-36S09B2C5 | | | 9 | 2222 | | | 89 |
| FD20-36S12B2C5 | | | 12 | 1667 | | | 89 |
| FD20-36S15B2C5 | | | 15 | 1333 | | | 90 |
| FD20-36S24B2C5 | | | 24 | 833 | | | 90 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency=total output power/module's input power.

封装尺寸 / Packing Dimension



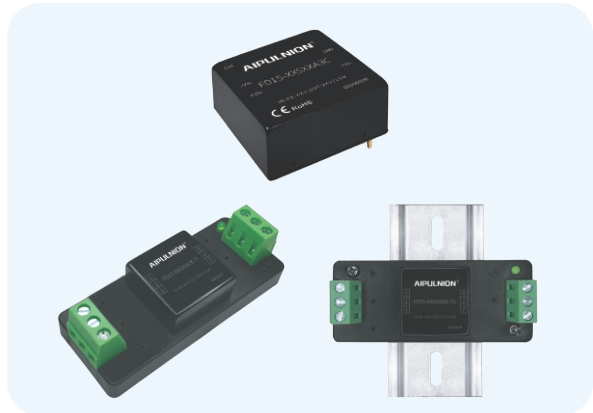
单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|------|------|----|-----|-------|
| 单路 Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |
| 封装代号 Packing Code Dimension | L*W*H | | | | | |
| B | 50.80*25.40*15.60mm | | | | | |
| | 2.000*1.000*0.614inch | | | | | |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.02W Low standby power consumption to 0.02W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FD15-18S3V3A3(C) | 9-36 | 30 | 3.3 | 4000 | 88 |
| FD15-18S05A3(C) | | | 5 | 3000 | 90 |
| FD15-18S09A3(C) | | | 9 | 1667 | 90 |
| FD15-18S12A3(C) | | 5 | 12 | 1250 | 90 |
| FD15-18S15A3(C) | | | 15 | 1000 | 90 |
| FD15-18S24A3(C) | | | 24 | 625 | 90 |
| FD15-36S3V3A3(C) | 18-75 | 30 | 3.3 | 4000 | 88 |
| FD15-36S05A3(C) | | | 5 | 3000 | 90 |
| FD15-36S09A3(C) | | | 9 | 1667 | 90 |
| FD15-36S12A3(C) | | 5 | 12 | 1250 | 90 |
| FD15-36S15A3(C) | | | 15 | 1000 | 90 |
| FD15-36S24A3(C) | | | 24 | 625 | 90 |
| FD15-18D3V3A3(C) | 9-36 | 30 | ±3.3 | ±2000 | 84 |
| FD15-18D05A3(C) | | | ±5 | ±1500 | 86 |
| FD15-18D09A3(C) | | | ±9 | ±833 | 87 |
| FD15-18D12A3(C) | | 3 | ±12 | ±625 | 90 |
| FD15-18D15A3(C) | | | ±15 | ±500 | 90 |
| FD15-18D24A3(C) | | | ±24 | ±313 | 90 |
| FD15-36D3V3A3(C) | 18-75 | 30 | ±3.3 | ±2000 | 84 |
| FD15-36D05A3(C) | | | ±5 | ±1500 | 86 |
| FD15-36D09A3(C) | | | ±9 | ±833 | 87 |
| FD15-36D12A3(C) | | 3 | ±12 | ±625 | 90 |
| FD15-36D15A3(C) | | | ±15 | ±500 | 90 |
| FD15-36D24A3(C) | | | ±24 | ±313 | 90 |

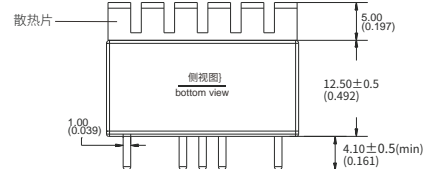
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

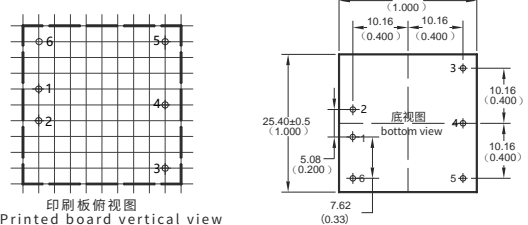
注3:后缀带“C”为产品带Ctrl控制功能;“R”为带控制脚和调节脚,“-H”为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热)封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function; Suffix “R” is with Ctrl and Trim function “-H” suffix is with heat sink, “-T(H)” suffix for chassis mounting (with heat sink), “-TS(H)” suffix for DIN-Rail mounting (with heat sink), DIN-Rail width is: 35mm.

封装尺寸 / Packing Dimension

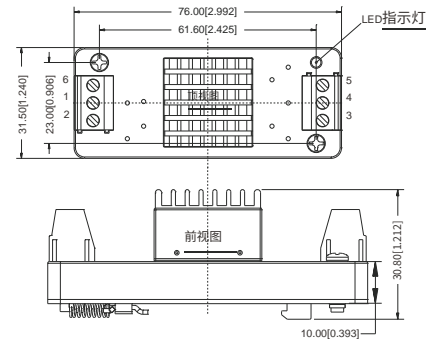
FD15-A3-H封装尺寸:25.40*25.40*18.00mm



FD15-A3(C)封装尺寸:25.40*25.40*12.50mm



FD15-A3-TS(H)封装尺寸:76.00*31.50*30.80mm



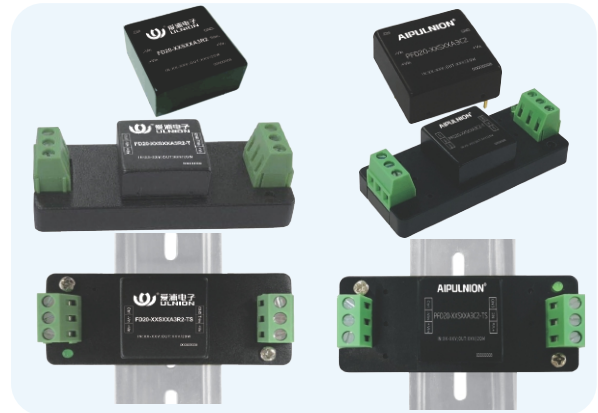
单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm(0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------|------|------|------|-------|------|-------|
| 单路(A3C) Single | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 单路功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |
| 单路(A3R) Single | -Vin | +Vin | +Vo | Trim | GND | CTRL |
| 单路功能 | 输入负极 | 输入正极 | 输出正极 | 电压调节端 | 输出地 | 远程控制脚 |
| 双路 Dual | -Vin | +Vin | +Vo | COM | -Vo | CTRL |
| 双路功能 | 输入负极 | 输入正极 | 输出正极 | 公共端 | 输出负极 | 远程控制脚 |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.050W Low standby power consumption to 0.050W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VDC
- 金属外壳, 输出纹波低 Metal case, low output ripple
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field: Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



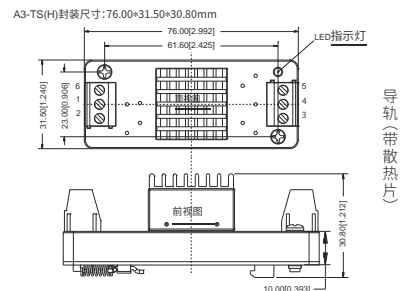
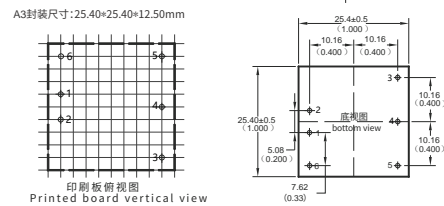
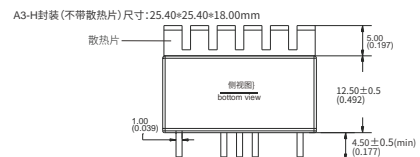
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|--------------------|-----------------------|--------------------------------|-----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FD20-18S3V3A3(C) | 9-36 | 30 | 3.3 | 4000 | 88 |
| FD20-18S05A3(C) | | | 5 | 4000 | 90 |
| FD20-18S09A3(C) | | | 9 | 2222 | 90 |
| FD20-18S12A3(C) | | 5 | 12 | 1667 | 90 |
| FD20-18S15A3(C) | | | 15 | 1333 | 90 |
| FD20-18S24A3(C) | | | 24 | 833 | 90 |
| FD20-36S3V3A3(C) | 18-75 | 30 | 3.3 | 4000 | 88 |
| FD20-36S05A3(C) | | | 5 | 4000 | 90 |
| FD20-36S09A3(C) | | | 9 | 2222 | 90 |
| FD20-36S12A3(C) | | 5 | 12 | 1667 | 90 |
| FD20-36S15A3(C) | | | 15 | 1333 | 90 |
| FD20-36S24A3(C) | | | 24 | 833 | 90 |
| PFD20-18S3V3A3(C)2 | 9-36 | 33 | 3.3 | 5000 | 88 |
| PFD20-18S05A3(C)2 | | | 5 | 4000 | 90 |
| PFD20-18S09A3(C)2 | | | 9 | 2222 | 90 |
| PFD20-18S12A3(C)2 | | 5 | 12 | 1667 | 90 |
| PFD20-18S15A3(C)2 | | | 15 | 1333 | 90 |
| PFD20-18S24A3(C)2 | | | 24 | 833 | 91 |
| PFD20-36S3V3A3(C)2 | 18-75 | 17 | 3.3 | 5000 | 88 |
| PFD20-36S05A3(C)2 | | | 5 | 4000 | 90 |
| PFD20-36S09A3(C)2 | | | 9 | 2222 | 90 |
| PFD20-36S12A3(C)2 | | 5 | 12 | 1667 | 91 |
| PFD20-36S15A3(C)2 | | | 15 | 1333 | 91 |
| PFD20-36S24A3(C)2 | | | 24 | 833 | 91 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3: 后缀带“C”为产品带Ctrl控制功能; “R”为带控制脚和调节脚, “-H”为带散热片, “-T(H)”为接线式(带散热片)封装, “-TS(H)”为导轨式(带散热片)封装, 导轨宽度31.5mm。
Note 3: Suffix with “C” means it with CTRL control function; Suffix “R” is with Ctrl and Trim function
“-H” suffix is with heat sink, “-T(H)” suffix for chassis mounting(with heat sink),
“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 31.5mm.

封装尺寸 / Packing Dimension



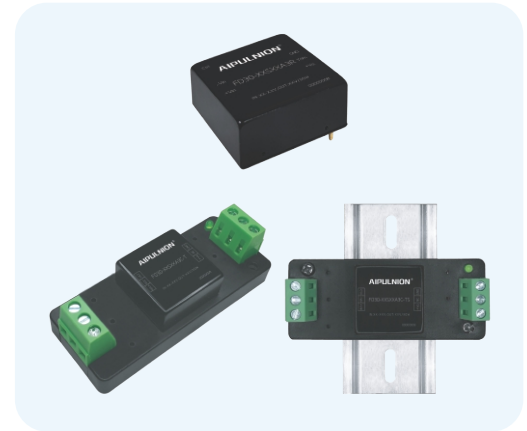
单位 (Unit) : mm
栅格间距 (lattice spacing) : 2.54mm(0.1inch)
未注尺寸公差 (General tolerance) : ±0.50mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|------|-------|-----|-------|
| A3C2 | -Vin | +Vin | +Vo | NP | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 远程控制脚 |
| A3R2 | -Vin | +Vin | +Vo | Trim | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 电压调节端 | 输出地 | 远程控制脚 |
| A3N2 | -Vin | +Vin | +Vo | NP | GND | NP |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 空脚 | 输出地 | 空脚 |
| A3T2 | -Vin | +Vin | +Vo | Trim | GND | NP |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 电压调节端 | 输出地 | 空脚 |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 宽电压输入(4:1) Wide input voltage rang(4:1)
- 低待机功耗低至0.08W Low standby power consumption to 0.08W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压(Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case,low output ripple
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FD30-18S3V3A3(R) | 9-36 | 50 | 3.3 | 6000 | 84 |
| FD30-18S05A3(R) | | 50 | 5 | 6000 | 88 |
| FD30-18S09A3(R) | | 50 | 9 | 3333 | 88 |
| FD30-18S12A3(R) | | 10 | 12 | 2500 | 89 |
| FD30-18S15A3(R) | | 10 | 15 | 2000 | 89 |
| FD30-18S24A3(R) | | 10 | 24 | 1250 | 90 |
| FD30-36S3V3A3(R) | 18-75 | 34 | 3.3 | 6000 | 83 |
| FD30-36S05A3(R) | | 43 | 5 | 6000 | 87 |
| FD30-36S09A3(R) | | 53 | 9 | 3333 | 87 |
| FD30-36S12A3(R) | | 2 | 12 | 2500 | 88 |
| FD30-36S15A3(R) | | 3 | 15 | 2000 | 88 |
| FD30-36S24A3(R) | | 4 | 24 | 1250 | 89 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

注3:后缀带“C”为产品带Ctrl控制功能;“R”为带控制脚和调节脚,“-H”为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热)封装,导轨宽度35mm。

Note 3: Suffix with “C” means it with CTRL control function; Suffix “R” is with Ctrl and Trim function

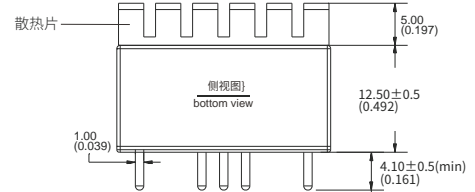
“-H” suffix is with heat sink, “-T(H)” suffix for chassis mounting(with heat sink),

“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

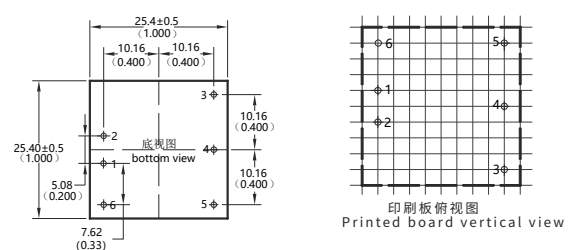
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|------|-------|-----|-------|
| 单路 Single | -Vin | +Vin | +Vo | Trim | GND | CTRL |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 电压调节端 | 输出地 | 远程控制脚 |

封装尺寸/Packing Dimension

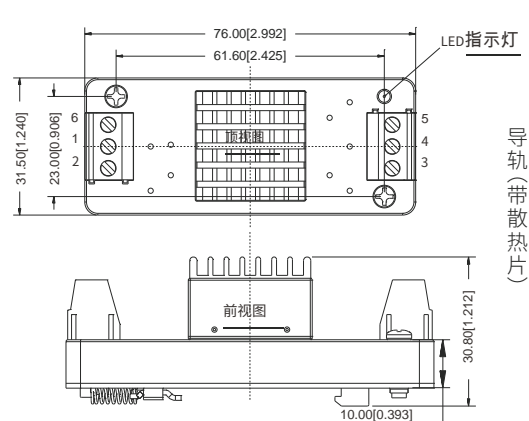
FD30-XXSXXA3-H封装尺寸:25.40*25.40*18.00mm



FD30-XXSXXA3(C)封装尺寸:25.40*25.40*12.50mm



FD30-XXSXXA3-TS(H)封装尺寸:76.00*31.50*30.80mm



单位(Unit):mm

栅格间距(lattice spacing):2.54mm(0.1inch)

未注尺寸公差(General tolerance):±0.5mm

未注明引脚直径公差(Pin section tolerances):±0.10mm

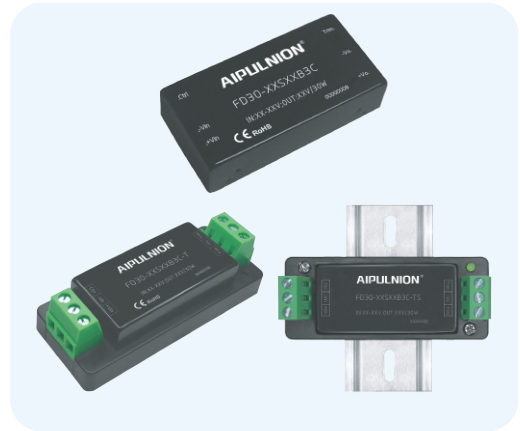
注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。

Note:if the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



产品特性 / Product Features

- 超宽电压输入 U_{rtual} wide input voltage rang30W:(4:1) 50W:(2:1)
- 低待机功耗低至0.20W Low standby power consumption to 0.20W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:输入欠压保护, 输出过流、短路保护 Protection:Input under-voltage,output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 30W已通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表 / Product List

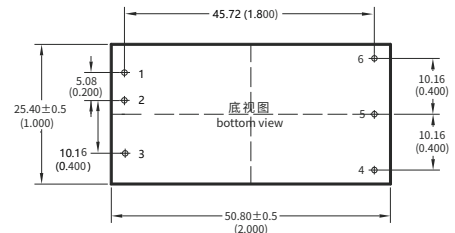


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FD30-18S3V3B3(C) | 9-36 | 30 | 3.3 | 6000 | 87 |
| FD30-18S05B3(C) | | | 5 | 6000 | 90 |
| FD30-18S09B3(C) | | | 9 | 3333 | 89 |
| FD30-18S12B3(C) | | | 12 | 2500 | 90 |
| FD30-18S15B3(C) | | | 15 | 2000 | 90 |
| FD30-18S24B3(C) | | | 24 | 1250 | 90 |
| FD30-36S3V3B3(C) | 18-75 | 30 | 3.3 | 6000 | 87 |
| FD30-36S05B3(C) | | | 5 | 6000 | 90 |
| FD30-36S09B3(C) | | | 9 | 3333 | 89 |
| FD30-36S12B3(C) | | | 12 | 2500 | 90 |
| FD30-36S15B3(C) | | | 15 | 2000 | 90 |
| FD30-36S24B3(C) | | | 24 | 1250 | 90 |
| FD50-24S3V3B3(C) | 18-36 | 50 | 3.3 | 10000 | 87 |
| FD50-24S05B3(C) | | | 5 | 10000 | 90 |
| FD50-24S12B3(C) | | | 12 | 4160 | 89 |
| FD50-24S15B3(C) | | | 15 | 3330 | 90 |
| FD50-24S24B3(C) | | | 24 | 2080 | 90 |
| FD50-48S3V3B3(C) | | | 36-75 | 50 | 3.3 |
| FD50-48S05B3(C) | 5 | 10000 | | | 89 |
| FD50-48S12B3(C) | 12 | 4160 | | | 89 |
| FD50-48S15B3(C) | 15 | 3330 | | | 90 |
| FD50-48S24B3(C) | 24 | 2080 | | | 90 |

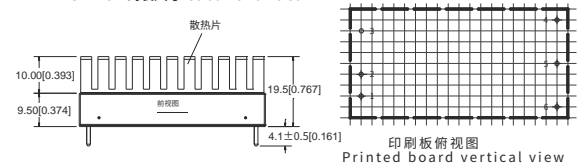
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(% TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3:后缀带“C”为产品带Ctrl控制功能;“-H”为带散热片;“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热片)封装,导轨宽度35mm。
 Note 3: Suffix with “C” means it with CTRL control function;“-H” suffix is with heat sink,“-T(H)” suffix for chassis mounting(with heat sink),“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

封装尺寸 / Packing Dimension

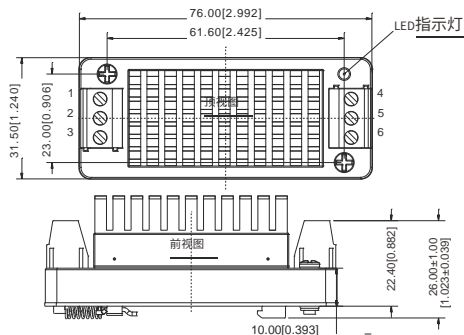
FDXX-XXSXXB3(C)封装尺寸:50.80*25.40*9.50mm



FDXX-XXSXXB3-H封装尺寸:50.80*25.40*19.50mm



FDXX-XXSXXB3-TS(H)封装尺寸:76.00*31.50*33.20mm



单位 (Unit): mm
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明针脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|-------|-------|------|------|
| 单路 Single | +Vin | -Vin | CTRL | Trim | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 远程控制脚 | 电压调节端 | 输出负极 | 输出正极 |

导轨(带散热片)



◆ 产品特性 / Product Features

- 超宽电压输入 Urtual wide input voltage rang 4:1
- 低待机功耗低至0.20W Low standby power consumption to 0.20W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 2250VDC/1500VAC
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能:输入欠压保护,输出过流、短路保护 Protection: Input under-voltage,output over-current,short-circuit
- 电磁兼容 EMI 特性好 EMI features good
- 国际标准引脚 International standard pin
- 应用领域:工业控制、电力设备、通信、机车、工业机器人、铁路车载电子设备等领域
Application Field:Industrial control, power equipment, communications, locomotives, industrial robots, railway electronic equipment.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

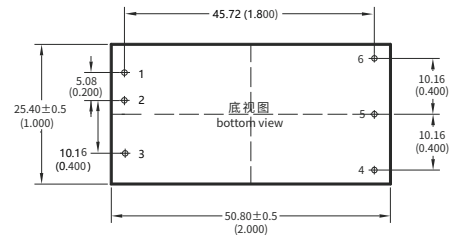


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|--------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FD20-110S3V3B3(C)3 | 40-160 | 30 | 3.3 | 5000 | 86 |
| FD20-110S05B3(C)3 | | | 5 | 4000 | 88 |
| FD20-110S09B3(C)3 | | | 9 | 2222 | 89 |
| FD20-110S12B3(C)3 | | 2 | 12 | 1667 | 88 |
| FD20-110S15B3(C)3 | | | 15 | 1333 | 90 |
| FD20-110S24B3(C)3 | | | 24 | 833 | 89 |
| FD20-110S40B3(C)3 | | | 40 | 500 | 88 |

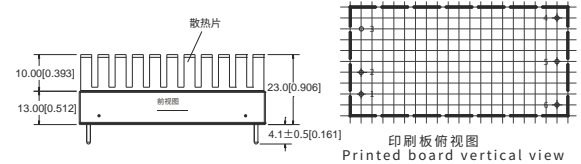
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率 (% TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3:后缀带“C”为产品带Ctrl控制功能;“-H”为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热片)封装,导轨宽度35mm。
 Note 3: Suffix with “C” means it with CTRL control function;“-H” suffix is with heat sink,“-T(H)” suffix for chassis mounting(with heat sink),“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

封装尺寸 / Packing Dimension

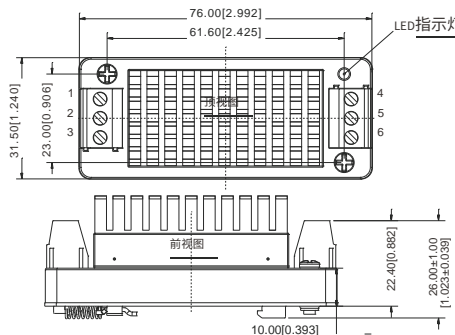
FDXX-XXSXXB3(C)封装尺寸:50.80*25.40*13.00mm



FDXX-XXSXXB3-H封装尺寸:50.80*25.40*23.00mm



FDXX-XXSXXB3-TS(H)封装尺寸:76.00*31.50*37.20mm



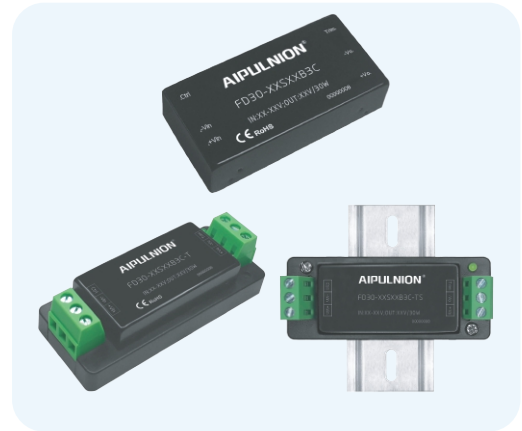
导轨(带散热片)

单位(Unit):mm
 栅格间距 (latic spacing):2.54mm(0.1inch)
 未注尺寸公差 (General tolerance):±0.5mm
 未注明引脚直径公差 (Pin section tolerances):±0.10mm

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|-------|-------|------|------|
| 单路 Single | +Vin | -Vin | CTRL | Trim | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 远程控制脚 | 电压调节端 | 输出负极 | 输出正极 |

◆ 产品特性 / Product Features

- 超宽电压输入 Urtual wide input voltage rang 4:1
- 低待机功耗低至0.20W Low standby power consumption to 0.20W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 3000VDC/1500VAC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:输入欠压保护,输出过流、短路保护 Protection:Input under-voltage,output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 30W已通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:工业控制、电力设备、通信、机车、工业机器人、铁路车载电子设备等领域
Application Field:Industrial control, power equipment, communications, locomotives, industrial robots, railway electronic equipment.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

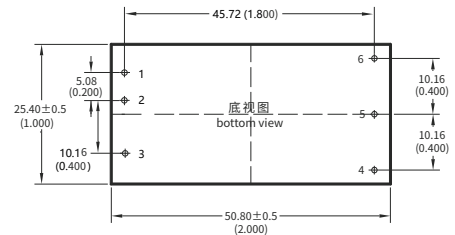


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency | |
|--------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|----|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) | |
| FD30-110S3V3B3(C)3 | 40-160 | 25 | 3.3 | 8000 | 87 | |
| FD30-110S05B3(C)3 | | | 5 | 6800 | 90 | |
| FD30-110S12B3(C)3 | | | 2 | 12 | 3333 | 89 |
| FD30-110S15B3(C)3 | | | | 15 | 2500 | 90 |
| FD30-110S24B3(C)3 | | | | 24 | 2000 | 90 |
| FD30-110S48B3(C)3 | | | | 48 | 1250 | 90 |
| FD40-110S3V3B3(C)3 | 40-160 | 25 | 3.3 | 6000 | 87 | |
| FD40-110S05B3(C)3 | | | 5 | 6000 | 90 | |
| FD40-110S12B3(C)3 | | | 2 | 12 | 3333 | 89 |
| FD40-110S15B3(C)3 | | | | 15 | 2500 | 90 |
| FD40-110S24B3(C)3 | | | | 24 | 2000 | 90 |
| FD40-110S48B3(C)3 | | | | 48 | 1250 | 90 |
| FD50-110S3V3B3(C)3 | 40-160 | 25 | 3.3 | 10000 | 87 | |
| FD50-110S05B3(C)3 | | | 5 | 10000 | 90 | |
| FD50-110S12B3(C)3 | | | 2 | 12 | 4160 | 89 |
| FD50-110S15B3(C)3 | | | | 15 | 3330 | 90 |
| FD50-110S24B3(C)3 | | | | 24 | 2080 | 90 |
| FD50-110S48B3(C)3 | | | | 48 | 10000 | 87 |

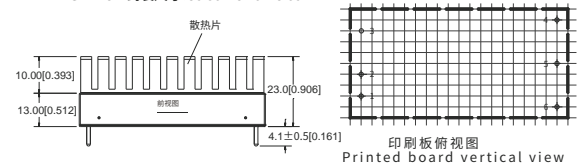
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3:后缀带“C”为产品带Ctrl控制功能;“-H”为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热片)封装,导轨宽度35mm。
 Note 3: Suffix with “C” means it with CTRL control function;“-H” suffix is with heat sink,“-T(H)” suffix for chassis mounting(with heat sink),“-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

封装尺寸 / Packing Dimension

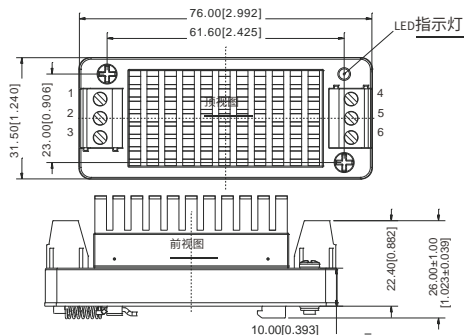
FDXX-XXSXXB3(C)封装尺寸:50.80*25.40*13.00mm



FDXX-XXSXXB3-H封装尺寸:50.80*25.40*23.00mm



FDXX-XXSXXB3-TS(H)封装尺寸:76.00*31.50*37.20mm



导轨(带散热片)

单位(Unit):mm

栅格间距 (latic spacing):2.54mm(0.1inch)

未注尺寸公差 (General tolerance):±0.5mm

未注明引脚直径公差 (Pin section tolerances):±0.10mm

| 引脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|------|-------|-------|------|------|
| 单路 Single | +Vin | -Vin | CTRL | Trim | -Vo | +Vo |
| 功能 | 输入正极 | 输入负极 | 远程控制脚 | 电压调节端 | 输出负极 | 输出正极 |



◆ 产品特性 / Product Features

- 超宽电压输入 Ultra wide input voltage rang
- 低待机功耗低至 0.40W Low standby power consumption to 0.40W
- 效率高达87% Transfer efficiency up to 87%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 满足 Meet IEC/EN62368 test standard 测试标准
- 工作环境温度 Operating Temp:BK15:-30°C~+70°C / BK25:-40~+85°C
- 保护功能:输入防反接、短路、过流、过压保护
Protection: Input protection against reverse connection, short circuit, overcurrent and overvoltage
- 应用领域:工业控制、仪器仪表、通信、电力、冶炼、熔炉等领域
Application Field: Industrial control, instrumentation, communication, electric power, smelting Industry,furnace industry of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



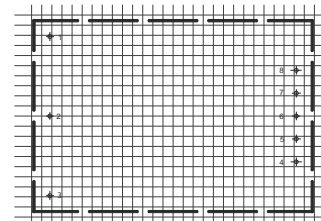
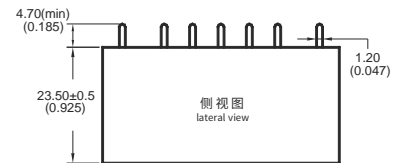
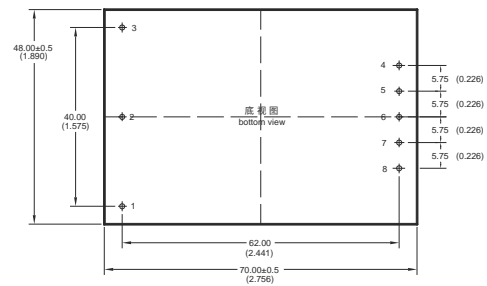
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| BK15-500S12H2N6 | 100-1000 | 12 | 1250 | 82 |
| BK15-500S24H2N6 | | 24 | 625 | 85 |
| BK25-150S12H2N4 | 64-280 | 12 | 2100 | 87 |

注1:因篇幅有限,以上是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 2 | 3 | 4 | 8 |
|--------------------------------|-----------------------|------|------|-----|
| 单路 Single | -Vin | +Vin | +Vo | GND |
| 单路功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| H | 70.00*48.00*23.50mm | | | |
| | 2.756*1.890*0.925inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性 / Product Features

- 超宽电压输入 Ultra wide input voltage rang
- 低待机功耗低至 0.60W Low standby power consumption to 0.60W
- 效率高达85% Transfer efficiency up to 85%
- 隔离电压 (Isolation voltage) : 4000VDC
- 金属外壳, 输出纹波低 Metal case, low output ripple
- 符合UL94V-0级 6-side shielding plastic, UL94V-0 class
- 工作环境温度 Operating Temp: -30°C~+70°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 应用领域: 工业控制、仪器仪表、通信、电力、冶炼、熔炉等领域
Application Field: Industrial control, instrumentation, communication, electric power, smelting Industry, furnace industry of things etc.
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



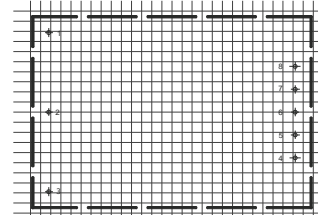
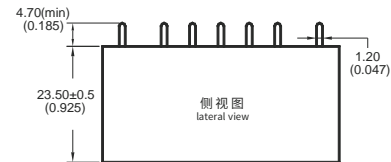
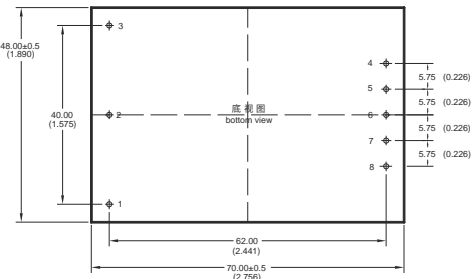
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|-----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| BK15-600S12H1N4 | 200-1200 | 0.50 | 12 | 1250 | 77 |
| BK15-600S15H1N4 | | 0.53 | 15 | 1000 | 78 |
| BK15-600S24H1N4 | | 0.56 | 24 | 625 | 80 |
| BK20-600D12H1N4 | | 1.5 | ±12 | ±833 | 82 |
| BK20-600D15H1N4 | | 2.5 | ±15 | ±667 | 83 |
| BK20-600D24H1N4 | | 2.5 | ±24 | ±417 | 84 |
| BK20-600S12H1N4 | | 0.50 | 12 | 1667 | 82 |
| BK20-600S15H1N4 | | 0.53 | 15 | 1334 | 84 |
| BK20-600S24H1N4 | | 0.56 | 24 | 834 | 85 |
| BK25-600D12H1N4 | | 1.5 | ±12 | ±1042 | 83 |
| BK25-600D15H1N4 | | 2.5 | ±15 | ±833 | 84 |
| BK25-600D24H1N4 | | 2.5 | ±24 | ±521 | 85 |
| BK25-600S12H1N4 | | 0.50 | 12 | 2084 | 82 |
| BK25-600S15H1N4 | | 0.53 | 15 | 1667 | 83 |
| BK25-600S24H1N4 | | 0.56 | 24 | 1042 | 84 |
| BK25-500S12H1N4 | | 100-1000 | 0.5 | 12 | 2084 |
| BK25-500S15H1N4 | 0.53 | | 15 | 1667 | 83 |
| BK25-500S24H1N4 | 0.56 | | 24 | 1042 | 85 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (latic spacing): 2.54mm(0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin No. Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------|-----------------------|------|------|------|-----|-----|-----|------|
| 单路 Single | NP | -Vin | +Vin | +Vo | NP | NP | NP | -Vo |
| 单路功能 Single | 无此脚 | 输入负极 | 输入正极 | 输出正极 | 无此脚 | 无此脚 | 无此脚 | 输出负极 |
| 双路 Dual | NP | -Vin | +Vin | +Vo | NP | COM | NP | -Vo |
| 双路功能 Dual | 无此脚 | 输入负极 | 输入正极 | 输出正极 | 无此脚 | 公共端 | 无此脚 | 输出负极 |
| 封装代号 Packing Code Dimension | L*W*H | | | | | | | |
| H | 70.00*48.00*23.50mm | | | | | | | |
| | 2.756*1.890*0.925inch | | | | | | | |

◆ 产品特性 / Product Features

- 超宽电压输入 Ultra wide input voltage rang
- 高效率、高可靠性、低纹波噪声 High efficiency, high reliability, low ripple noise
- 效率高达85% Transfer efficiency up to 85%
- 隔离电压 (Isolation voltage) : 4000VDC
- 输入具有防反接保护、欠压保护
The input has anti-reverse connection protection and undervoltage protection
- 输出具有过流、过压、短路保护 Output with over current, over voltage, short circuit protection
- 工作环境温度 Operating Temp:-30°C~+70°C
- 工业级产品技术设计, 国际标准体 Industrial product technical design, international standard body

- 应用领域: 应用于光伏发电及高压变频
Application Field: Used in photovoltaic power generation and high voltage frequency conversion.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

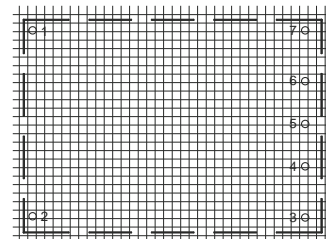
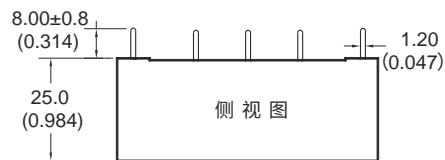
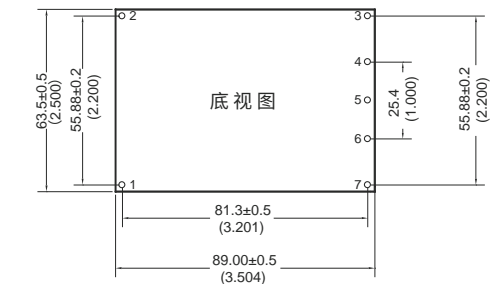


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| BK40-600S12W2N4 | 200-1200 | 12 | 3333 | 83 |
| BK40-600S15W2N4 | | 15 | 2667 | 84 |
| BK40-600S24W2N4 | | 24 | 1667 | 85 |

注1: 因篇幅有限, 以上只是部分产品列表, 如需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 5 | 7 |
|---------------------------------|-----------------------|------|------|------|
| 单路 Single | -Vin | +Vin | -Vo | +Vo |
| 功能 | 输入负极 | 输入正极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| W2N4 | 89.00*63.50*25.00mm | | | |
| | 3.504*2.500*0.984inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 超宽电压输入 Ultra wide input voltage rang
 - 低待机功耗低至 0.15W Low standby power consumption to 0.15W
 - 效率高达82% Transfer efficiency up to 82%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 塑料外壳, 输出纹波低 Plastic case, low output ripple
 - 短路、过流、过电压保护 Short circuit, over current, over voltage protection
 - 工作环境温度 Operating Temp: -40°C~+70°C
 - 符合 CE、RoHS 认证标准 Comply with CE and RoHS certification standards
- 应用领域: 工业控制、仪器仪表、通信、电力、冶炼、熔炉等领域
Application Field: Industrial control, instrumentation, communication, electric power, smelting Industry, furnace industry of things etc.
 - 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|---------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range | 电压 Voltage | 电流 Current | | |
| | (VDC) | (VDC) | (mA) | | |
| BK40-850S24G2N6 | 200-1500 | 24 | 1667 | 81 | |
| BK40-850S28G2N6 | | 28 | 1428 | 82 | |

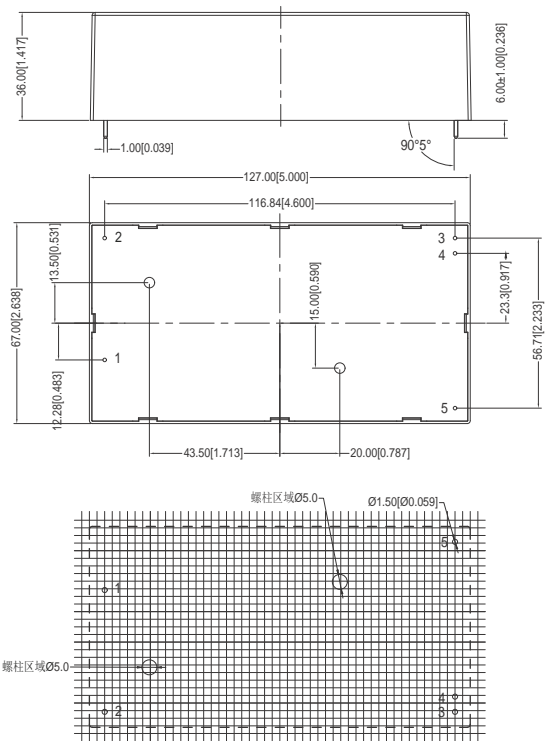
注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率 (%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 8 |
|---------------------------------|-----------------------|--------|------|------|-----|
| 单路 Single | Vin- | Vin+ | -Vo | +Vo | NC |
| 功能 | 直流输入负极 | 直流输入正极 | 输出负极 | 输出正极 | 无功能 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| | 127.00*67.00*36.00mm | | | | |
| | 5.000*2.638*1.417inch | | | | |

封装尺寸 / Packing Dimension

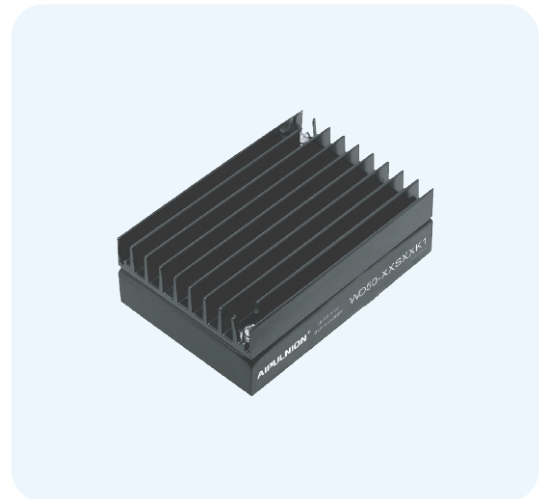
第三角投影



单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing) : 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance) : ±0.5mm
 未注明针脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性/Product Features

- 宽电压输入(2:1) Wide input voltage rang(2:1)
- 低待机功耗低至0.60W Low standby power consumption to 0.60W
- 效率高达87% Transfer efficiency up to 87%
- 隔离电压(Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case,low output ripple
- 工作环境温度 Operating Temp:-25°C~+85°C
- 保护功能:输入欠压保护, 输出过流、短路保护 Protection:Input under-voltage, output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| WD50-12S05K1 | 9-18 | 50 | 5 | 10000 | 80 |
| WD50-12S12K1 | | 70 | 12 | 4166 | 85 |
| WD50-12S24K1 | | 75 | 24 | 2083 | 85 |
| WD50-24S05K1 | 18-36 | 39 | 5 | 10000 | 82 |
| WD50-24S12K1 | | 40 | 12 | 4166 | 85 |
| WD50-24S24K1 | | 42 | 24 | 2083 | 86 |
| WD50-48S05K1 | 36-72 | 18 | 5 | 10000 | 84 |
| WD50-48S12K1 | | 20 | 12 | 4166 | 85 |
| WD50-48S24K1 | | 21 | 24 | 2083 | 87 |
| WD50-110S05K1 | 72-144 | 9 | 5 | 10000 | 84 |
| WD50-110S12K1 | | 10 | 12 | 4166 | 85 |
| WD50-110S24K1 | | 11 | 24 | 2083 | 87 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。

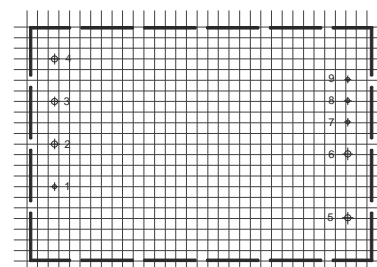
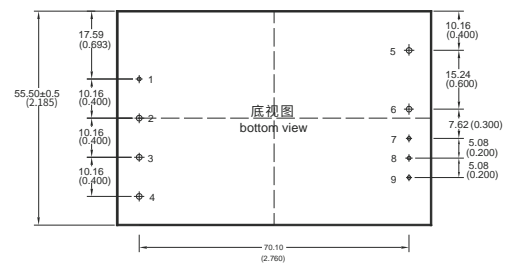
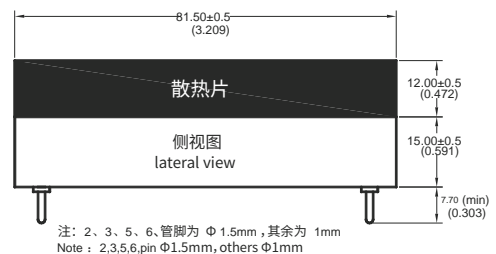
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。

Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|------|-------|------|--------------------------------|------|-----------------------|
| 单路 Single | CASE | +Vin | -Vin | REM | +Vo | -Vo |
| 功能 | 电源外壳 | 输入正极 | 输入负极 | 控制脚 | 输出正极 | 输出负极 |
| 管脚号码 Pin-out | 7 | 8 | 9 | 封装代号 Packing Code/Dimension | | L*W*H |
| 单路 Single | +S | TRIM | -S | K | | 81.50*55.50*15.00mm |
| 功能 | 正反馈端 | 电压调节脚 | 负反馈端 | | | 3.209*2.185*0.591inch |

封装尺寸/Packing Dimension



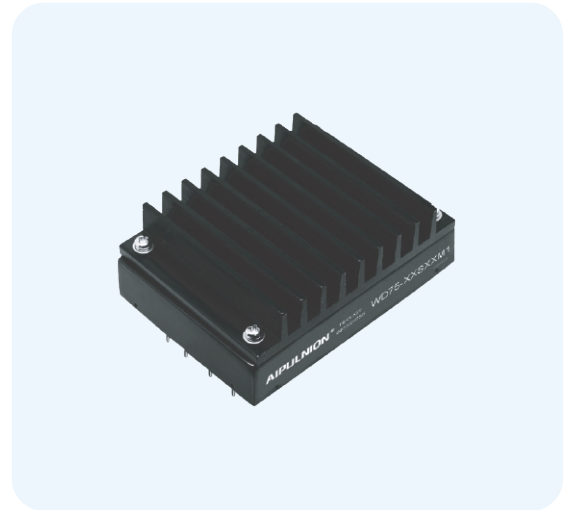
单位(Unit):mm
印刷板俯视图(Printed board vertical view)
栅格间距(latic spacing):2.54mm(0.1inch)
未注尺寸公差(General tolerance):±0.5mm
未注明针脚直径公差(Pin section tolerances):±0.10mm

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。

Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 宽电压输入(2:1) Wide input voltage rang(2:1)
- 低待机功耗低至2.00W Low standby power consumption to 2.00W
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压(Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case,low output ripple
- 工作环境温度 Operating Temp:-25°C~+55°C
- 保护功能:输入欠压保护,输出过流、短路保护
Protection:Input under-voltage, output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



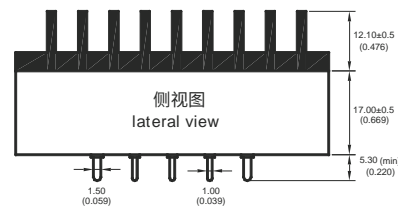
| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| WD75-12S05M1 | 9-18 | 106 | 5 | 15000 | 79 |
| WD75-12S12M1 | | 100 | 12 | 6250 | 86 |
| WD75-12S24M1 | | 90 | 24 | 3125 | 86 |
| WD75-24S05M1 | 18-36 | 82 | 5 | 15000 | 83 |
| WD75-24S12M1 | | 80 | 12 | 6250 | 86 |
| WD75-24S24M1 | | 80 | 24 | 3125 | 87 |
| WD75-48S05M1 | 36-72 | 75 | 5 | 15000 | 83 |
| WD75-48S12M1 | | 75 | 12 | 6250 | 85 |
| WD75-48S24M1 | | 70 | 24 | 3125 | 87 |
| WD75-110S05M1 | 72-144 | 80 | 5 | 15000 | 87 |
| WD75-110S12M1 | | 79 | 12 | 6250 | 88 |
| WD75-110S24M1 | | 80 | 24 | 3125 | 88 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

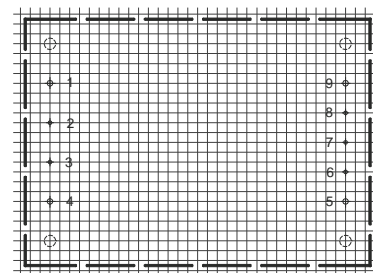
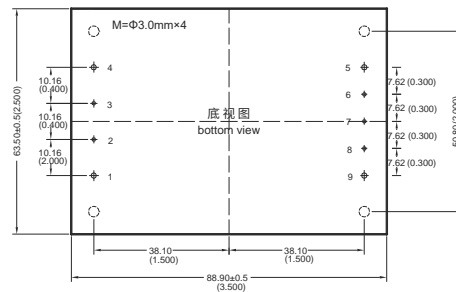
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|-------|------|------|--------------------------------|------|-----------------------|
| 单路 Single | -Vin | REM | CASE | +Vin | +Vo | +S |
| 功能 | 输入负极 | 控制脚 | 电源外壳 | 输入正极 | 输出正极 | 正反馈端 |
| 管脚号码 Pin-out | 7 | 8 | 9 | 封装代号 Packing Code Dimension | | L*W*H |
| 单路 Single | TRIM | -S | -Vin | M | | 88.90*63.50*17.00mm |
| 功能 | 电压调节端 | 负反馈端 | 输出负极 | | | 3.500*2.500*0.669inch |

封装尺寸 / Packing Dimension



注:1,4,5,9、管脚为1.5mm,其余为1mm
Note:1,4,5,9,pin Φ1.5mm, others Φ1mm



单位(Unit):mm
印刷板俯视图(Printed board vertical view)
栅格间距(latic spacing):2.54mm(0.1inch)
未注尺寸公差(General tolerance):±0.5mm
未注明针脚直径公差(Pin section tolerances):±0.10mm



◆ 产品特性/Product Features

- 宽电压输入 Ultra wide input voltage rang
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) :1500VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输入欠压, 输出过压, 短路, 过流保护
Protection:nput under-voltage, output over-current,short-circuit
- 长期短路保护,可自恢复 Long - term short - circuit protection, self - recovery
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

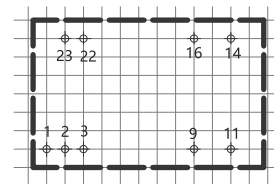
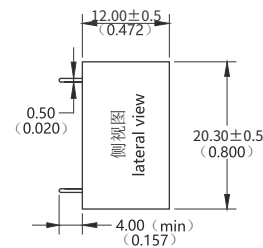
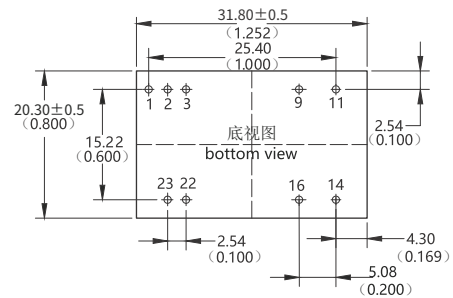


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DD6-05S05E3(C)2 | 4.5-9 | 10 | 5 | 1200 | 80 |
| DD6-05S12E3(C)2 | | | 12 | 500 | 84 |
| DD6-05S15E3(C)2 | | | 15 | 400 | 84 |
| DD6-05S24E3(C)2 | | | 24 | 250 | 84 |

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注2:表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 2,3 | 22,23 | 14 | 16 | 1 | 9 | 11 |
|---------------------------------|---|-------|------|-----|------|-----|-----|
| E3N2 | -Vin | +Vin | +Vo | GND | NP | NP | NC |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 | 无此脚 | 无此脚 | 无功能 |
| E3C2 | -Vin | +Vin | +Vo | GND | Ctrl | NP | NC |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 | 控制端 | 无此脚 | 无功能 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | | |
| E3 | 31.80*20.30*12.00mm 1.252*0.800*0.472inch | | | | | | |

封装尺寸/Packing Dimension



单位(Unit):mm
栅格间距 (latic spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明针脚直径公差 (Pin section tolerances):±0.10mm



◆ 产品特性/Product Features

- 宽电压输入 Ultra wide input voltage rang
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压 (Isolation voltage) :1500VDC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输入欠压, 输出过压, 短路, 过流保护
Protection:nput under-voltage, output over-current,short-circuit
- 长期短路保护,可自恢复 Long - term short - circuit protection, self - recovery
- 应用领域:仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

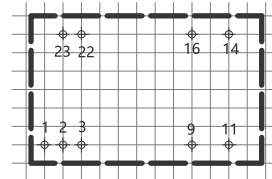
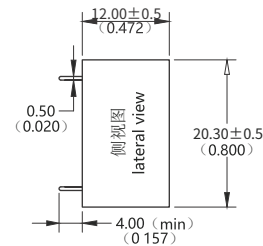
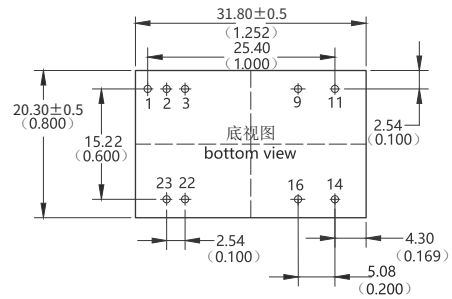


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|-------------------|-----------------------|------------------------|----------------------------------|---------------|---------------------------|
| | 范围值 Range | 输出空载 Output no load | 电压 Voltage | 电流 Current | (%TYP) |
| | (VDC) | (mA) | (VDC) | (mA) | |
| DD10-18S3V3E3(C)2 | 9-36 | 33 | 3.3 | 2400 | 86 |
| DD10-18S05E3(C)2 | | | 5 | 2000 | 87 |
| DD10-18S12E3(C)2 | | 10 | 12 | 833 | 87 |
| DD10-18S15E3(C)2 | | | 15 | 667 | 87 |
| DD10-18S24E3(C)2 | | | 24 | 416 | 88 |
| DD10-36S3V3E3(C)2 | 18-75 | 33 | 3.3 | 2400 | 86 |
| DD10-36S05E3(C)2 | | | 5 | 2000 | 87 |
| DD10-36S12E3(C)2 | | 10 | 12 | 833 | 87 |
| DD10-36S15E3(C)2 | | | 15 | 667 | 87 |
| DD10-36S24E3(C)2 | | | 24 | 416 | 88 |
| DD10-12D05E3C2 | 9-18 | 12 | ±5 | ±1000 | 83 |
| DD10-12D12E3C2 | | | ±12 | ±416 | 87 |
| DD10-12D15E3C2 | | | ±15 | ±333 | 87 |
| DD10-24D05E3C2 | 18-36 | 12 | ±5 | ±1000 | 83 |
| DD10-24D12E3C2 | | | ±12 | ±416 | 87 |
| DD10-24D15E3C2 | | | ±15 | ±333 | 87 |

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 Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
 注2: 表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率=总输出功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
 注3: 后缀带“C”为产品带Ctrl控制功能; 单路输出产品不带控制脚后缀为“N2”。
 Note 3: Suffix with "C" means it with CTRL control function; Single output product without control pin suffix "N2".

| 管脚号码 Pin-out | 2, 3 | 22, 23 | 14 | 16 | 1 | 9 | 11 |
|--------------------------------|---|--------|------|-----|------|-----|-----|
| 双路(D) | -Vin | +Vin | +Vo | GND | Ctrl | GND | -Vo |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 | 控制端 | 输出地 | 负输出 |
| 单路(S)E3N2 | -Vin | +Vin | +Vo | GND | NP | NP | NC |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 | 无此脚 | 无此脚 | 无功能 |
| 单路(S)E3C2 | -Vin | +Vin | +Vo | GND | Ctrl | NP | NC |
| 功能 | 输入负极 | 输入正极 | 输出正极 | 输出地 | 控制端 | 无此脚 | 无功能 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | | |
| E3 | 31.80*20.30*12.00mm 1.252*0.800*0.472inch | | | | | | |

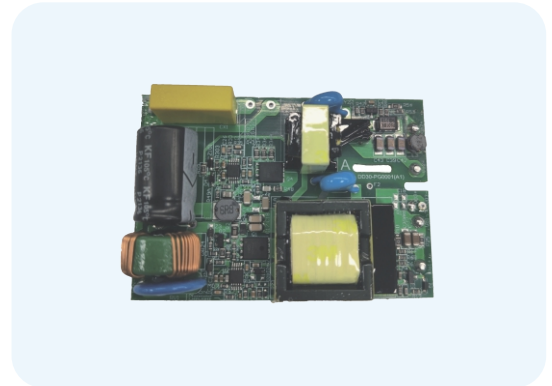
封装尺寸/Packing Dimension



单位 (Unit): mm
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明针脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性/Product Features

- 超宽电压输入 Ultra wide input voltage rang(4:1)
- 电磁兼容EMC:裸机满足(bare board) CISPR32/EN55032 CLASS B
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 3000VAC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输入欠压保护, 输出过流、短路保护 Protection:Input under-voltage, output over-current,short-circuit
- 应用领域: 仪器仪表、通信、纯数字电路、一般低频模拟电路、继电器驱动电路、数据交换电路等领域
Application Field:Instrumentation, communication, pure digital circuit, general low frequency analog circuit, relay drive circuit, data exchange circuit, etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

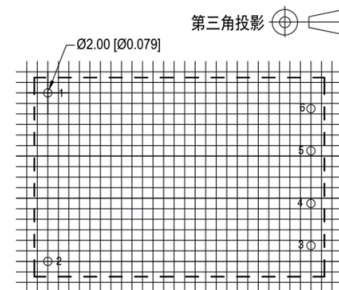
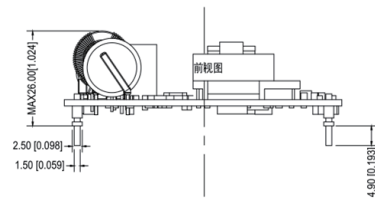
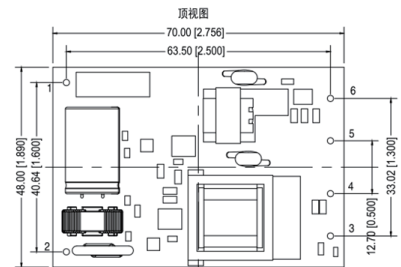


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------|----------------------------------|--------------------------|-------------------------|--------|---------------------------|
| | 范围值 Range (VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) | |
| DD30-36E0524G9N5 | 18-75 | 5 | 4000 | 24 | 417 | 84 | |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|------|-------|-------|-------|-------|
| 双路 Dual | Vin+ | GND | Vo1+ | Vo1- | Vo2- | Vo2+ |
| 功能 | 输入正极 | 输入负极 | 输入1正极 | 输入1负极 | 输入2负极 | 输入2正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| / | 70.00*48.00*26.00mm | | | | | |
| | 2.756*1.890*1.024inch | | | | | |

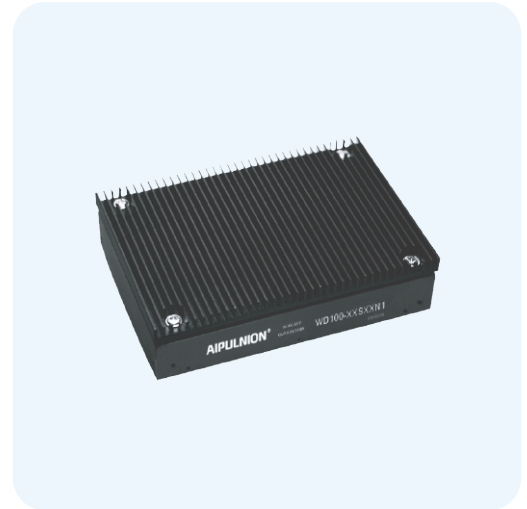
封装尺寸/Packing Dimension



单位 (Unit): mm[inch]
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±1.0mm[±0.039inch]

◆ 产品特性 / Product Features

- 宽电压输入(2:1) Wide input voltage rang(2:1)
- 低待机功耗低至0.80W Low standby power consumption to 0.80W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case, low output ripple
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能:输入欠压保护,输出过流、短路保护
Protection: Input under-voltage, output over-current, short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



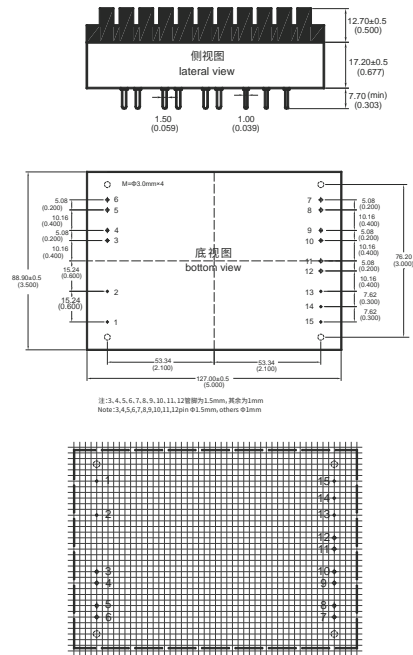
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| WD100-12S05N1 | 9-18 | 30 | 5 | 20000 | 82 |
| WD100-12S12N1 | | 35 | 12 | 8333 | 87 |
| WD100-12S24N1 | | 39 | 24 | 4166 | 88 |
| WD100-24S05N1 | 18-36 | 39 | 5 | 20000 | 85 |
| WD100-24S12N1 | | 40 | 12 | 8333 | 88 |
| WD100-24S24N1 | | 44 | 24 | 4166 | 88 |
| WD100-48S05N1 | 36-72 | 40 | 5 | 20000 | 82 |
| WD100-48S12N1 | | 45 | 12 | 8333 | 87 |
| WD100-48S24N1 | | 50 | 24 | 4166 | 88 |
| WD100-110S05N1 | 72-144 | 45 | 5 | 20000 | 85 |
| WD100-110S12N1 | | 46 | 12 | 8333 | 88 |
| WD100-110S24N1 | | 50 | 24 | 4166 | 88 |
| WD150-12S12N1 | 9-18 | 14368 | 12 | 12500 | 87 |
| WD150-12S24N1 | | 14205 | 24 | 6250 | 88 |
| WD150-24S12N1 | 18-36 | 7102 | 12 | 12500 | 88 |
| WD150-24S24N1 | | 7102 | 24 | 6250 | 88 |
| WD150-48S12N1 | 36-72 | 3592 | 12 | 12500 | 87 |
| WD150-48S24N1 | | 3551 | 24 | 6250 | 88 |
| WD150-110S12N1 | 72-144 | 1550 | 12 | 12500 | 88 |
| WD150-110S24N1 | | 1550 | 24 | 6250 | 88 |
| VD150-48S24N1 | 33.6-72 | 45 | 24 | 6250 | 87 |
| VD150-48S24N1A | | 45 | 24 | 6250 | 87 |
| VD150-110S12N1 | 72-144 | 50 | 12 | 12500 | 90 |
| VD150-110S24N1 | | 50 | 24 | 6250 | 90 |

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注2: 表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension

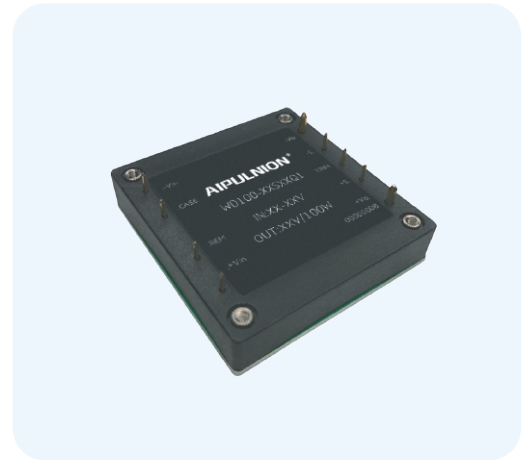


单位(Unit): mm
印刷板俯视图(Printed board vertical view)
栅格间距(lattic spacing): 2.54mm(0.1inch)
未注尺寸公差(General tolerance): ±0.5mm
未注明引脚直径公差(Pin section tolerances): ±0.10mm

| | | | | | | |
|---------------------------------|-------|------|-------|------|-----------------------|------|
| 管脚号码 Pin-out | 1 | 2 | 3:4 | 5:6 | 7:8 | 9:10 |
| 单路 Single | REM | CASE | -Vin | +Vin | +Vo | -Vo |
| 功能 | 控制脚 | 电源外壳 | 输入负极 | 输入正极 | 输出正极 | 输出负极 |
| 管脚号码 Pin-out | 11:12 | 13 | 14 | 15 | L*W*H | |
| 单路 Single | NP | +S | TRIM | -S | | |
| 功能 | 空脚 | 正反馈端 | 电压调节端 | 负反馈端 | 127.00*88.90*17.20mm | |
| 封装代号 Packing Code/ Dimension | N | | | | 5.000*3.500*0.667inch | |

◆ 产品特性 / Product Features

- 宽电压输入(2:1) Wide input voltage rang(2:1)
- 高功率密度 High power density
- 低待机功耗低至0.80W Low standby power consumption to 0.80W
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压 (Isolation voltage) : 1500VDC
- 铝基板, 输出纹波低 Aluminum baseplate, low output ripple
- 工作环境温度 Operating Temp: -40°C~+85°C
- 保护功能: 输入欠压保护, 输出过流、短路保护 Protection: Input under-voltage, output over-current, short-circuit
- 电磁兼容EMC: 裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

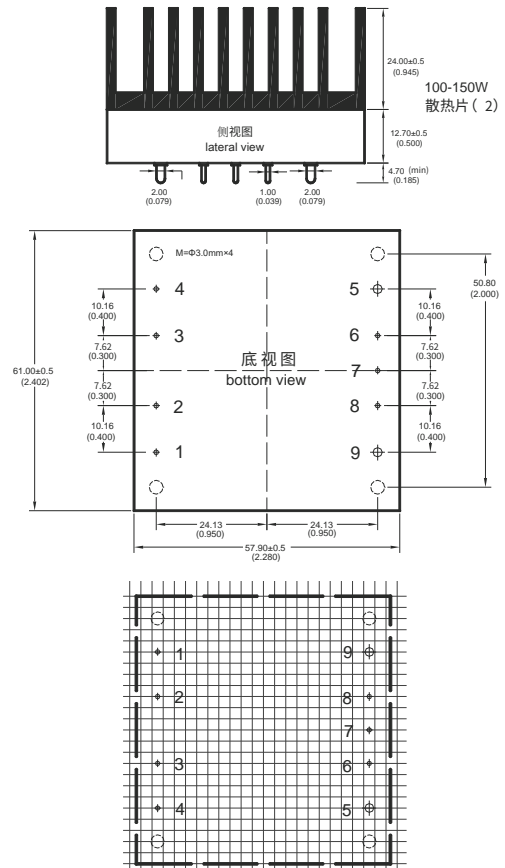


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| WD100-24S12Q1 | 18-36 | 4735 | 12 | 8333 | 88 |
| WD100-24S24Q1 | | 4735 | 24 | 4166 | 88 |
| WD100-48S12Q1 | 36-72 | 2367 | 12 | 8333 | 88 |
| WD100-48S24Q1 | | 2367 | 24 | 4166 | 88 |
| WD100-110S12Q1 | 74-144 | 1033 | 12 | 8333 | 88 |
| WD100-110S24Q1 | | 1033 | 24 | 4166 | 88 |
| WD150-24S12Q1 | 18-36 | 7102 | 12 | 12500 | 88 |
| WD150-24S24Q1 | | 7102 | 24 | 6250 | 88 |
| WD150-48S12Q1 | 36-72 | 12500 | 12 | 12500 | 88 |
| WD150-48S24Q1 | | 6250 | 24 | 6250 | 88 |
| WD150-110S12Q1 | 74-144 | 12500 | 12 | 12500 | 88 |
| WD150-110S24Q1 | | 6250 | 24 | 6250 | 88 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|-------|-------|------|---------------------------------|-----------------------|-------|
| 单路 Single | +Vin | REM | CASE | -Vin | -Vo | -S |
| 功能 | 输入正极 | 控制脚 | 电源外壳 | 输入负极 | 输出负极 | 负反馈端 |
| 管脚号码 Pin-out | 7 | 8 | 9 | 封装代号 Packing Code/ Dimension | | L*W*H |
| 单路 Single | TRIM | +S | +Vo | Q | 61.00*57.90*12.70mm | |
| 功能 | 电压调节端 | 正反反馈端 | 输出正极 | | 2.402*2.280*0.500inch | |

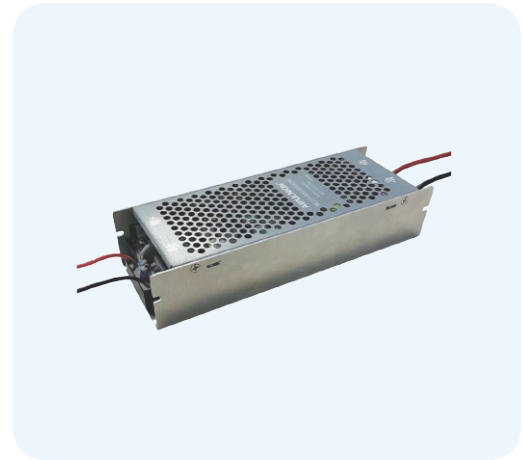
封装尺寸 / Packing Dimension





◆ 产品特性 / Product Features

- 超宽电压输入 Ultra wide input voltage rang 250-1500
- 高功率密度 High power density
- 低待机功耗低至1.3mA Low standby power consumption to 1.3mA
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 4000VC
- 工作环境温度 Operating Temp:-40°C~+70°C
- 保护功能:输入防反接保护、欠压保护,输出过流、过压、短路保护
Protection:Input anti-reverse connection , under voltage , output over current, over voltage, short circuit
- 应用于光伏发电及高压变频
Applications: Photovolt power generation and high voltage frequency conversion
- 应用领域:光伏逆变器、储能系统、充电桩和工控等领域
Application Field: Photovoltaic inverters, energy storage systems, charging piles and industrial control and other industries
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

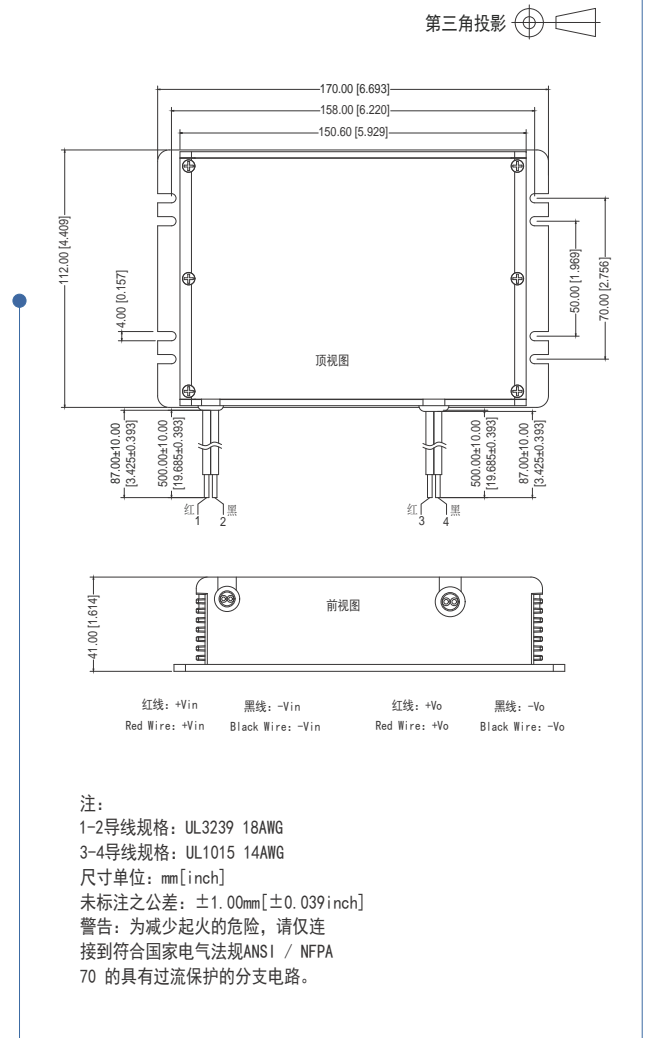


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|-------------------|-----------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| BK150-800S28GA1N6 | 250-1500 | 28 | 5360 | 86 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

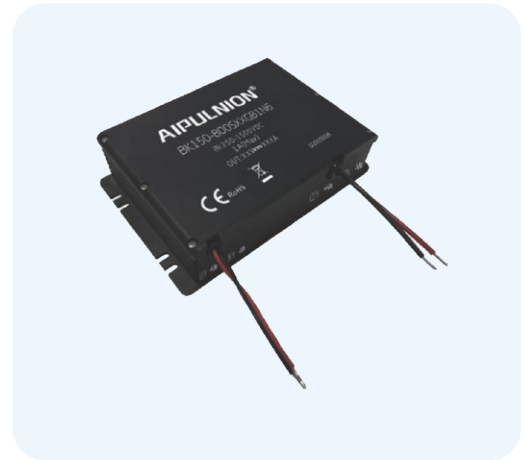
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|-----------------------|------|------|------|------|
| 单路 Single | +VIN | -VIN | +Vo | -Vo | PE |
| 功能 | 输入正极 | 输入负极 | 输出正极 | 输出负极 | 输入大地 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| | 111.20*168.00*42.50mm | | | | |
| | 4.378*6.614*1.674inch | | | | |

封装尺寸 / Packing Dimension



◆ 产品特性 / Product Features

- 超宽电压输入(6:1) Ultra wide input voltage rang(6:1)
- 高功率密度 High power density
- 低待机功耗低至1W Low standby power consumption to 1W
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压(Isolation voltage) : 4000VC
- 工作环境温度 Operating Temp:-40°C~+70°C
- 保护功能:输入防反接保护、欠压保护,输出过流、过压、短路保护
Protection:Input anti-reverse connection , under voltage , output over current, over voltage, short circuit
- 应用于光伏发电及高压变频
Applications: Photovolt power generation and high voltage frequency conversion
- 应用领域:光伏逆变器、储能系统、充电桩和工控等领域
Application Field: Photovoltaic inverters, energy storage systems, charging piles and industrial control and other industries
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

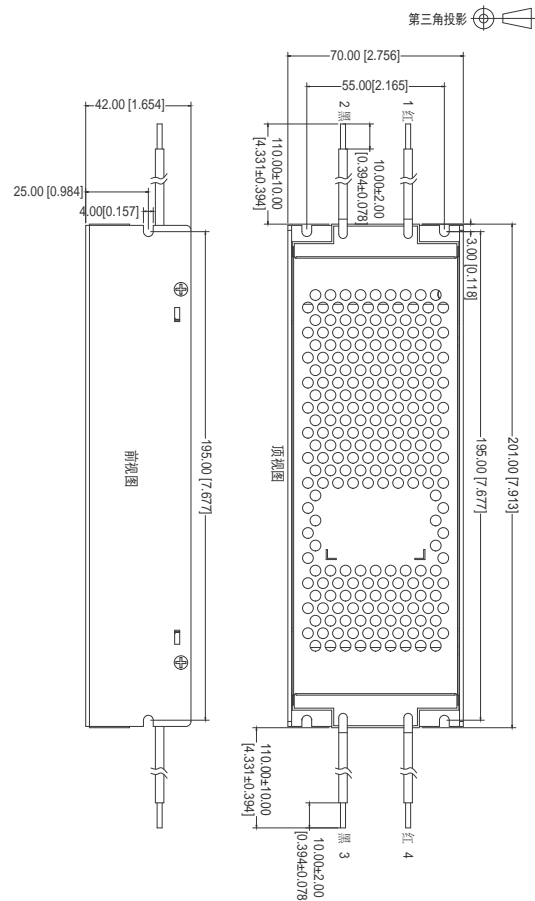


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|-----------------------|------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VDC) | 电压 Voltage (VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| BK150-800S28GB1N6 | 250-1500 | 28 | 5360 | 88 | |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|---------------------------------|-----------------------|------|------|------|------|
| 单路 Single | +VIN | -VIN | -Vo | +Vo | PE |
| 功能 | 输入正极 | 输入负极 | 输出负极 | 输出正极 | 输入大地 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| - | 201.00*70.00*42.00mm | | | | |
| - | 7.913*2.756*1.654inch | | | | |

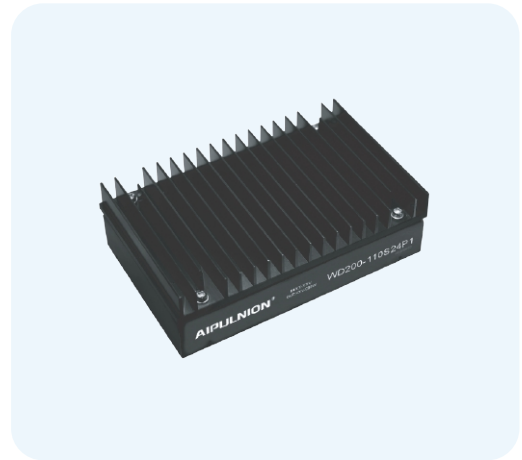
封装尺寸 / Packing Demension



单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (latic spacing) : 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance) : ±0.5mm
 未注明针脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性 / Product Features

- 超宽电压输入(2:1) Ultra wide input voltage rang(2:1)
- 低待机功耗低至0.80W Low standby power consumption to 0.80W
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case, low output ripple
- 工作环境温度 Operating Temp: -25°C~+85°C
- 保护功能: 有短路保护, 可自恢复 Protection: Short circuit, self-recovery
- 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032/GB9254 CLASS A
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

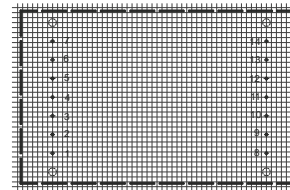
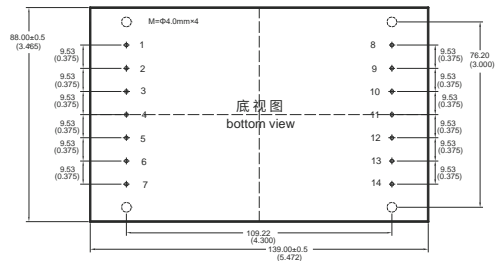
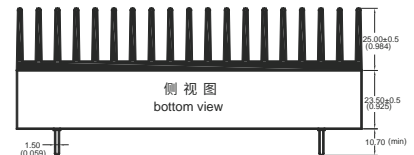


| 产品型号 Part no. | 输入电压 Input voltage | 输入电流 Input current | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|--------------------------------|----------------------------------|------------|---------------------------|
| | 范围值 Range (VDC) | 输出空载 Output no load (mA) | 电压 (VDC) | 电流 (mA) | (%TYP) |
| WD200-12S12P1 | 9-18 | 88 | 12 | 16666 | 88 |
| WD200-24S12P1 | 18-36 | 88 | 12 | 16666 | 88 |
| WD200-24S24P1 | | 88 | 24 | 8333 | 88 |
| WD200-48S12P1 | 36-72 | 87 | 12 | 16666 | 87 |
| WD200-48S24P1 | | 88 | 24 | 8333 | 88 |
| WD200-110S12P1 | 72-144 | 90 | 12 | 16666 | 88 |
| WD200-110S24P1 | | 89 | 24 | 8333 | 88 |
| WD300-24S12P1 | 18-36 | 87 | 12 | 25000 | 88 |
| WD300-24S24P1 | | 89 | 24 | 12500 | 89 |
| WD300-48S12P1 | 36-72 | 88 | 12 | 25000 | 88 |
| WD300-48S24P1 | | 90 | 24 | 12500 | 89 |
| WD300-110S12P1 | 72-144 | 90 | 12 | 25000 | 88 |
| WD300-110S24P1 | | 88 | 24 | 12500 | 89 |
| WD400-24S12P1 | 18-36 | 88 | 12 | 33333 | 88 |
| WD400-24S24P1 | | 89 | 24 | 16666 | 89 |
| WD400-48S12P1 | 36-72 | 91 | 12 | 33333 | 88 |
| WD400-48S24P1 | | 90 | 24 | 16666 | 89 |
| WD400-110S12P1 | 72-144 | 89 | 12 | 33333 | 88 |
| WD400-110S24P1 | | 89 | 24 | 16666 | 89 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension

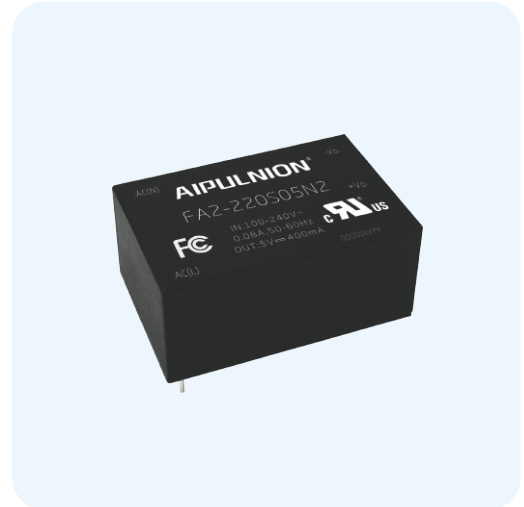


单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

| 管脚号码 Pin-out | 1 | 2:3 | 4:5 | 6 | 7 | 8:9 |
|--------------------------------|-------|------|-------|------|-----------------------|------|
| 单路 Single | NP | -Vin | +Vin | REM | CASE | -Vo |
| 功能 | 空脚 | 输入负极 | 输入正极 | 控制脚 | 电源外壳 | 输出负极 |
| 管脚号码 Pin-out | 10:11 | 12 | 13 | 14 | L*W*H | |
| 单路 Single | +Vo | -S | TRIM | +S | 139.00*88.00*23.50mm | |
| 功能 | 输出正极 | 负反馈端 | 电压调节端 | 正反馈端 | | |
| 封装代号 Packing Code Dimension | P | | | | 5.472*3.465*0.925inch | |

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
 - 超低待机功耗≤0.30W Ultra low stand-by power consumption ≤ 0.30W
 - 效率高达70% Transfer efficiency up to 70%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
 - 交直流两用 AC-DC dual use
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - PCB板上直插式安装 PCB Mounting
 - 通过UL、FCC、CE、RoHS认证 Has passed UL, FCC, CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



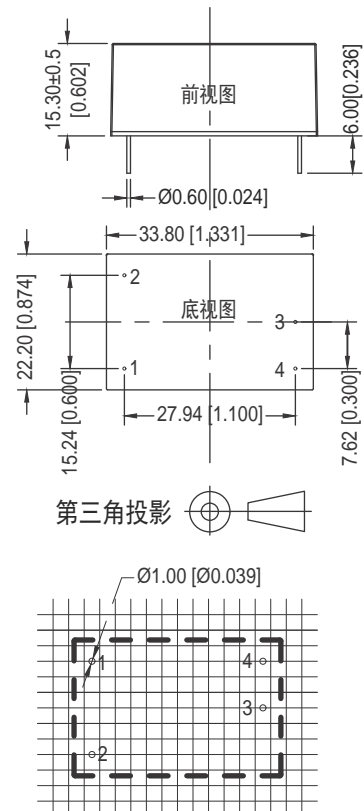
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FA2-220S3V3N2 | 85-305/ 120-430 | 3.3 | 600 | 68 |
| FA2-220S05N2 | | 5 | 400 | 70 |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| N | 33.80*22.20*15.30mm | | | |
| | 1.331*0.874*0.602inch | | | |

封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
 - 超低待机功耗≤0.30W Ultra low stand-by power consumption ≤ 0.30W
 - 效率高达74% Transfer efficiency up to 74%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
 - 交直流两用 AC-DC dual use
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - PCB板上直插式安装 PCB Mounting
 - 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



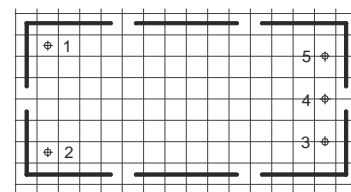
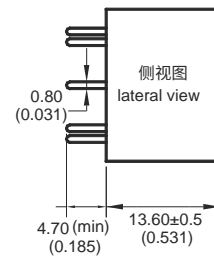
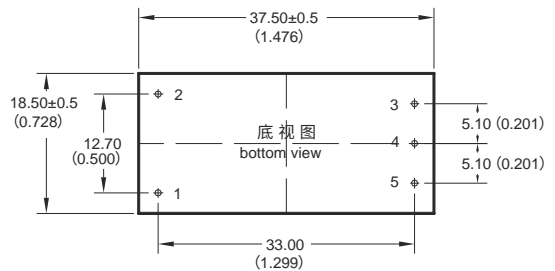
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|------------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| FA3-220S3V3A2N3 | 85-265/ 120-380 | 3.3 | 600 | 66 | |
| FA3-220S05A2N3 | | 5 | 600 | 72 | |
| FA3-220S09A2N3 | | 9 | 333 | 73 | |
| FA3-220S12A2N3 | | 12 | 250 | 73 | |
| FA3-220S15A2N3 | | 15 | 200 | 74 | |
| FA3-220S24A2N3 | | 24 | 125 | 74 | |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|-----------------------|-------|------|----|------|
| 单路 Single | AC(N) | AC(L) | +Vo | NP | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| A | 37.50*18.50*13.60mm | | | | |
| | 1.457*0.709*0.535inch | | | | |

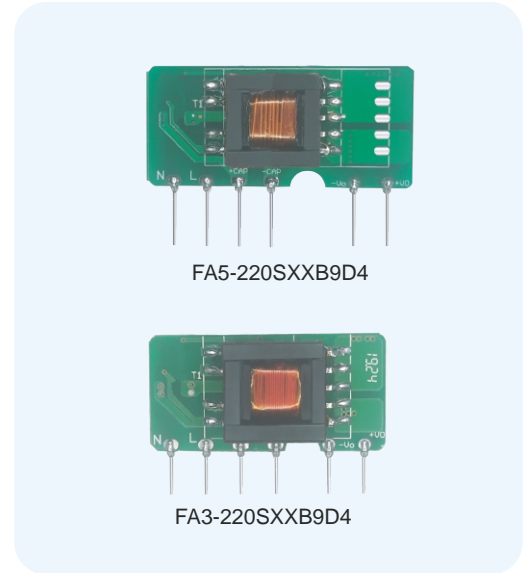
封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 4000VAC
- 超小体积裸板、高功率密度、工业级设计 Ultra small size bare board, high power density, industrial class design
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 交直流两用 AC-DC dual use
- 通过LPS(限功率电源)测试 Pass LPS test
- PCB板上直插式安装 PCB Mounting
- 符合CE认证标准 Meet CE standard
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home,internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



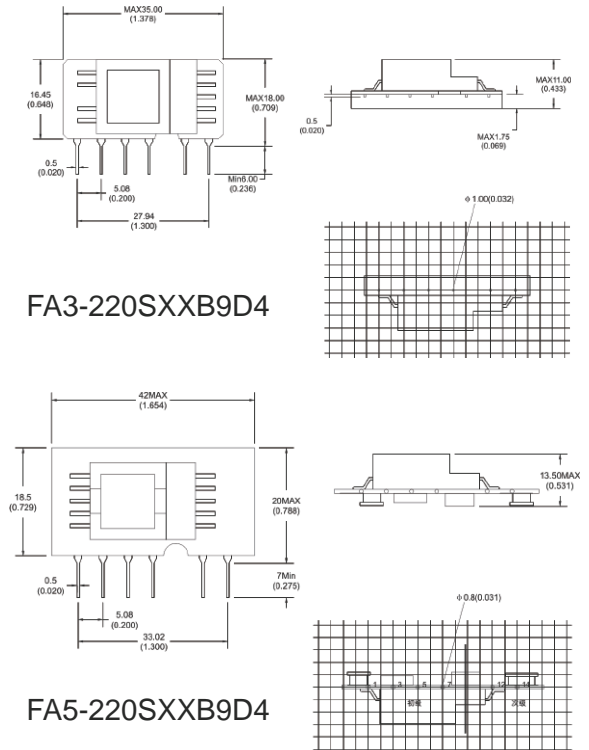
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA3-220S3V3B9D4 | 85-265/ 120-380 | 3.3 | 600 | 69 |
| FA3-220S05B9D4 | | 5 | 600 | 72 |
| FA3-220S09B9D4 | | 9 | 333 | 73 |
| FA3-220S12B9D4 | | 12 | 250 | 73 |
| FA3-220S15B9D4 | | 15 | 200 | 76 |
| FA3-220S24B9D4 | | 24 | 125 | 77 |
| FA5-220S3V3B9D4 | 90-265/ 127-380 | 3.3 | 1000 | 67 |
| FA5-220S05B9D4 | | 5 | 1000 | 71 |
| FA5-220S09B9D4 | | 9 | 556 | 77 |
| FA5-220S12B9D4 | | 12 | 416 | 79 |
| FA5-220S15B9D4 | | 15 | 333 | 79 |
| FA5-220S24B9D4 | | 24 | 208 | 82 |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码(3W) Pin-out | 1 | 3 | 5 | 7 | 10 | 12 |
|--------------------------------|---|-------|---------|---------|------|------|
| 单路 Single | AC(L) | AC(N) | +V(cap) | -V(cap) | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 输出电容正极 | 输出电容负极 | 输出负极 | 输出正极 |
| 管脚号码(5W) Pin-out | 1 | 3 | 5 | 7 | 12 | 14 |
| 单路 Single | AC(L) | AC(N) | +V(cap) | -V(cap) | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 输出电容正极 | 输出电容负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| FA3-B9D4 | 35.00*18.00*11.00mm 1.378*0.709*0.433inch | | | | | |
| FA5-B9D4 | 42.00*20.00*13.00mm 1.654*0.788*0.531inch | | | | | |

- 1.5/7脚间必须外接电容C1
- 2.输出必须外接π型滤波电路,如产品规格书典型应用图1;
- 3.初级与次级的外围元器件要保持大于或等于6.4mm的安全距离

封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图(Printed board vertical view)
栅格间距(latic spacing):2.54mm(0.1inch)
未注尺寸公差±0.5mm
未注明针脚直径公差±0.10mm



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 3100VAC
- 超小体积裸板、工业级设计 Ultra small size bare board, industrial class design
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

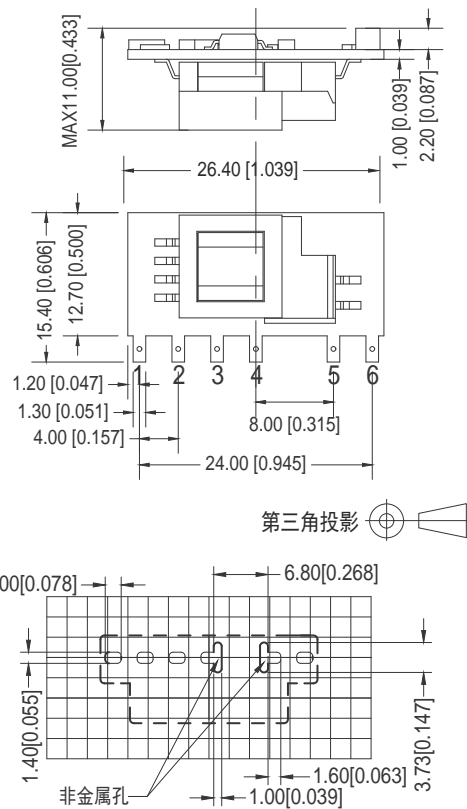


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压/电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|---------------|-----------------------------------|----|-------------------------------------|
| | 范围 Range | 电压 Voltage | 电流 Current | | |
| | (VAC/VDC) | (VDC) | (mA) | | |
| DA3-220S3V3G9D4 | 85-305/ 120-430 | 3.3 | 600 | 69 | |
| DA3-220S05G9D4 | | 5 | 600 | 72 | |
| DA3-220S09G9D4 | | 9 | 333 | 77 | |
| DA3-220S12G9D4 | | 12 | 250 | 79 | |
| DA3-220S15G9D4 | | 15 | 200 | 79 | |
| DA3-220S24G9D4 | | 24 | 125 | 82 | |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|------|------|-----|------|
| 单路 Single | AC(L) | AC(N) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 电容正极 | 电容负极 | 输出地 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| / | 26.40*15.40*11.00mm | | | | | |
| / | 1.039*0.606*0.433inch | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
器件布局仅供参考,具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)



◆ 产品特性/Product Features

- 宽电压范围输入 Wide input voltage rang
 - 超低待机功耗 ≤ 0.20W Ultra low stand-by power consumption ≤ 0.20W
 - 效率高达87% Transfer efficiency up to 87%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路、过压保护 Protection : Output over current, short circuit, over voltage
 - 交直流两用 AC-DC dual use
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、办公电力、民用等领域
Application Field: Industrial control, office, civil applications of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



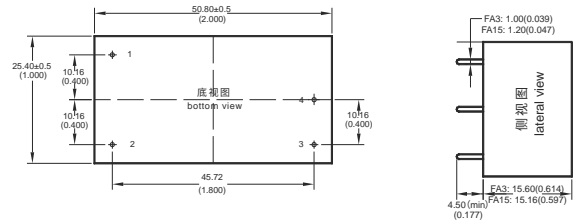
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|---------------------------|------------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| FA3-300S05Y2N3 | 90-528/ 100-745 | 5 | 600 | 70 | |
| FA3-300S12Y2N3 | | 12 | 250 | 72 | |
| FA3-300S15Y2N3 | | 15 | 200 | 73 | |
| FA3-300S24Y2N3 | | 24 | 125 | 75 | |
| FA15-220S05Y2N3 | 85-305/ 120-430 | 5 | 3000 | 82 | |
| FA15-220S12Y2N3 | | 12 | 1250 | 86 | |
| FA15-220S12V5Y2N3 | | 12.5 | 1200 | 86 | |
| FA15-220S12V8Y2N3 | | 12.8 | 1172 | 86 | |
| FA15-220S15Y2N3 | | 15 | 1000 | 87 | |
| FA15-220S24Y2N3 | | 24 | 625 | 86 | |

注1: 因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

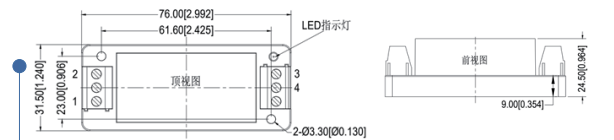
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|---|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| Y2 | FA3: 50.80*25.40*15.60mm; FA15: 50.80*25.40*15.16mm | | | |
| | FA3: 2.000*1.000*0.614inch; FA15: 2.000*1.000*0.597inch | | | |
| Y2-T | 76.00*31.50*24.50mm | | | |
| | 2.992*1.240*0.964inch | | | |
| Y2-TS | 76.00*31.50*29.00mm | | | |
| | 2.992*1.240*1.141inch | | | |

封装尺寸/Packing Dimension

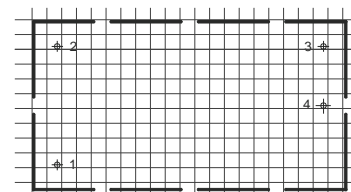
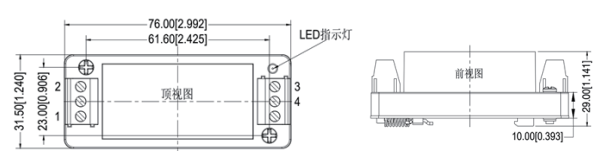
Y2封装尺寸:FA3: 50.80*25.40*15.60mm; FA15: 50.80*25.40*15.16mm



Y2-T封装尺寸:76.00*31.50*24.50mm



Y2-TS封装尺寸:76.00*31.50*29.00mm

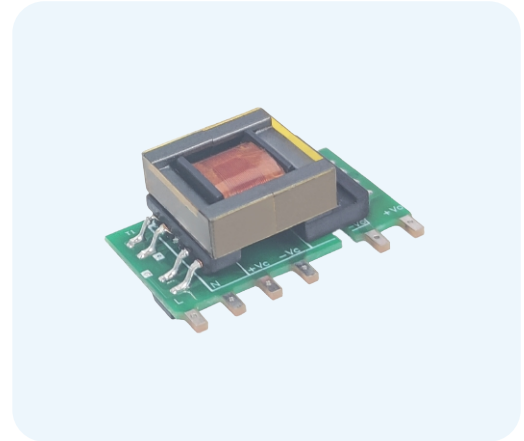


单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (latic spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明针脚直径公差 (Pin section tolerances) : ±0.10mm



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 3600VAC
- 超小体积裸板、工业级设计 Ultra small size bare board, industrial class design
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

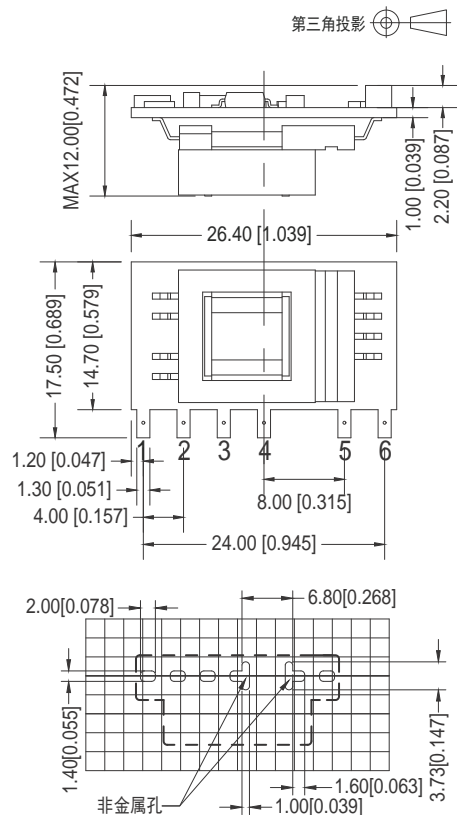


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA5-220S3V3G9D4 | 85-305/ 120-430 | 3.3 | 1000 | 67 |
| DA5-220S05G9D4 | | 5 | 1000 | 71 |
| DA5-220S09G9D4 | | 9 | 556 | 77 |
| DA5-220S12G9D4 | | 12 | 416 | 79 |
| DA5-220S15G9D4 | | 15 | 333 | 79 |
| DA5-220S24G9D4 | | 24 | 208 | 82 |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|------|------|-----|------|
| 单路 Single | AC(L) | AC(N) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 电容正极 | 电容负极 | 输出地 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| / | 26.40*17.50*12.00mm | | | | | |
| / | 1.039*0.689*0.472inch | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
器件布局仅供参考,具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 ≤ 0.15W Ultra low stand-by power consumption ≤ 0.15W
- 效率高达78% Transfer efficiency up to 78%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 部分系列通过CE、RoHS认证 Some series have passed CE and RoHS certification

- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



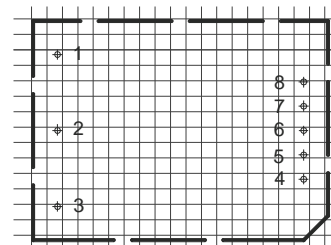
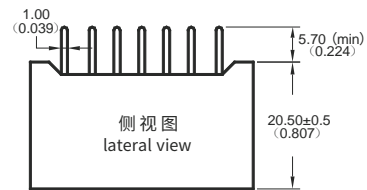
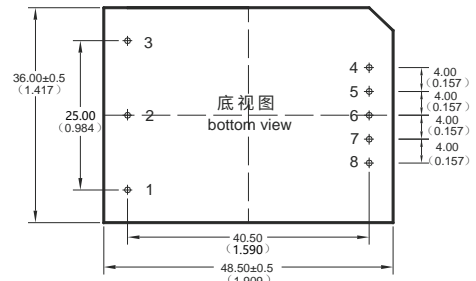
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) |
| FA5-220E0512C2D3 | 85-265/ | 5 | 750 | 12 | 100 | 77 |
| FA5-220E0524C2D3 | 120-380 | 5 | 600 | 24 | 100 | 78 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out 单路 Single | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------------------------|-----------------------|-------|-------|-------|-------|----|-------|-------|
| 单路功能 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 空脚 | 空脚 | 输出负极 |
| 双路 Dual | FG | AC(N) | AC(L) | +Vo2 | -Vo2 | NP | +Vo1 | -Vo1 |
| 双路功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 输出负极2 | 空脚 | 输出正极1 | 输出负极1 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | | | |
| C | 48.50*36.00*20.50mm | | | | | | | |
| | 1.909*1.417*0.807inch | | | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing) : 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance) : ±0.25mm
 未注明针脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
 - 超低待机功耗≤0.25W Ultra low stand-by power consumption ≤ 0.25W
 - 效率高达74% Transfer efficiency up to 76%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+85°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032 CLASS B
 - 交直流两用 AC-DC dual use
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - PCB板上直插式安装 PCB Mounting
 - 通过TUVCE认证 Has passed TUVCE certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA5-220S05G2D4 | 85-305/ 120-430 | 5 | 1000 | 72 |
| FA5-220S12G2D4 | | 12 | 416 | 75 |
| FA5-220S12V5G2D4 | | 12.5 | 400 | 76 |
| FA5-220S15G2D4 | | 15 | 333 | 76 |
| FA5-220S24G2D4 | | 24 | 208 | 78 |

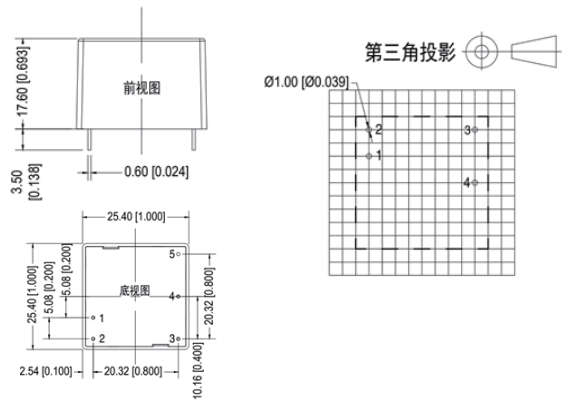
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

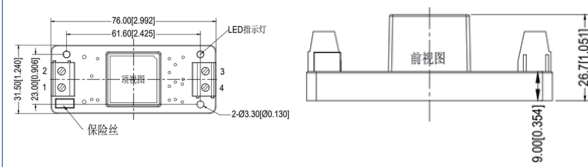
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|-----------------------|-------|------|------|----|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo | NP |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 | 空脚 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| - | 25.40*25.40*17.60mm | | | | |
| | 1.000*1.000*0.693inch | | | | |
| -T | 76.00*31.50*26.70mm | | | | |
| -TS | 2.992X1.240X1.051inch | | | | |
| | 76.00X31.50X31.50mm | | | | |
| | 2.992X1.240X1.240inch | | | | |

封装尺寸/Packing Dimension

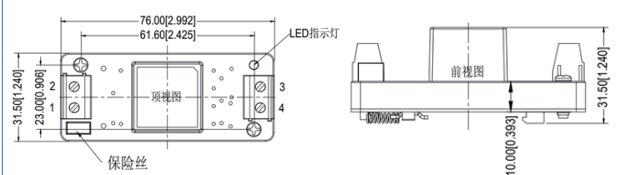
封装尺寸:25.40*25.40*17.60mm



-T封装尺寸:76.00*31.50*26.70mm



-TS封装尺寸:76.00*31.50*31.50mm



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明针脚直径公差 (Pin section tolerances) : ±0.10mm

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 ≤ 0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 符合CE认证标准 Meet CE standard
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

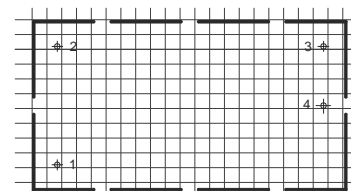
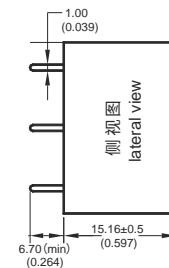
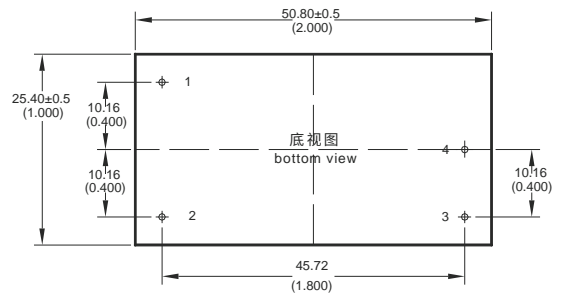


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA5-220S3V3Y2D4 | 90-265/ 120-380 | 3.3 | 1250 | 69 |
| FA5-220S05Y2D4 | | 5 | 1000 | 71 |
| FA5-220S09Y2D4 | | 9 | 556 | 74 |
| FA5-220S12Y2D4 | | 12 | 416 | 78 |
| FA5-220S15Y2D4 | | 15 | 333 | 78 |
| FA5-220S24Y2D4 | | 24 | 208 | 82 |
| FA10-220S05Y2D4 | 85-305/ 120-430 | 5 | 2000 | 78 |
| FA10-220S12Y2D4 | | 12 | 833 | 83 |
| FA10-220S24Y2D4 | | 24 | 417 | 86 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(L) | AC(N) | +Vo | -Vo |
| 功能 | 输入火线 | 输入零线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| Y | 50.80*25.40*15.16mm | | | |
| | 2.000*1.000*0.597inch | | | |

封装尺寸/Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (latic spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm



◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 ≤ 0.20W Ultra low stand-by power consumption ≤ 0.20W
 - 效率高达88% Transfer efficiency up to 88%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路、过压保护 Protection : Output over current, short circuit, over voltage
 - 交直流两用 AC-DC dual use
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、办公电力、民用等领域
Application Field: Industrial control, office, civil applications of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



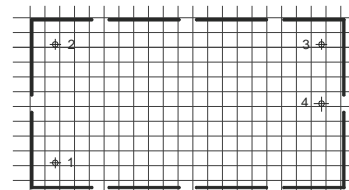
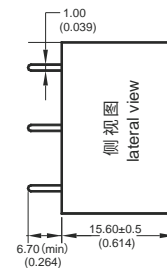
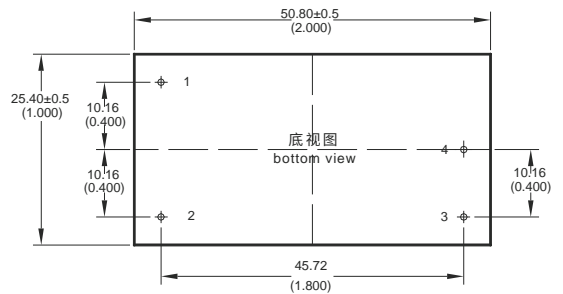
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA5-220S3V3Y2N4 | 85-305/ 120-430 | 3.3 | 1000 | 76 |
| FA5-220S05Y2N4 | | 5 | 1000 | 78 |
| FA5-220S09Y2N4 | | 9 | 555 | 80 |
| FA5-220S12Y2N4 | | 12 | 416 | 82 |
| FA5-220S15Y2N4 | | 15 | 333 | 83 |
| FA5-220S24Y2N4 | | 24 | 208 | 84 |
| FA10-220S3V3Y2N4 | 85-305/ 120-430 | 3.3 | 2000 | 78 |
| FA10-220S05Y2N4 | | 5 | 2000 | 81 |
| FA10-220S09Y2N4 | | 9 | 1111 | 83 |
| FA10-220S12Y2N4 | | 12 | 833 | 87 |
| FA10-220S15Y2N4 | | 15 | 667 | 88 |
| FA10-220S24Y2N4 | | 24 | 416 | 88 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| Y2 | 50.80*25.40*15.60mm | | | |
| | 2.000*1.000*0.614inch | | | |

封装尺寸/Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm
未注明引脚直径公差 (Pin section tolerances) : ±0.10mm

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗 ≤ 0.20W Ultra low stand-by power consumption ≤ 0.20W
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 3750VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 通过CE、RoHS认证 Has passed CE, RoHS certification

- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

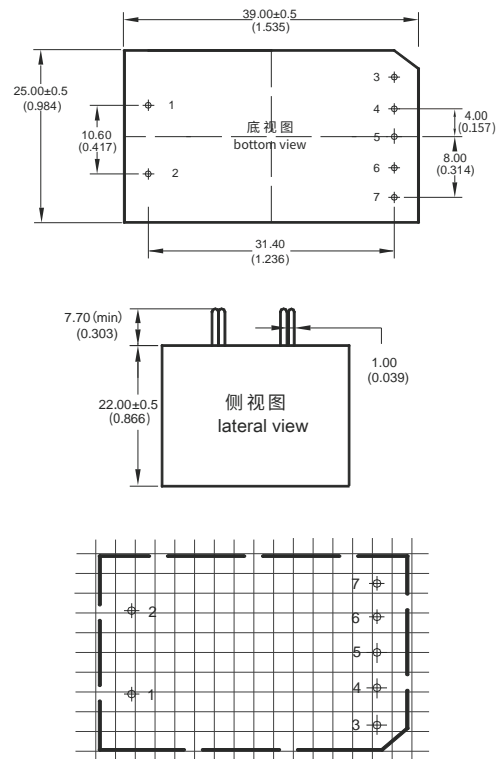


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|------------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| FA6-220S3V3D2 | 85-265/ 120-380 | 3.3 | 1818 | 71 | |
| FA6-220S05D2 | | 5 | 1200 | 75 | |
| FA6-220S09D2 | | 9 | 667 | 78 | |
| FA6-220S12D2 | | 12 | 500 | 80 | |
| FA6-220S15D2 | | 15 | 400 | 82 | |
| FA6-220S16V5D2 | | 16.5 | 360 | 82 | |
| FA6-220S24D2 | | 24 | 250 | 84 | |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 4 | 6 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(L) | AC(N) | +Vo | -Vo |
| 功能 | 输入火线 | 输入零线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| D | 39.00*25.00*22.00mm | | | |
| | 1.535*0.984*0.866inch | | | |

封装尺寸 / Packing Dimension

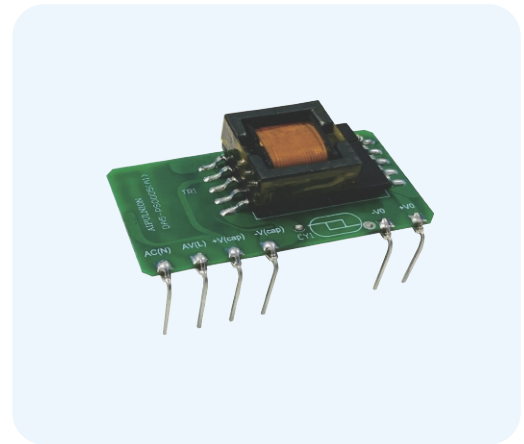


单位 (Unit) : mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing) : 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance) : ±0.5mm
 未注明针脚直径公差 (Pin section tolerances) : ±0.10mm

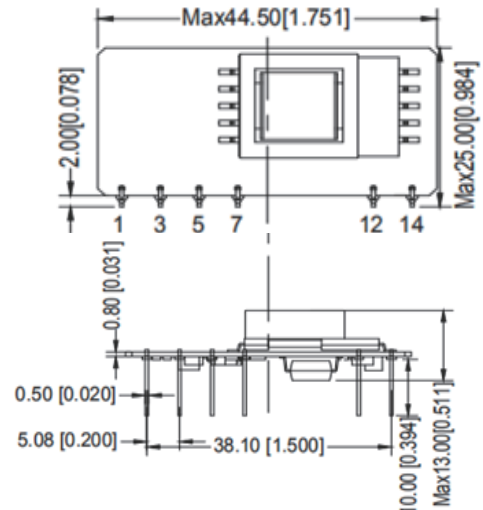


◆ 产品特性 / Product Features

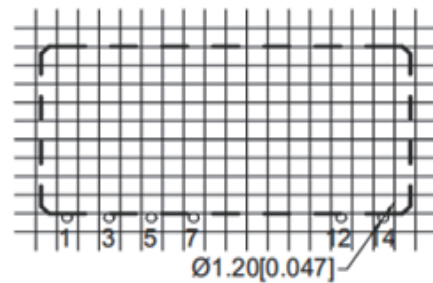
- 国际通用全电压范围输入 Universal wide input voltage range:90-528VAC/127-746VDC
 - 超低待机功耗 ≤ 0.20W Ultra low stand-by power consumption ≤ 0.20W
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 裸板、工业级设计 Bare board, industrial class design
 - 工作环境温度 Operating Temp:-40°C~+85°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 满足Meet IEC62368/UL62368/EN62368 test standard 测试标准
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



封装尺寸 / Packing Dimension



第三角投影



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±1.00mm
 器件布局仅供参考, 具体以实物为准
 (Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|------------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| DA5-300S05G9N4 | 90-528/ 127-746 | 5 | 1000 | 76 | |
| DA5-300S12G9N4 | | 12 | 420 | 78 | |
| DA5-300S24G9N4 | | 24 | 210 | 80 | |

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 注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

| 管脚号码 Pin-out | 1 | 3 | 5 | 7 | 12 | 14 |
|--------------------------------|-----------------------|-------|------|------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入零线 | 输入火线 | 电容正极 | 电容负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| G9 | 44.50*25.00*13.00mm | | | | | |
| | 1.752*0.984*0.512inch | | | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-418VAC/100-591VDC
- 超低待机功耗 ≤0.30W Ultra low stand-by power consumption ≤ 0.30W
- 效率高达79% Transfer efficiency up to 79%
- 隔离电压 (Isolation voltage) : 3600VAC
- 超小体积裸板、工业级设计 Ultra small size bare board, industrial class design
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC62368/UL62368/EN62368 test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

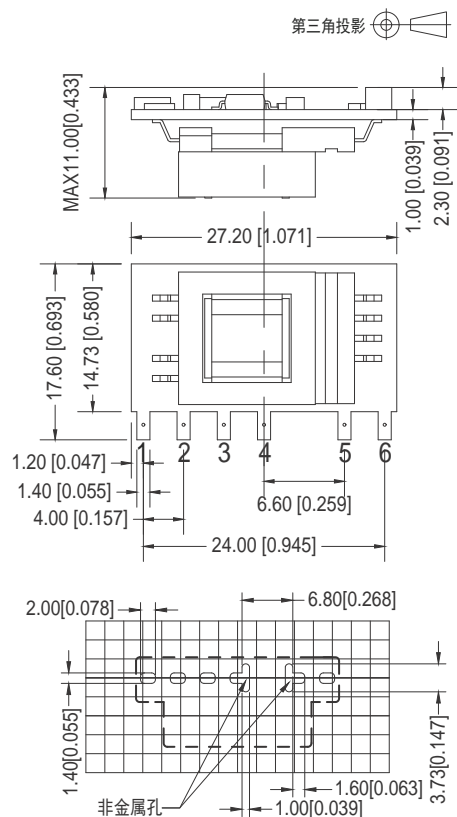


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|------------------------|----------------------------------|--|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| | | | | | |
| DA5-300S12GA9N4 | 85-418/100-591 | 12 | 416 | | 79 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|------|------|-----|------|
| 单路 Single | AC(L) | AC(N) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 电容正极 | 电容负极 | 输出地 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| / | 27.20*17.60*11.00mm | | | | | |
| / | 1.071*0.693*0.433inch | | | | | |

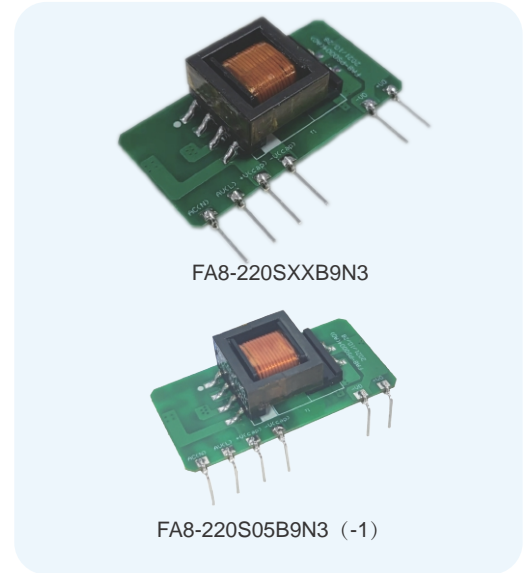
封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±1.00mm
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 ≤ 0.15W Ultra low stand-by power consumption ≤ 0.15W
 - 效率高达82% Transfer efficiency up to 82%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 超小体积裸板、高功率密度、工业级设计 Ultra small size bare board, high power density, industrial class design
 - 工作环境温度 Operating Temp: -40°C~+75°C
 - 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
 - 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032 CLASS B
 - 交直流两用 AC-DC dual use
 - 通过LPS (限功率电源) 测试 Pass LPS test
 - PCB板上直插式安装 PCB Mounting
 - 符合CE认证标准 Meet CE standard
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|---------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA8-220S05B9N3 (-1) | 85-305/ 120-430 | 5 | 1600 | 76 |
| FA8-220S12B9N3 (-1) | | 12 | 667 | 80 |
| FA8-220S24B9N3 (-1) | | 24 | 333 | 82 |

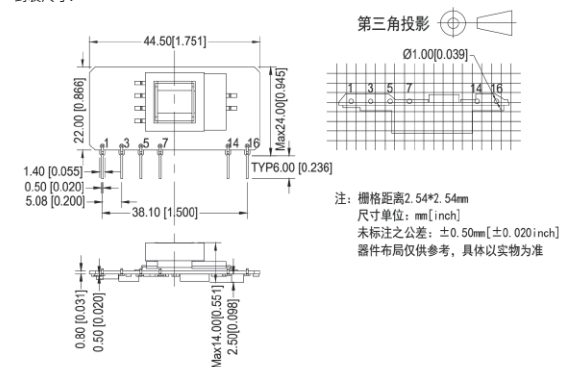
注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
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Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

| 管脚号码 Pin-out | 1 | 3 | 5 | 7 | 14 | 16 |
|--------------------------------|---|-------|---------|---------|------|------|
| 单路 Single | AC(N) | AC(L) | +V(cap) | -V(cap) | -Vo | +Vo |
| 功能 | 输入零线 | 输入火线 | 输出电容正极 | 输出电容负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| - | 44.50*22.00*14.00mm 1.751*0.866*0.551inch | | | | | |

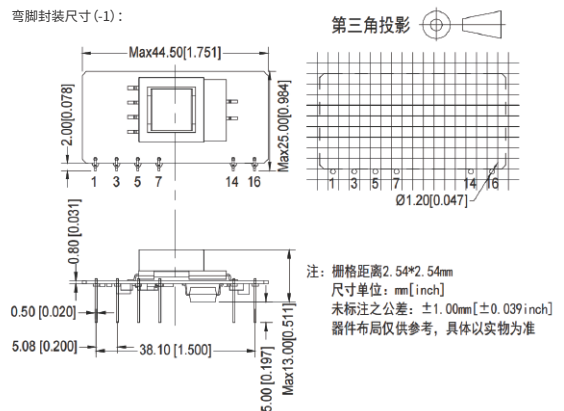
- 1.5/7脚间必须外接电容C1
- 2.输出必须外接π型滤波电路, 如产品规格书典型应用图1;
- 3.初级与次级的外围元器件要保持大于或等于6.4mm的安全距离

封装尺寸/Packing Dimension

封装尺寸:



弯脚封装尺寸 (-1):



单位 (Unit) : mm

印刷板俯视图 (Printed board vertical view)
未注明引脚直径公差 ±0.10mm

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 ≤ 0.20W Ultra low stand-by power consumption ≤ 0.20W
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting

● 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.

● 测试条件:如无特殊指定,所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



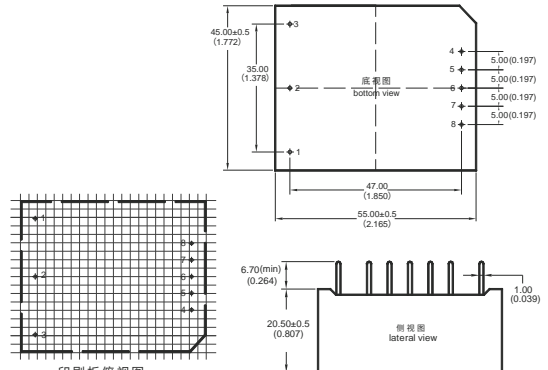
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency (%TYP) |
|-------------------|-----------------------|----------------------------------|-------------------------|------------------------|-------------------------|-------------------------------------|
| | | 范围值 Range (VAC/VDC) | 电压1 Voltage (VDC) | 电流1 Current (mA) | 电压2 Voltage (VDC) | |
| FA10-220S3V3E2D4 | 85-305/ 100-430 | 3.3 | 2000 | / | / | 73 |
| FA10-220S05E2D4 | | 5 | 1500 | / | / | 73 |
| FA10-220S09E2D4 | | 9 | 1111 | / | / | 79 |
| FA10-220S12E2D4 | | 12 | 833 | / | / | 82 |
| FA10-220S15E2D4 | | 15 | 667 | / | / | 82 |
| FA10-220S24E2D4 | | 24 | 416 | / | / | 82 |
| FA10-220S28E2D4 | | 28 | 360 | / | / | 82 |
| FA10-220E0505E2D4 | 85-265/ 120-380 | 5 | 1800 | 5 | 200 | 75 |
| FA10-220E0512E2D4 | | 5 | 1500 | 12 | 200 | 78 |
| FA10-220E0524E2D4 | | 5 | 1000 | 24 | 200 | 83 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3:后缀带“C”为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting,“-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

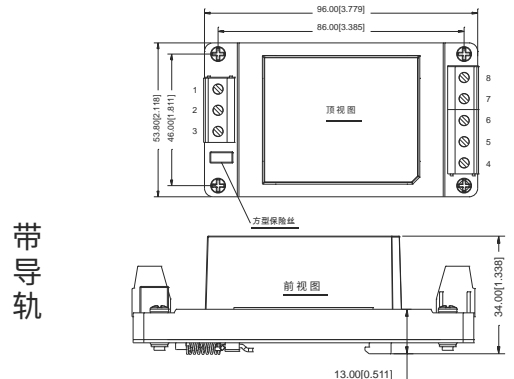
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|----|-------|-------|-------|-------|----|-------|-------|
| 单路(S) Single | FG | AC(N) | AC(L) | +Vo | NP | NP | NP | -Vo |
| 单路功能 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 空脚 | 空脚 | 输出负极 |
| 双路(E) Dual | FG | AC(N) | AC(L) | +Vo2 | -Vo2 | NP | +Vo1 | -Vo1 |
| 双路功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 输出负极2 | 空脚 | 输出正极1 | 输出负极1 |

封装尺寸/Packing Dimension

FA10-E2D4封装尺寸:55.00*45.00*20.50mm



FA10-E2-TS封装尺寸:96.00*53.80*34.00mm



单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗 ≤ 0.35W Ultra low stand-by power consumption ≤ 0.35W
- 效率高达82% Transfer efficiency up to 78%
- 隔离电压 (Isolation voltage) : 3600VAC
- 超小体积裸板、工业级设计 Ultra small size bare board, industrial class design
- 工作环境温度 Operating Temp:-20°C~+85°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC62368/UL62368/EN62368test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

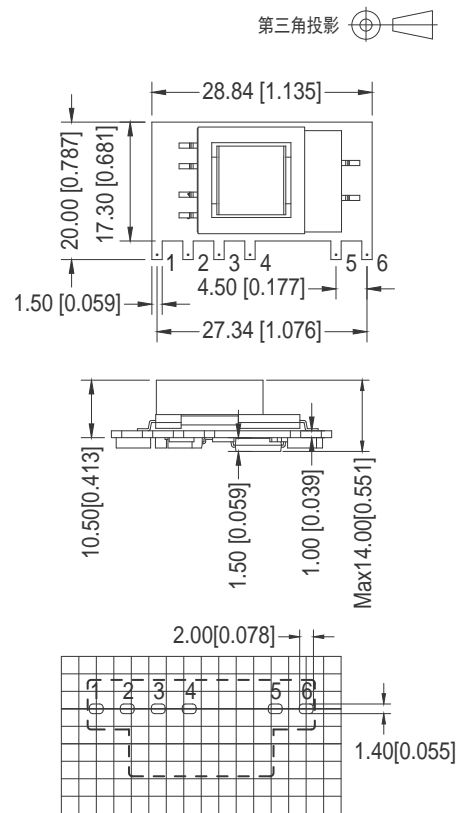


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|-------------------|--------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA10-220S3V3G9N4 | 85-305/ 120-430 | 3.3 | 2000 | 72 |
| DA10-220S05G9N4 | | 5 | 2000 | 78 |
| DA10-220S09G9N4 | | 9 | 1111 | 80 |
| DA10-220S12G9N4 | | 12 | 833 | 82 |
| DA10-220S12V5G9N4 | | 12.5 | 800 | 82 |
| DA10-220S15G9N4 | | 15 | 667 | 82 |
| DA10-220S24G9N4 | | 24 | 416 | 84 |

注1:因篇幅有限,以上是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|------|------|-----|------|
| 单路 Single | AC(L) | AC(N) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 电容正极 | 电容负极 | 输出地 | 输出正极 |
| 封装代号 Packing Code Dimension | L*W*H | | | | | |
| / | 28.84*20.00*14.00mm | | | | | |
| / | 1.135*0.787*0.551inch | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±1.00mm
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 ≤ 0.50W Ultra low stand-by power consumption ≤ 0.50W
- 效率高达84% Transfer efficiency up to 83%
- 隔离电压 (Isolation voltage) : 3000VAC
- 通过LPS (仅限功率电源) 测试 Passed LPS (limited power supply) test
- 工作环境温度 Operating Temp: -40°C ~ +75°C
- 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
- 满足 Meet IEC60950/UL60950/EN60950 test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

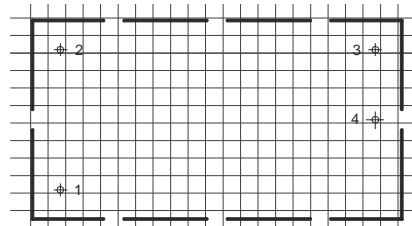
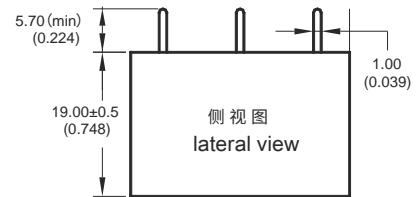
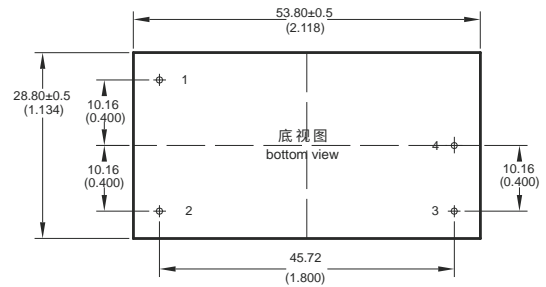


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| DA10-220S05P2D4 | 90-310/ 127-438 | 5 | 1500 | 74 |
| DA10-220S09P2D4 | | 9 | 1111 | 81 |
| DA10-220S12P2D4 | | 12 | 833 | 82 |
| DA10-220S15P2D4 | | 15 | 667 | 82 |
| DA10-220S24P2D4 | | 24 | 417 | 83 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| P2 | 53.80*28.80*19.00mm | | | |
| | 2.118*1.134*0.748inch | | | |

封装尺寸 / Packing Dimension

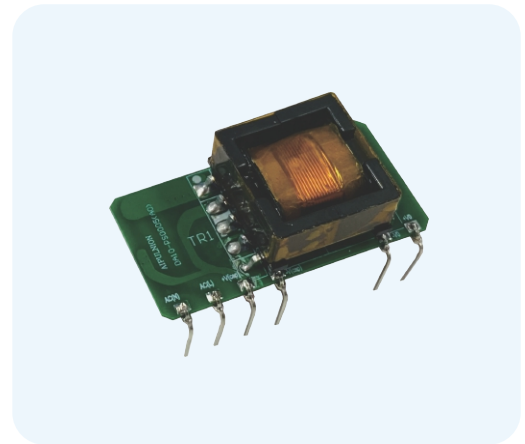


单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)

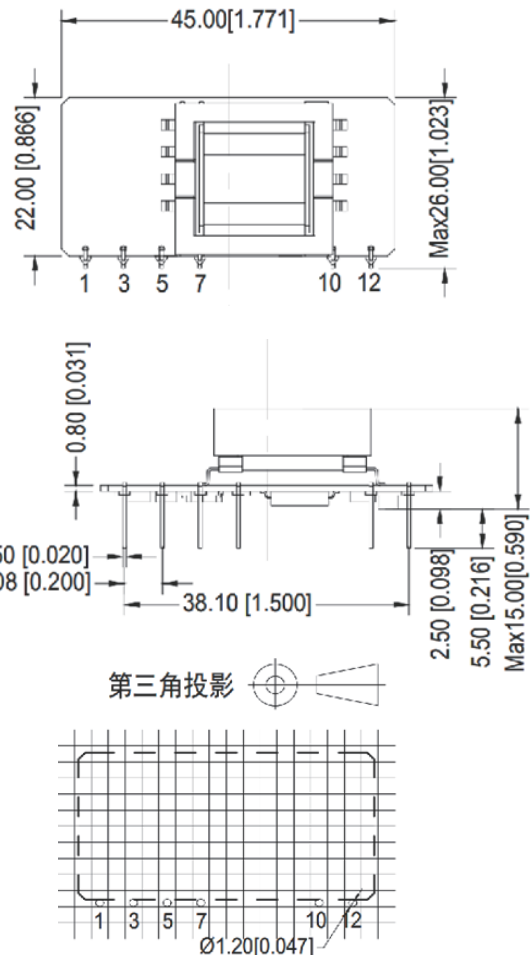


◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:90-528VAC/127-746VDC
- 超低待机功耗≤0.30W Ultra low stand-by power consumption ≤ 0.30W
- 效率高达81% Transfer efficiency up to 81%
- 隔离电压 (Isolation voltage) : 4000VAC
- 裸板、工业级设计 Bare board, industrial class design
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC62368/UL62368/EN62368 test standard 测试标准
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



封装尺寸/Packing Dimension



单位 (Unit):mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (latic spacing):2.54mm(0.1inch)
 未注尺寸公差 (General tolerance):±1.00mm
 器件布局仅供参考,具体以实物为准
 (Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA10-300S05G9N4 | 90-528/ 127-746 | 5 | 2000 | 77 |
| DA10-300S12G9N4 | | 12 | 833 | 81 |
| DA10-300S24G9N4 | | 24 | 417 | 82 |

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 注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 3 | 5 | 7 | 10 | 12 |
|--------------------------------|-----------------------|-------|------|------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vc | -Vc | -Vo | +Vo |
| 功能 | 输入零线 | 输入火线 | 电容正极 | 电容负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| G9 | 45.00*22.00*16.00mm | | | | | |
| | 1.771*0.866*0.629inch | | | | | |

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗 ≤ 0.45W Ultra low stand-by power consumption ≤ 0.45W
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 3000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
- 交直流两用 AC-DC dual use
- 符合CE、RoHS认证标准 Meet CE、RoHS standard
- PCB板上直插式安装 PCB Mounting

● 应用领域:工业控制、仪器仪表、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, electric power, smart home, internet.

● 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

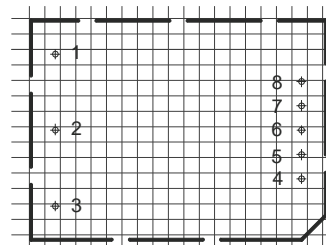
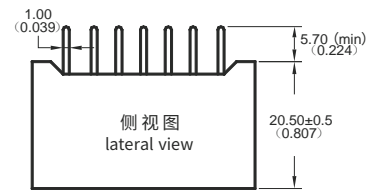
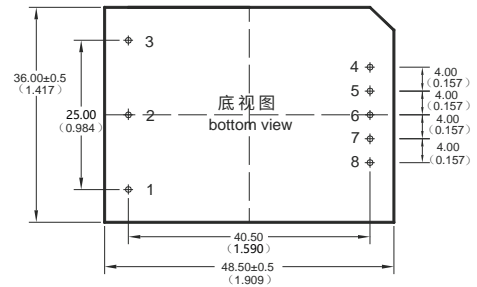


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA10-220S3V3C2N3 | 85-265/ 120-380 | 3.3 | 2000 | 76 |
| FA10-220S05C2N3 | | 5 | 2000 | 78 |
| FA10-220S09C2N3 | | 9 | 1111 | 80 |
| FA10-220S12C2N3 | | 12 | 833 | 82 |
| FA10-220S15C2N3 | | 15 | 667 | 83 |
| FA10-220S24C2N3 | | 24 | 450 | 84 |

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 8 |
|--------------------------------|-----------------------|-------|-------|------|------|
| 单路 Single | FG | AC(N) | AV(L) | +Vo | -Vo |
| 功能 | 无功能脚 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| C2 | 48.50*36.00*20.50mm | | | | |
| | 1.909*1.417*0.807inch | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:90-265VAC/127-380VDC
- 超低待机功耗 ≤0.20W Ultra low stand-by power consumption ≤ 0.20W
- 效率高达83% Transfer efficiency up to 83%
- 隔离电压 (Isolation voltage) : 3000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet,charging pile of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



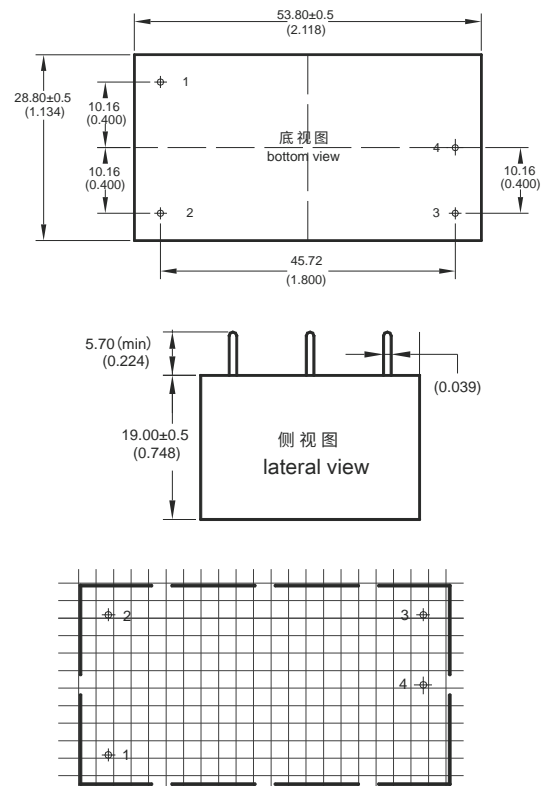
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| UA10-220S3V3P2D | 90-265/ 127-380 | 3.3 | 2000 | 74 |
| UA10-220S05P2D | | 5 | 1500 | 74 |
| UA10-220S09P2D | | 9 | 1111 | 81 |
| UA10-220S12P2D | | 12 | 833 | 81 |
| UA10-220S15P2D | | 15 | 667 | 82 |
| UA10-220S24P2D | | 24 | 417 | 83 |

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| P | 53.80*28.80*19.00mm | | | |
| | 2.118*1.134*0.748inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
 - 超低待机功耗 ≤0.3W Ultra low stand-by power consumption ≤ 0.3W
 - 效率高达83% Transfer efficiency up to 83%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+70°C
 - 保护功能:输出过流、短路、过压、过温度保护
Protection:Output over-current,short-circuit, over-voltage, over-temperature
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet,charging pile of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



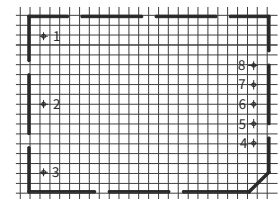
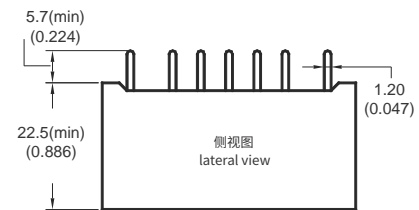
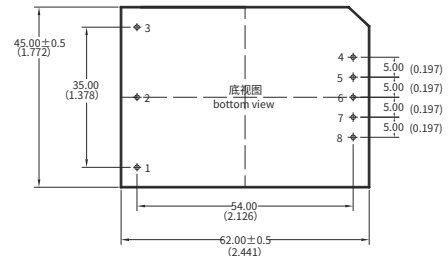
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | | | 输出效率 Output efficiency (%TYP) |
|---------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压1 Voltage1 (VDC) | 电流1 Current1 (mA) | 电压2 Voltage2 (VDC) | 电流2 Current2 (mA) | 电压3 Voltage3 (VDC) | 电流3 Current3 (mA) | |
| | FA15-220H050505F2D4 | 85-265/ 120-380 | 5 | 2000 | 5 | 500 | -5 | |
| FA15-220H051212F2D4 | 5 | | 2000 | 12 | 200 | -12 | 200 | 81 |
| FA15-220H051515F2D4 | 5 | | 1800 | 15 | 200 | -15 | 200 | 82 |
| FA15-220H052424F2D4 | 5 | | 1800 | 24 | 125 | -24 | 125 | 83 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------|-----------------------|-------|-------|-------|-----|-------|-------|-------|
| 三路 Triple | FG | AC(N) | AC(L) | +Vo2 | COM | +Vo3 | +Vo1 | -Vo1 |
| 功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 公共地 | 输出正极3 | 输出正极1 | 输出负极1 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | | | |
| F2 | 62.00*45.00*22.50mm | | | | | | | |
| | 2.441*1.772*0.885inch | | | | | | | |

封装尺寸 / Packing Dimension



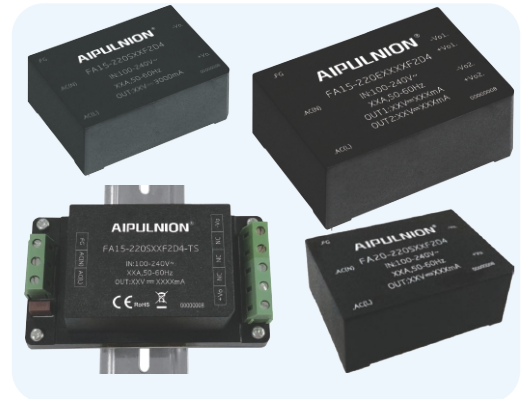
印刷板俯视图
Printed board vertical view

单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性/Product Features

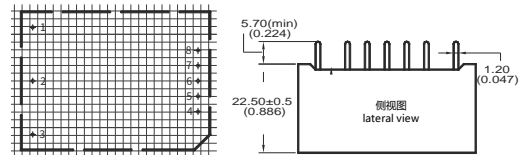
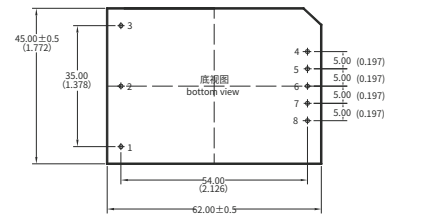
- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗≤0.20W Ultra low stand-by power consumption ≤ 0.20W
- 效率高达87% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 4000VAC / UA15-220H05XXXXF2(A): 3000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 符合CE认证标准 Meet CE standard

- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、充电桩、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, charging pile, internet of things, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



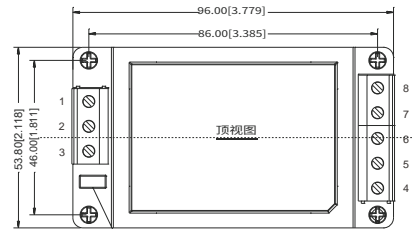
封装尺寸/Packing Dimension

FA20-F2D4封装尺寸:62.00*45.00*22.50mm

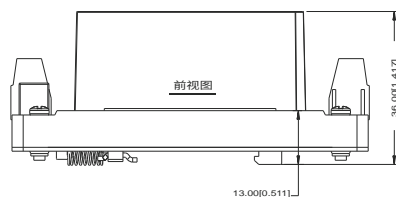


印刷板俯视图
Printed board vertical view

FA15-220SXXF2D4-TS封装尺寸:96.00*53.80*36.00mm



方型保险丝



带导轨

单位(Unit):mm
栅格间距 (lattice spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明针脚直径公差 (Pin section tolerances):±0.10mm

◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|-------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) |
| FA15-220S3V3F2D4 | 85-265/ 120-380 | 3.3 | 3000 | / | / | 70 |
| FA15-220S05F2D4 | | 5 | 3000 | / | / | 74 |
| FA15-220S09F2D4 | | 9 | 1667 | / | / | 82 |
| FA15-220S12F2D4 | | 12 | 1250 | / | / | 84 |
| FA15-220S15F2D4 | | 15 | 1000 | / | / | 85 |
| FA15-220S24F2D4 | | 24 | 625 | / | / | 86 |
| FA20-220S05F2D4 | | 5 | 3500 | / | / | 77 |
| FA20-220S12F2D4 | | 12 | 1666 | / | / | 83 |
| FA20-220S24F2D4 | | 24 | 833 | / | / | 85 |
| FA20-220S28F2D4 | | 28 | 714 | / | / | 86 |
| FA15-220E0512F2D4 | | 5 | 2000 | 12 | 400 | 76 |
| FA15-220E0524F2D4 | | 5 | 2000 | 24 | 200 | 78 |

注1:因篇幅有限,以上是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3:后缀带“C”为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting,“-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|----|-------|-------|-------|-------|----|-------|-------|
| 单路(S) Single | FG | AC(N) | AC(L) | +Vo | NP | NP | NP | -Vo |
| 单路功能 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 空脚 | 空脚 | 输出负极 |
| 双路(E) Dual | FG | AC(N) | AC(L) | +Vo2 | -Vo2 | NP | +Vo1 | -Vo1 |
| 双路功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 输出负极2 | 空脚 | 输出正极1 | 输出负极1 |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
 - 超低待机功耗 $\leq 0.20W$ Ultra low stand-by power consumption $\leq 0.20W$
 - 效率高达84% Transfer efficiency up to 84%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 工作环境温度 Operating Temp:-40°C~+85°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 满足Meet IEC62368/UL62368/EN62368 test standard 测试标准
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



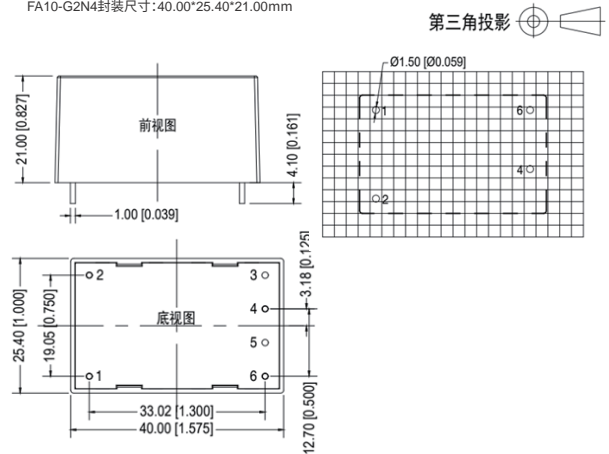
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|---------------------------|------------------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| FA10-220S3V3G2N4 | 85-305/ 120-430 | 3.3 | 2600 | 73 | |
| FA10-220S05G2N4 | | 5 | 2000 | 76 | |
| FA10-220S12G2N4 | | 12 | 833 | 82 | |
| FA10-220S12V5G2N4 | | 12.5 | 800 | 82 | |
| FA10-220S15G2N4 | | 15 | 667 | 83 | |
| FA10-220S24G2N4 | | 24 | 416 | 85 | |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

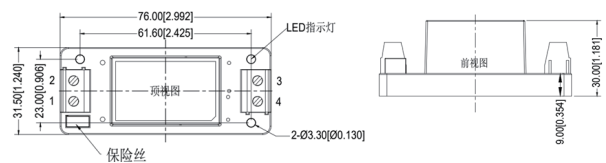
| 管脚号码 Pin-out | 1 | 2 | 5 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|-----|------|-----|------|
| 单路 Single | AC(L) | AC(N) | NP | +Vo | NP | -Vo |
| 功能 | 输入火线 | 输入零线 | 无引脚 | 输出正极 | 无引脚 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| - | 40.00*25.40*21.00mm | | | | | |
| | 1.575*1.000*0.827inch | | | | | |
| -T | 76.00*31.50*30.00mm | | | | | |
| | 2.992*1.240*1.181inch | | | | | |
| -TS | 76.00*31.50*35.00mm | | | | | |
| | 2.992*1.240*1.377inch | | | | | |

封装尺寸 / Packing Dimension

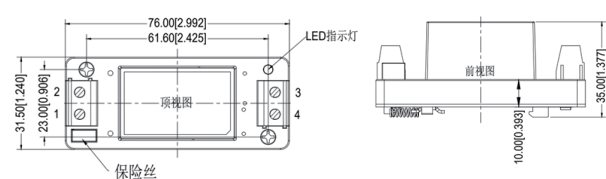
FA10-G2N4封装尺寸:40.00*25.40*21.00mm



FA10-G2N4-T封装尺寸:76.00*31.50*30.00mm



FA10-G2N4-TS封装尺寸:76.00*31.50*35.00mm



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): $\pm 0.50mm$
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
 - 超低待机功耗≤0.50W Ultra low stand-by power consumption ≤ 0.50W
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 2500VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case: 6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp: -40°C~+70°C
 - 保护功能:输出过流、过压、短路保护 Protection: Output over-current, over voltage, short-circuit
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
 - 安全等级 Security level: CLASS II
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、充电桩、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, charging pile, internet of things, etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|----------------------------------|---------------|---------------------------|
| | 范围值 Range | 电压 Voltage | 电流 Current | (%TYP) |
| | (VAC/VDC) | (VDC) | (mA) | |
| DA20-220D12F2D2 | 85-265/230-370 | ±12 | 1500/100 | 80 |

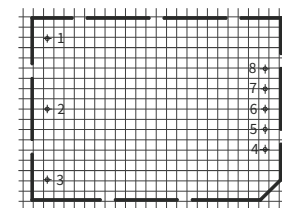
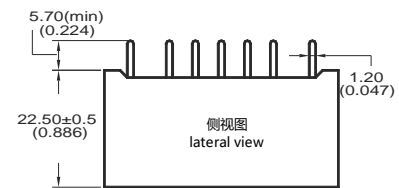
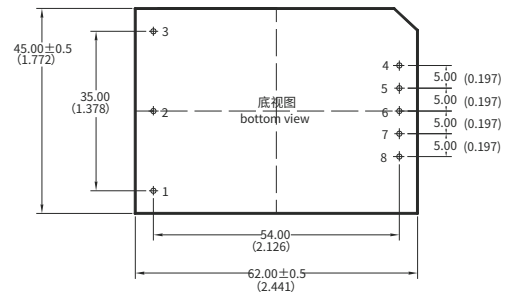
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

注3:后缀带“C”为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting,“-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------------------|-----------------------|-------|-------|-------|-----|-----|-----|-------|
| 单路 Single | FG | AC(N) | AC(L) | -Vo2 | NP | COM | NP | +Vo1 |
| 功能 | 大地 | 输入零线 | 输入火线 | 输出负极2 | 无此脚 | 公共端 | 无此脚 | 输出正极1 |
| 封装代号 Packing Code | L*W*H | | | | | | | |
| P | 62.00*45.00*22.50mm | | | | | | | |
| | 2.441*1.772*0.886inch | | | | | | | |

封装尺寸/Packing Dimension

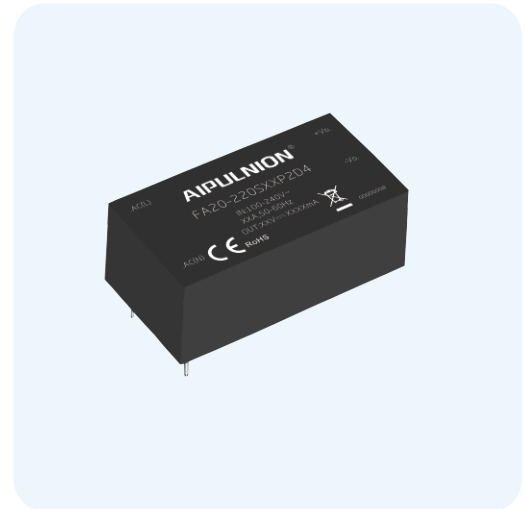


印刷板俯视图
Printed board vertical view

单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm(0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗 ≤ 0.15W Ultra low stand-by power consumption ≤ 0.15W
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
- 交直流两用 AC-DC dual use
- 通过LPS(限功率电源)测试 Passed LPS (limited power supply) test
- PCB板上直插式安装 PCB Mounting
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet, charging pile of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

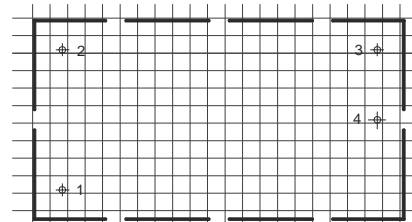
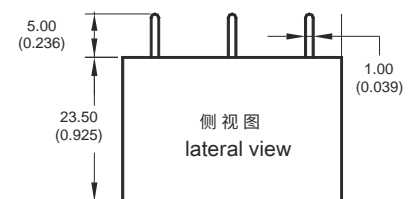
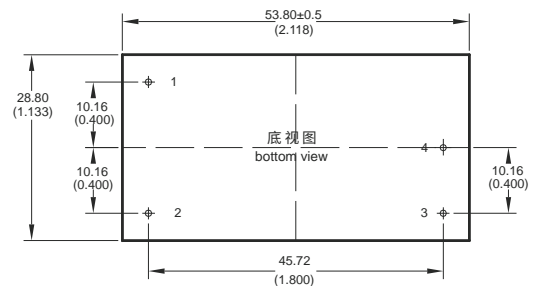


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA20-220S05P2D4 | 85-265/ 120-380 | 5 | 4000 | 82 |
| FA20-220S09P2D4 | | 9 | 2222 | 83 |
| FA20-220S12P2D4 | | 12 | 1666 | 84 |
| FA20-220S15P2D4 | | 15 | 1333 | 85 |
| FA20-220S24P2D4 | | 24 | 833 | 88 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(L) | AC(N) | +Vo | -Vo |
| 功能 | 输入火线 | 输入零线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| P | 53.80*28.80*23.50mm | | | |
| | 2.118*1.133*0.925inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

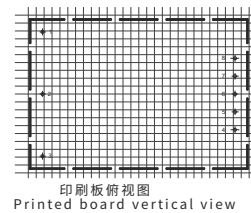
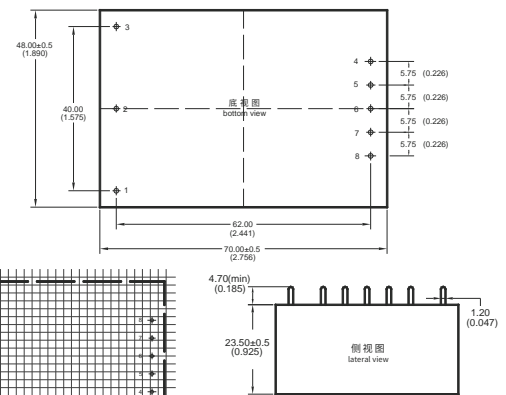
◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 $\leq 0.50W$ Ultra low stand-by power consumption $\leq 0.50W$
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:过流、过压、短路保护 Protection:Over-current, over voltage, short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR32/EN55032 CLASS B
- 交直流两用 AC-DC dual use
- 符合CE认证标准 Meet CE standard
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、电力、智能家居等领域
Application Field:Industrial control, instrumentation, electric power, smart home.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and $T_a=25^{\circ}C$.

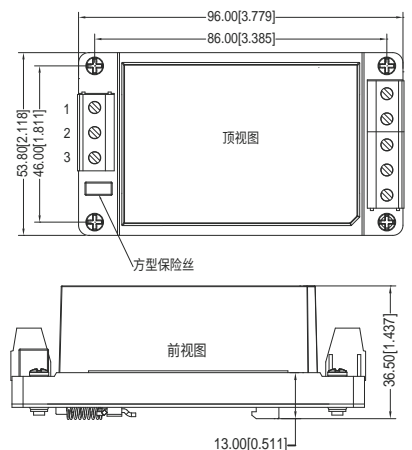


封装尺寸 / Packing Dimension

FA20-H2D4封装尺寸:70.00*48.00*23.50mm



FA20-H2D4-TS封装尺寸:96.00*53.80*36.5mm



带导轨

单位 (Unit) : mm
 栅格间距 (lattice spacing) : 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance) : $\pm 0.5mm$
 未注明引脚直径公差 (Pin section tolerances) : $\pm 0.10mm$

◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|---------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) |
| FA20-300S3V3H2D4 | 90-528/ 100-745 | 3.3 | 4000 | / | / | 75 |
| FA20-300S05H2D4 | | 5 | 4000 | / | / | 78 |
| FA20-300S09H2D4 | | 9 | 2222 | / | / | 80 |
| FA20-300S12H2D4 | | 12 | 1660 | / | / | 83 |
| FA20-300S15H2D4 | | 15 | 1330 | / | / | 84 |
| FA20-300S24H2D4 | | 24 | 833 | / | / | 84 |
| FA20-220H051212H2D4 | 85-265/ 120-370 | 5 | 2000 | ± 12 | 400 | 79 |
| FA20-220H051515H2D4 | | 5 | 2000 | ± 15 | 300 | 79 |

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 注2:表格中为满载效率(%TYP),波动幅度为 $\pm 2\%$,满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is $\pm 2\%$, full load output efficiency= total output power/module's input power.
 注3:后缀带"C"为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
 Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|----|-------|-------|-------|-----|-------|-------|-------|
| 单路 Single | FG | AC(N) | AC(L) | +Vo | NP | NP | NP | -Vo |
| 单路功能 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 空脚 | 空脚 | 输出负极 |
| 三路 Triple | FG | AC(N) | AC(L) | +Vo2 | COM | -Vo2 | +Vo1 | -Vo1 |
| 三路隔离 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 公共地 | 输出负极2 | 输出正极1 | 输出负极1 |

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
 - 超低待机功耗 ≤0.3W Ultra low stand-by power consumption ≤ 0.3W
 - 效率高达83% Transfer efficiency up to 83%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 外壳:塑料 Case : Plastic
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、过温、短路保护
Protection: Output over-current, Over temperature, short-circuit
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
 - 满足Meet IEC62368/UL62368/EN62368 test standard 测试标准
- 应用领域:工业控制、仪器仪表、电力、智能家居等领域
Application Field: Industrial control, instrumentation, electric power, smart home.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



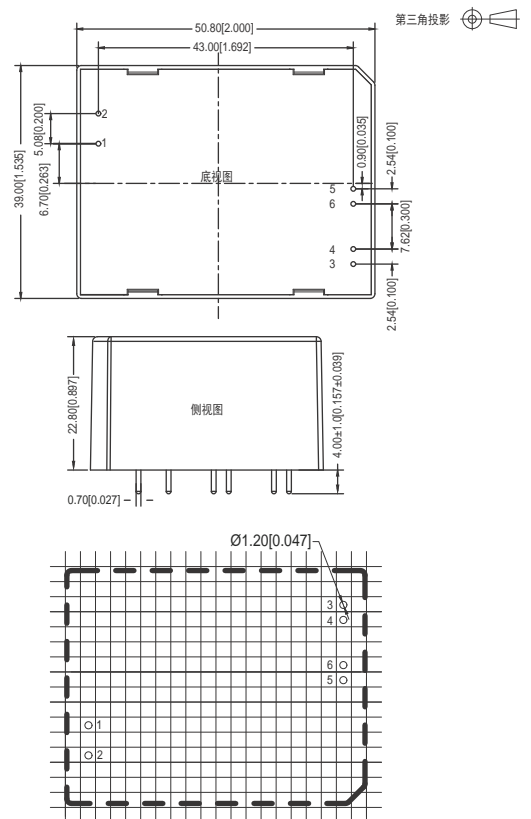
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| DA24-220S3V3G2N3Y | 85-305/ 120-430 | 3.3 | 4000 | 75 |
| DA24-220S05G2N3Y | | 5 | 4000 | 77 |
| DA24-220S12G2N3Y | | 12 | 2000 | 83 |
| DA24-220S24G2N3Y | | 24 | 1000 | 85 |

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注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3,4 | 5,6 |
|---------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(N) | AC(L) | +Vo | -Vo |
| 功能 | 输入零线 | 输入火线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| | 50.80*39.00*22.80mm | | | |
| | 2.000*1.535*0.897inch | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 $\leq 0.20W$ Ultra low stand-by power consumption $\leq 0.20W$
- 效率高达88% Transfer efficiency up to 88%
- 隔离电压 (Isolation voltage) : UA25-220EXXXH2 : 3750VAC, FA25-220SXXH2D4 : 3800VAC
- 隔离电压 (Isolation voltage) : FA25-220DXXH2D4, FA30-220SXXH2D4 : 4000VAC
- 外壳: 全封闭塑料外壳, 符合UL94V-0级 Case: 6-side shielding plastic, UL94V-0 class
- 工作环境温度 Operating Temp: $-40^{\circ}C \sim +75^{\circ}C$
- 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
- 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- 通过CE、RoHS认证 Has passed CE, RoHS certification

- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet, charging pile of things etc.

- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及 $25^{\circ}C$ 室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and $T_a=25^{\circ}C$.



封装尺寸 / Packing Dimension

◆ 产品列表 / Product List

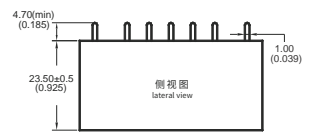
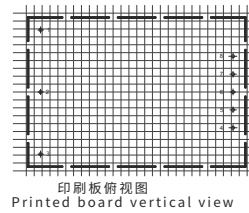
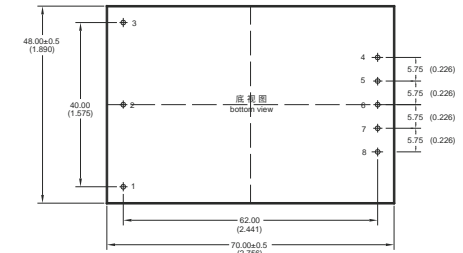


| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|-------------------------|----------------------------------|-------------------------|------------------------|------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压1 Voltage (VDC) | 电流1 Current (mA) | 电压2 Voltage (VDC) | 电流2 Current (mA) | | |
| FA25-220S05H2D4 | 85-305/ 120-430 | 5 | 4200 | / | / | 78 | |
| FA25-220S09H2D4 | | 9 | 2780 | / | / | 85 | |
| FA25-220S12H2D4 | | 12 | 2083 | / | / | 85 | |
| FA25-220S15H2D4 | | 15 | 1667 | / | / | 85 | |
| FA25-220S18H2D4 | | 18 | 1389 | / | / | 85 | |
| FA25-220S24H2D4 | | 24 | 1042 | / | / | 85 | |
| FA25-220S28H2D4 | | 28 | 893 | / | / | 86 | |
| FA25-220S29H2D4 | | 29 | 853 | / | / | 86 | |
| FA25-220S48H2D4 | | 48 | 520 | / | / | 86 | |
| FA25-220D12H2D4 | | 85-265/ 120-380 | +12 | +1041 | -12 | 1041 | 82 |
| FA25-220D15H2D4 | +15 | | +833 | -15 | 833 | 83 | |
| FA30-220S05H2D4 | 85-305/ 120-430 | 5 | 5000 | / | / | 78 | |
| FA30-220S09H2D4 | | 9 | 3333 | / | / | 80 | |
| FA30-220S12H2D4 | | 12 | 2500 | / | / | 82 | |
| FA30-220S15H2D4 | | 15 | 2000 | / | / | 83 | |
| FA30-220S18H2D4 | | 18 | 1667 | / | / | 85 | |
| FA30-220S24H2D4 | | 24 | 1250 | / | / | 85 | |
| UA25-220E0512H2 | 85-265/ 120-380 | 5 | 2500 | 12 | 833 | 85 | |
| UA25-220E0515H2 | | 5 | 2000 | 15 | 1000 | 85 | |

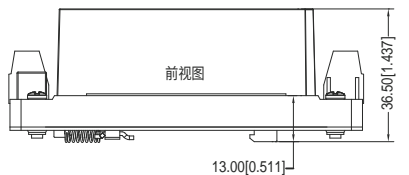
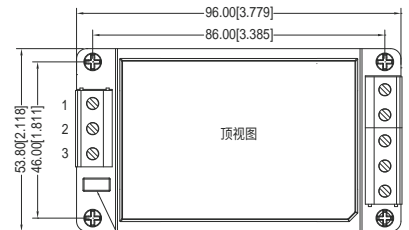
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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率 (%TYP), 波动幅度为 $\pm 2\%$, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (%TYP) is $\pm 2\%$, full load output efficiency = total output power/module's input power.
注3: 后缀带 "C" 为产品带 Ctrl 控制功能; -T 为接线式片封装, -TS 为导轨式封装, 导轨宽度 35mm。
Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|----|-------|-------|-------|-------|-------|-------|-------|
| 单路(S) | FG | AC(N) | AC(L) | +Vo | NP | NP | NP | -Vo |
| 单路功能 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 | 空脚 | 空脚 | 输出负极 |
| 双路(D) | FG | AC(N) | AC(L) | +Vo1 | NP | COM | NP | -Vo2 |
| 双路(D)功能 | 接地 | 输入零线 | 输入火线 | 输出正极1 | 空脚 | 输出公共端 | 空脚 | 输出负极2 |
| 双路隔离(E) | FG | AC(N) | AC(L) | +Vo2 | -Vo2 | NP | +Vo1 | -Vo1 |
| 双路隔离(E)功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | 输出负极2 | 空脚 | 输出正极1 | 输出负极1 |

FA20/25/30/UA25-H2/H2D4封装尺寸: 70.00*48.00*23.50mm



FA30-220SXXH2-TS封装尺寸: 96.00*53.80*36.5mm

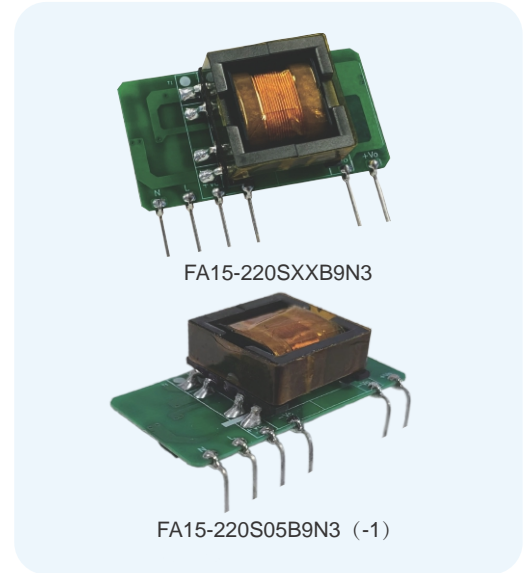


带
导
轨

单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): $\pm 0.5mm$
未注明引脚直径公差 (Pin section tolerances): $\pm 0.10mm$

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 ≤0.25W Ultra low stand-by power consumption ≤ 0.25W
 - 效率高达82% Transfer efficiency up to 85%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 超小体积裸板、高功率密度、工业级设计 Ultra small size bare board, high power density, industrial class design
 - 工作环境温度 Operating Temp: -40°C~+75°C
 - 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
 - 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032 CLASS B
 - 交直流两用 AC-DC dual use
 - 通过LPS (限功率电源) 测试 Pass LPS test
 - PCB板上直插式安装 PCB Mounting
 - 符合CE认证标准 Meet CE standard
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA15-220S05B9N3 (-1) | 85-305/ 120-430 | 5 | 3000 | 80 |
| FA15-220S12B9N3 (-1) | | 12 | 1250 | 83 |
| FA15-220S12V7B9N3 (-1) | | 12.7 | 1181 | 82 |
| FA15-220S24B9N3 (-1) | | 24 | 625 | 85 |

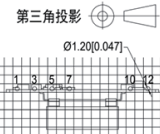
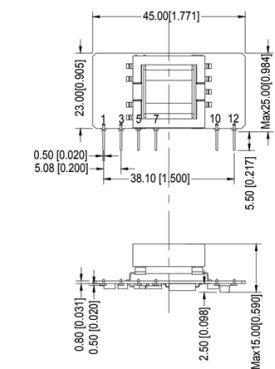
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Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.

| 管脚号码 Pin-out | 1 | 3 | 5 | 7 | 10 | 12 |
|--------------------------------|---|-------|---------|---------|------|------|
| 单路 Single | AC(N) | AC(L) | +V(cap) | -V(cap) | -Vo | +Vo |
| 功能 | 输入零线 | 输入火线 | 电容正极 | 电容负极 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| - | 45.00*23.00*15.00mm 1.771*0.905*0.590inch | | | | | |

- 1.5/7脚间必须外接电容C1
- 2.输出必须外接π型滤波电路, 如产品规格书典型应用图1;
- 3.初级与次级的外围元器件要保持大于或等于6.4mm的安全距离

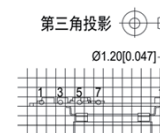
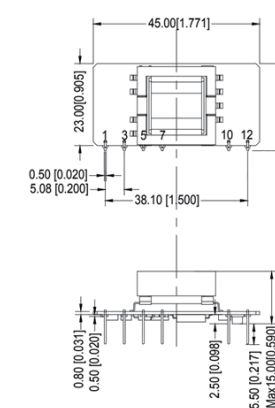
封装尺寸/Packing Dimension

封装尺寸:



注: 栅格距离2.54*2.54mm
尺寸单位: mm[inch]
未标注之公差: ±1.00mm[±0.039inch]
器件布局仅供参考, 具体以实物为准

弯脚封装尺寸 (-1):



注: 栅格距离2.54*2.54mm
尺寸单位: mm[inch]
未标注之公差: ±1.00mm[±0.039inch]
器件布局仅供参考, 具体以实物为准

单位 (Unit): mm

印刷板俯视图 (Printed board vertical view)

未注明引脚直径公差 ±0.10mm



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗 ≤ 0.30W Ultra low stand-by power consumption ≤ 0.30W
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 4000VAC
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
- 满足Meet CISPR22/EN55022 test standard 测试标准
- PCB板上直插式安装 PCB Mounting

● 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
 Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.

● 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
 Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



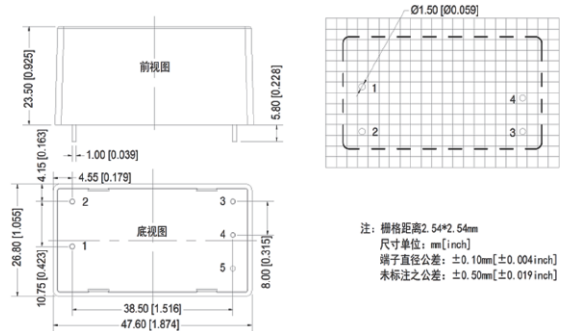
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| FA15-220S05G2N4 | 85-305/ 120-430 | 5 | 3000 | 85 |
| FA15-220S12G2N4 | | 12 | 1250 | 85 |
| FA15-220S12V5G2N4 | | 12.5 | 1200 | 85 |
| FA15-220S24G2N4 | | 24 | 625 | 86 |

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 注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension



印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 器件布局仅供参考, 具体以实物为准
 (Component arrangement is just for reference, it should be subject to actual product.)

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(L) | AC(N) | -Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| G | 47.60*26.80*23.50mm | | | |
| | 1.874*1.055*0.925inch | | | |

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
 Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 ≤ 0.15W Ultra low stand-by power consumption ≤ 0.15W
 - 效率高达86% Transfer efficiency up to 86%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032 CLASS B
 - 交直流两用 AC-DC dual use
 - 通过CB、CE、RoHS认证 Has passed CB, CE, RoHS certification
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet ,charging pile of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



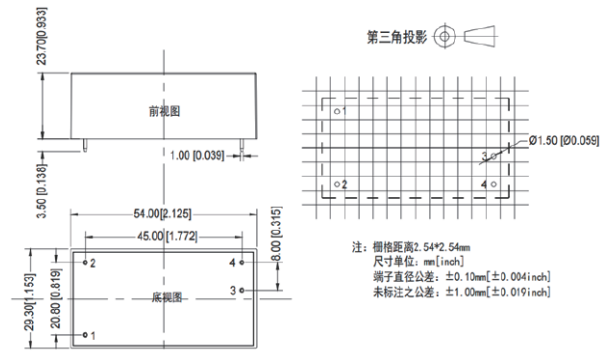
◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|-------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA20-220S05G2N4 | 85-305/ 120-430 | 5 | 4000 | 84 |
| DA20-220S12G2N4 | | 12 | 1666 | 86 |
| DA20-220S12V5G2N4 | | 12.5 | 1600 | 86 |
| DA20-220S15G2N4 | | 15 | 1333 | 86 |
| DA20-220S24G2N4 | | 24 | 833 | 88 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

封装尺寸 / Packing Dimension

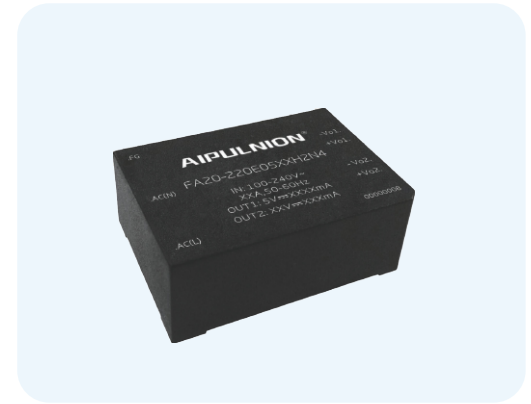


印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm(0.1inch)
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)

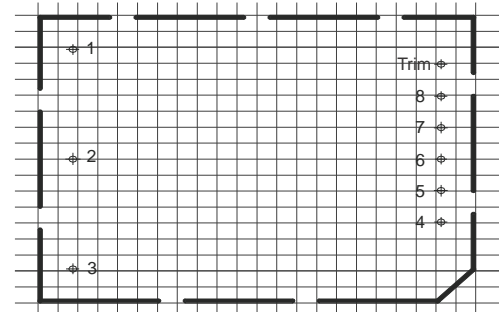
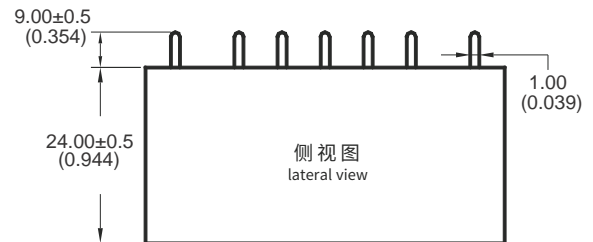
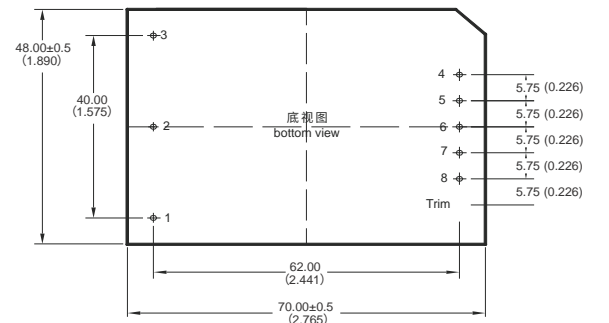
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|--------------------------------|-----------------------|-------|------|------|
| 单路 Single | AC(L) | AC(N) | +Vo | -Vo |
| 功能 | 输入火线 | 输入零线 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | |
| G2 | 54.00*29.30*23.70mm | | | |
| | 2.126*1.153*0.933inch | | | |

◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 ≤ 0.50W Ultra low stand-by power consumption ≤ 0.50W
 - 效率高达88% Transfer efficiency up to 78%
 - 隔离电压 (Isolation voltage) : 4000VAC
 - 外壳: 全封闭塑料外壳, 符合UL94V-0级 Case: 6-side shielding plastic, UL94V-0 class
 - 工作环境温度 Operating Temp: -40°C ~ +70°C
 - 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
 - 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032 CLASS B
 - 交直流两用 AC-DC dual use
 - 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet, charging pile of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



封装尺寸 / Packing Dimension



印刷板俯视图
Printed board vertical view

单位 (Unit): mm
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品列表 / Product List



| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|-------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) |
| FA20-220E0512H2N4 | 85-265/ | 5 | 2500 | 12 | 600 | 78 |
| FA20-220E0524H2N4 | 120-370 | 5 | 2500 | 24 | 300 | 78 |

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 注2: 表格中为满载效率 (%TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
 Note 2: The fluctuation range of full load efficiency (%TYP) is ±2%, full load output efficiency = total output power/module's input power.
 注3: 后缀带 "C" 为产品带 Ctrl 控制功能; -T 为接线式封装, -TS 为导轨式封装, 导轨宽度 35mm。
 Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----------------|-----|-------|-------|-------|-------|----|-------|-------|----|
| 双路 Dual | FG | AC(N) | AC(L) | +Vo2 | -Vo2 | NC | +Vo1 | -Vo1 | NC |
| 功能 | 接大地 | 零线 | 火线 | 输出正极2 | 输出负极2 | 空脚 | 输出正极1 | 输出负极1 | 空脚 |

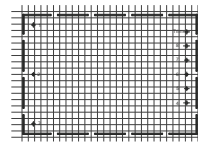
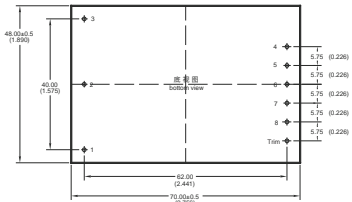
◆ 产品特性 / Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗 $\leq 0.50W$ Ultra low stand-by power consumption $\leq 0.20W$
- 效率高达79% Transfer efficiency up to 79%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳: 全封闭塑料外壳, 符合UL94V-0级 Case: 6-side shielding plastic, UL94V-0 class
- 工作环境温度 Operating Temp: $-40^{\circ}C \sim +75^{\circ}C$
- 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
- 电磁兼容EMC: 裸机满足 (bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet, charging pile of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及 $25^{\circ}C$ 室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and $T_a=25^{\circ}C$.

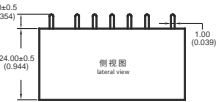


封装尺寸 / Packing Dimension

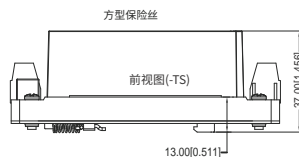
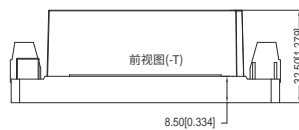
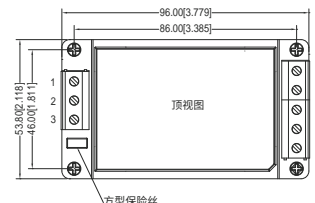
H2封装尺寸: 70.00*48.00*24.00mm



印刷板俯视图
Printed board vertical view



H2(-T/-TS)封装尺寸: 96.00*53.80*32.50mm / 96.00*53.80*37.00mm



带导轨

| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | 输出效率 Output efficiency |
|---------------------|---------------------------|----------------------------------|-------------------------|--------------------------|-------------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 1 Voltage (VDC) | 电流 1 Current (mA) | 电压 2 Voltage (VDC) | 电流 2 Current (mA) | (%TYP) |
| FA20-220H051212H2D4 | 85-265/ | 5 | 2000 | ±12 | 400 | 79 |
| FA20-220H051515H2D4 | 120-370 | 5 | 2000 | ±15 | 300 | 79 |

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Note 2: The fluctuation range of full load efficiency (%TYP) is $\pm 2\%$, full load output efficiency = total output power/module's input power.
注3: 后缀带 "C" 为产品带 Ctrl 控制功能; "-T" 为接线式封装, "-TS" 为导轨式封装, 导轨宽度 35mm。
Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

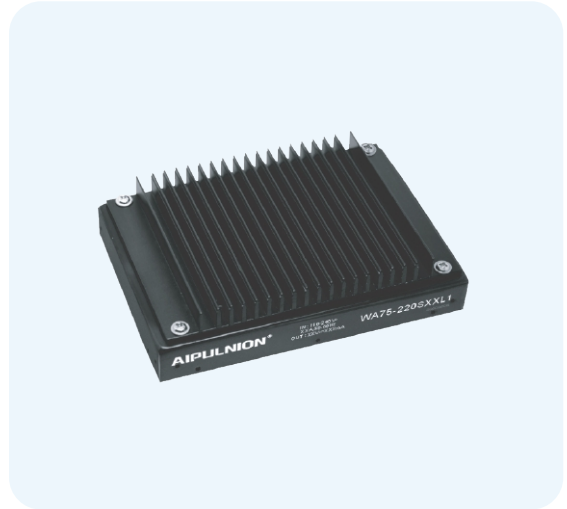
| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|----|-------|-------|-------|----------|-------|-------|-------|
| H2(-T/-TS) | FG | AC(N) | AC(L) | +Vo2 | COM | -Vo2 | +Vo1 | -Vo1 |
| 功能 | 接地 | 输入零线 | 输入火线 | 输出正极2 | Vo2输出公共端 | 输出负极2 | 输出正极1 | 输出负极1 |

单位 (Unit): mm
 栅格间距 (lattice spacing): 2.54mm (0.1inch)
 未注尺寸公差 (General tolerance): $\pm 0.5mm$
 未注明引脚直径公差 (Pin section tolerances): $\pm 0.10mm$



◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range:100-265VAC/140-380VDC
 - 超低待机功耗 $\leq 0.20W$ Ultra low stand-by power consumption $\leq 0.20W$
 - 效率高达86% Transfer efficiency up to 86%
 - 隔离电压 (Isolation voltage) : 2500VAC
 - 外壳:金属外壳屏蔽 Case : Metal case shielded
 - 工作环境温度 Operating Temp:-25°C~+65°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home,internet of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



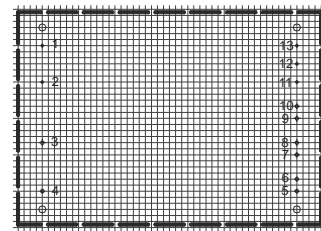
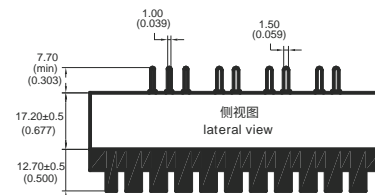
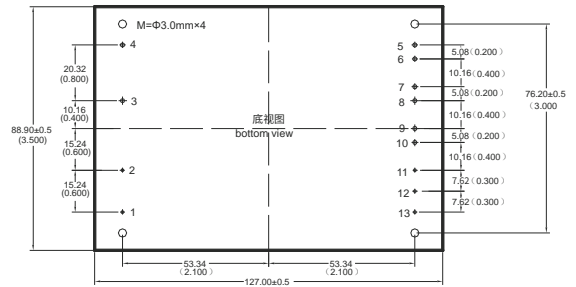
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|---------------------------|----------------------------------|-----------------------|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | |
| WA75-220S05L1 | 100-265/ 140-380 | 5 | 15000 | 82 |
| WA75-220S12L1 | | 12 | 6250 | 85 |
| WA75-220S24L1 | | 24 | 3125 | 86 |
| WA100-220S12L1 | | 12 | 8333 | 85 |
| WA100-220S24L1 | | 24 | 4166 | 86 |
| NA150-220S12L1 | 165-265/ 200-380 | 12 | 12500 | 84 |
| NA150-220S24L1 | | 24 | 6250 | 85 |
| NA150-220S28L1 | | 28 | 5357 | 86 |
| NA150-220S36L1 | | 36 | 4166 | 85 |

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注2:表格中为满载效率(%TYP),波动幅度为 $\pm 2\%$,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is $\pm 2\%$, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5:6 | 7:8 |
|----------------------------------|-------|-------|-------|-------|-----------------------|-----|
| 单路 Single | NC | FG | AC(N) | AC(L) | +Vo | NP |
| 功能 | 无电气连接 | 接地 | 输入零线 | 输入火线 | 输出正极 | 空脚 |
| 管脚号码 Pin-out | 9:10 | 11 | 12 | 13 | L*W*H | |
| 单路 Single | -Vo | +S | TRIM | -S | | |
| 功能 | 输出负极 | 正反反馈端 | 电压调节端 | 负反馈端 | 127.00*88.90*17.20mm | |
| 封装代号 Packing Code / Dimension | L | | | | 5.000*3.500*0.667inch | |

封装尺寸 / Packing Dimension



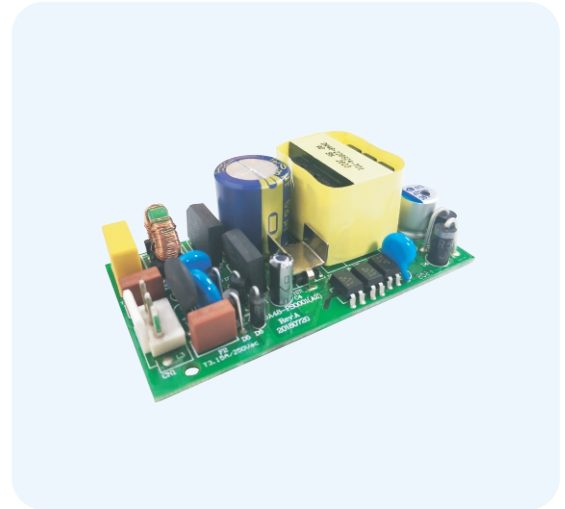
单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (latic spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : $\pm 0.5\text{mm}$
未注明针脚直径公差 (Pin section tolerances) : $\pm 0.10\text{mm}$

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.



◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range:110-270VAC/150-385VDC
 - 超低待机功耗0.6W Ultra low stand-by power consumption 0.6W
 - 效率高达87% Transfer efficiency up to 87%
 - 隔离电压 (Isolation voltage) : 3000VAC
 - 工作环境温度 Operating Temp:-25°C~+50°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 安全等级 (Security level) : CLASS II
- 应用领域:工业控制、办公、民用、电动窗帘等领域
Application Field:Industrial control, office, civil applications,electric curtains of things etc.
 - 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

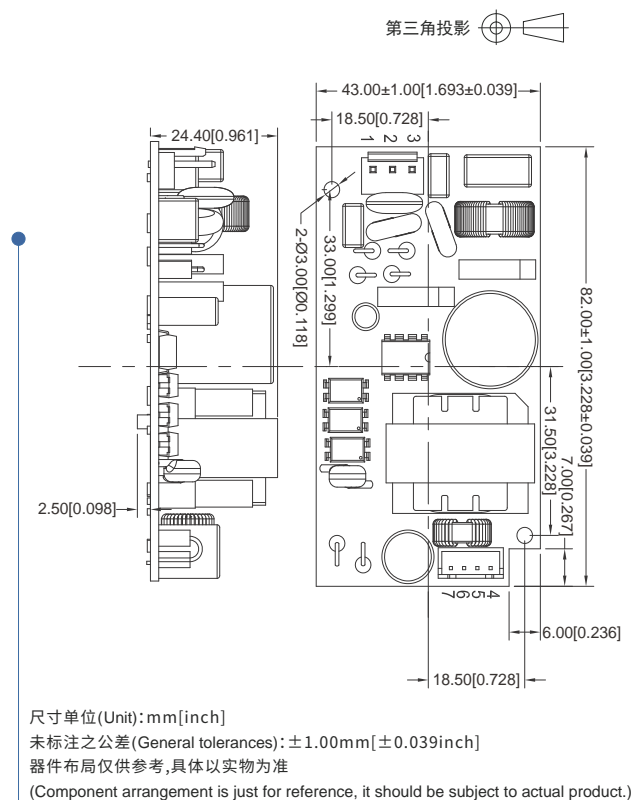


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA48-220S24B | 110-270/150-385 | 24 | 2000 | 87 |

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 |
|---------------------------------|-----------------------|---------|--------|------|
| CN1 | AC(L1) | AC(N) | AC(L2) | / |
| 功能 | 输入火线 | 输入零线 | 输入火线 | / |
| CN2 | AC(2-3) | AC(2-1) | +Vo | -Vo |
| 功能 | 控制IC5 | 控制IC4 | 输出正极 | 输出负极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | |
| B | 82.00*43.00*24.40mm | | | |
| | 3.228*1.693*0.961inch | | | |

封装尺寸 / Packing Dimension





◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗 ≤0.30W Ultra low stand-by power consumption ≤ 0.30W
- 效率高达85% Transfer efficiency up to 85%
- 隔离电压 (Isolation voltage) : 3750VAC
- 外壳:全封闭金属外壳 Case : 6-side shielding metal
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 安全等级 (Safety class) :CLASS II
- 交直流两用 AC-DC dual use
- PCB板上直插式安装 PCB Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网、充电桩等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet,charging pile of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



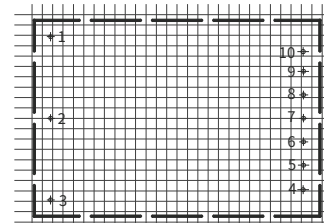
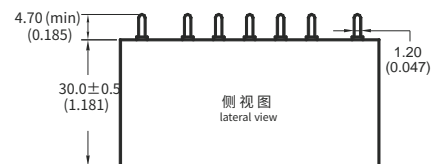
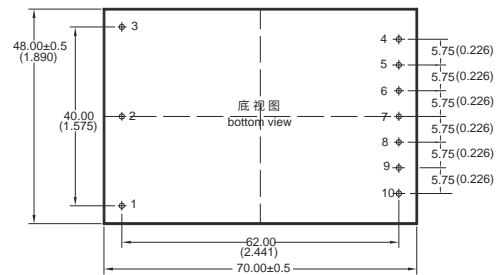
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|---------------------------|------------------------|----------------------------------|--|-------------------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | | |
| | | | | | |
| FA40-220S3V3H3N4 | 85-265/ 120-380 | 3.3 | 7000 | | 76 |
| FA40-220S05H3N4 | | 5 | 7000 | | 78 |
| FA40-220S09H3N4 | | 9 | 4444 | | 80 |
| FA40-220S12H3N4 | | 12 | 3333 | | 83 |
| FA40-220S15H3N4 | | 15 | 2667 | | 83 |
| FA40-220S17H3N4 | | 17 | 2353 | | 85 |
| FA40-220S17V5H3N4 | | 17.5 | 2290 | | 85 |
| FA40-220S17V6H3N4 | | 17.6 | 2290 | | 85 |
| FA40-220S24H3N4 | | 24 | 1667 | | 86 |

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|---------------------------------|-----------------------|-------|-------|-----|------|
| 单路 Single | FG | AC(N) | AC(L) | NP | +Vo |
| 功能 | 接地 | 输入零线 | 输入火线 | 空脚 | 输出正极 |
| 管脚号码 Pin-out | 6 | 7 | 8 | 9 | 10 |
| 单路 Single | NP | NP | NP | GND | NP |
| 功能 | 空脚 | 空脚 | 空脚 | 输出地 | 空脚 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | |
| H3 | 70.00*48.00*30.00mm | | | | |
| | 2.756*1.890*1.181inch | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm



◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range: W2D4: 85-265VAC/120-380VDC, W2N4: 85-305VAC/120-430VDC
- 超待机功耗 $\leq 0.30W$ Ultra low stand-by power consumption $\leq 0.30W$
- 效率高达86% Transfer efficiency up to 86%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳: 全封闭金属外壳 Case : 6-side shielding metal
- 工作环境温度 Operating Temp: $-40^{\circ}C \sim +75^{\circ}C$
- 保护功能: 输出过流、短路保护 Protection: Output over-current, short-circuit
- 电磁兼容 EMC: 裸机满足 (bare board) CISPR22/EN55032 CLASS B
- 交直流两用 AC-DC dual use
- 通过LPS (限功率电源) 测试 Pass LPS test
- PCB板上直插式安装 PCB Mounting
- 通过CE、RoHS认证 Has passed CE, RoHS certification
- 应用领域: 工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field: Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及 $25^{\circ}C$ 室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and $T_a=25^{\circ}C$.



◆ 产品列表 / Product List



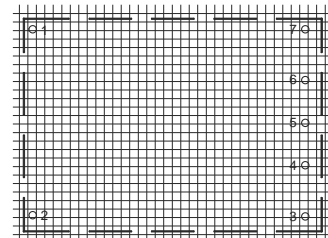
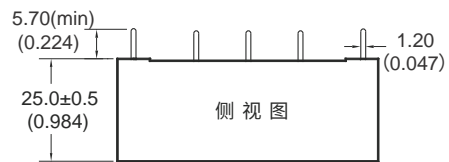
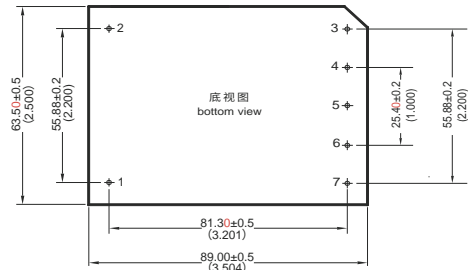
| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|---------------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| FA40-220S05W2D4 | 85-265/ 120-380 | 5 | 8000 | 79 |
| FA40-220S12W2D4 | | 12 | 3333 | 84 |
| FA40-220S24W2D4 | | 24 | 1667 | 86 |
| FA40-220S05W2N4 | 85-305/ 120-430 | 5 | 8000 | 79 |
| FA40-220S12W2N4 | | 12 | 3333 | 83 |
| FA40-220S24W2N4 | | 24 | 1667 | 86 |

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注2: 表格中为满载效率 (%TYP), 波动幅度为 $\pm 2\%$, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency (%TYP) is $\pm 2\%$, full load output efficiency = total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------|-----------------------|-------|------|----|------|-------|------|
| 单路 Single | AC(L) | AC(N) | Trim | NC | -Vo | NC/NP | +Vo |
| 功能 | 输入火线 | 输入零线 | 调压脚 | 无 | 输出负极 | 无 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | | |
| W2 | 89.00*63.50*25.00mm | | | | | | |
| | 3.504*2.500*0.984inch | | | | | | |

封装尺寸 / Packing Dimension



单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): $\pm 0.25mm$
未注明引脚直径公差 (Pin section tolerances): $\pm 0.10mm$

◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗1W Ultra low stand-by power consumption 0.5W
- 效率高达82% Transfer efficiency up to 82%
- 隔离电压 (Isolation voltage) : 3000VAC
- 工作环境温度 Operating Temp:-25°C~+70°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 裸板 Bare board
- 螺丝固定安装 Screw Mounting
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List

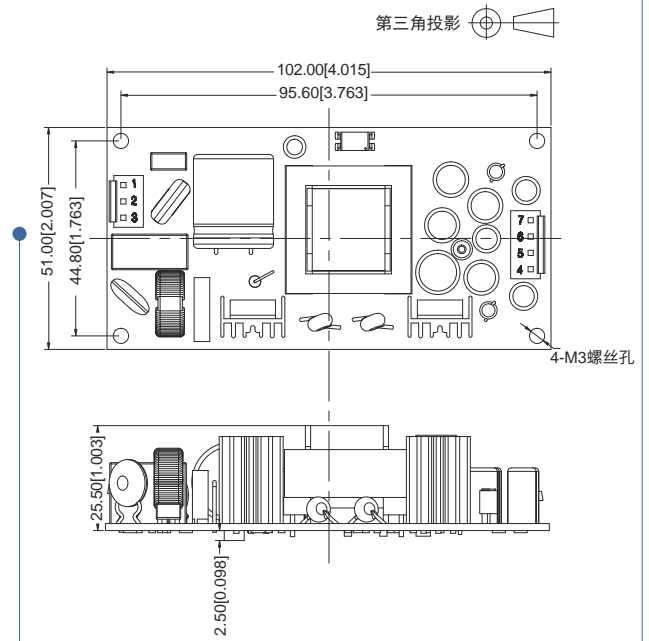


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | | | | | 输出效率 Output efficiency |
|-------------------------|---------------------------|----------------------------------|--------------------|----------------------|--------------------|----------------------|--------------------|---------------------------|
| | 范围值 Range (VAC/VDC) | 电压1 +Vo1 (VDC) | 电流1 Io1 (mA) | 电压2 +Vo2 (VDC) | 电流2 Io2 (mA) | 电压3 -Vo3 (VDC) | 电流3 Io3 (mA) | (%TYP) |
| DA45-220T05 1205G9N3 | 85-265/ 120-380 | 5 | 3000 | 12 | 2000 | -5 | 300 | 80 |
| DA45-220T05 1212G9N3 | | 5 | 3000 | 12 | 2000 | -12 | 300 | 80 |
| DA45-220T05 1515G9N3 | | 5 | 3000 | 15 | 1600 | -15 | 300 | 82 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------|-----------------------|-------|------|-----|------|------|
| 单路 Single | AC(L) | AC(N) | -Vo3 | COM | +Vo2 | +Vo1 |
| 功能 | 输入火线 | 输入零线 | 输出负极 | 公共地 | 输出正极 | 输出正极 |
| 封装代号 Packing Code/ Dimension | L*W*H | | | | | |
| / | 102.00*51.00*28.00mm | | | | | |
| / | 4.016*2.008*1.102inch | | | | | |

封装尺寸 / Packing Dimension



尺寸单位 (Unit): mm [inch]
未标注之公差 (General tolerances): ±1.00mm [±0.039inch]
输入CN1型号: 输入VH-3A(空中间位), 客户端连接器: VH-3Y
(Input CN1 model: Input VH-3A(no pin for the middle hole), client connector: VH-3Y)
输出CN2型号: 输出VH-4A, 客户端连接器: VH-4Y
(Output CN2 model: Output VH-4A, client connector: VH-4Y)
安装孔拧紧力矩 (Installation hole tightening torques): Max0.4N·m
器件布局仅供参考, 具体以实物为准
(Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品特性 / Product Features

- 超宽输入电压范围 Universal wide input voltage range:85-900VAC
- 超低待机功耗1W Ultra low stand-by power consumption 1W
- 效率高达89% Transfer efficiency up to 89%
- 隔离电压 (Isolation voltage) : 4000VAC
- 工作环境温度 Operating Temp:-25°C~+70°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 符合CE、RoHS认证标准 Meet CE、RoHS standard
- 专为煤矿电气设备设计 Designed for coal mine electrical equipment
- 应用领域:煤矿、新能源、安防等领域
Application Field:Coal Industry, alternative energy, Security Industry of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表 / Product List



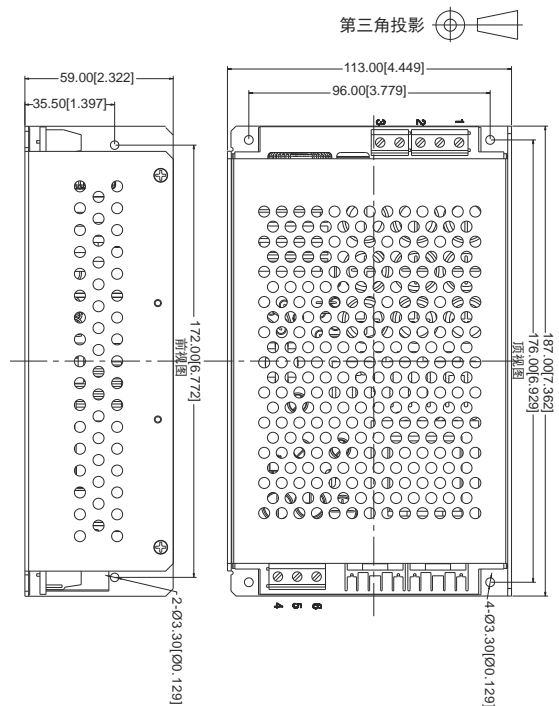
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|-------------------|-----------------------|---------------|----------------------------------|----|-------------------------------------|
| | 范围值 Range | 电压 Voltage | 电流 Current | | |
| | (VAC) | (VDC) | (mA) | | |
| DA120-1000S24G1N4 | 85-900 | 24 | 5000 | 88 | |
| DA120-1000S28G1N4 | | 28 | 4300 | 88 | |
| DA120-1000S35G1N4 | | 35 | 3500 | 89 | |
| DA120-1000S48G1N4 | | 48 | 2500 | 90 | |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------------|-----------------------|-------|-------|-------|------|------|
| 单路 Single | PE | AC(L) | AC(N) | Trim | -Vo | +Vo |
| 功能 | 输入地线 | 输入火线 | 输入零线 | 调节控制端 | 输出负极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| / | 187.00*113.00*59.00mm | | | | | |
| / | 7.362*4.449*2.323inch | | | | | |

封装尺寸 / Packing Dimension

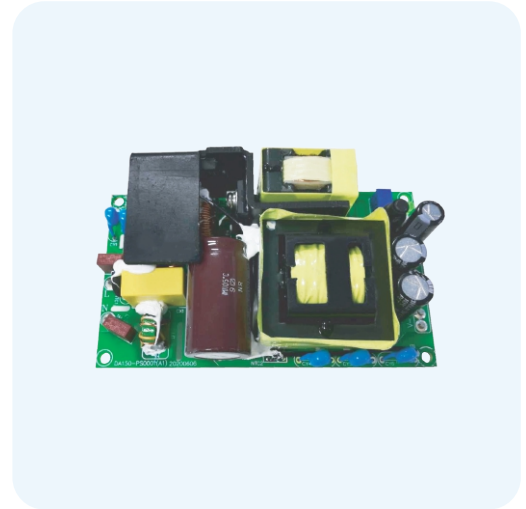


单位 (Unit) : mm
 接线线径 (Wire diameter of terminal) : 24~12AWG
 紧固力矩 (tightening torque) : Max0.4N·m
 未注尺寸公差 (General tolerance) : ±0.5mm



◆ 产品特性/Product Features

- 超宽输入电压范围 Universal wide input voltage range:80-264VAC
- 超低待机功耗0.15W Ultra low stand-by power consumption 0.15W
- 效率高达94% Transfer efficiency up to 94%
- 隔离电压 (Isolation voltage) : 3000VAC
- 工作环境温度 Operating Temp:-30°C~+70°C
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 符合CE、RoHS认证标准 Meet CE、RoHS standard
- 专为5G电气设备设计 Designed for 5G electrical equipment
- 应用领域:5G、安防等领域
Application Field:5G, Security Industry of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

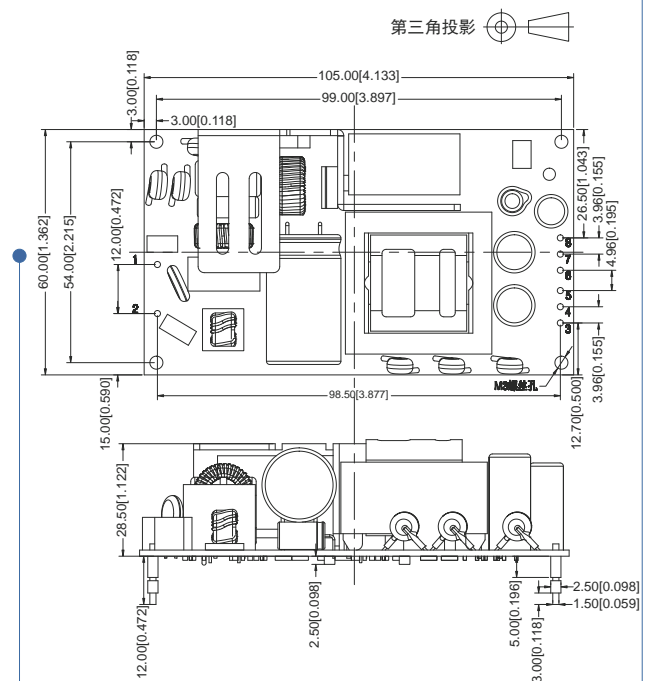


| 产品型号 Part no. | 输入电压 Input voltage | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency |
|------------------|-----------------------|----------------------------------|-----------------------|---------------------------|
| | 范围值 Range (VAC) | 电压 Voltage (VDC) | 电流 Current (mA) | (%TYP) |
| DA150-220S12G9N3 | 85-264 | 12 | 11700 | 93 |
| DA150-220S24G9N3 | | 24 | 5900 | 94 |
| DA150-220S48G9N3 | | 48 | 3000 | 94 |

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------|-----------------------|-------|------|------|------|------|------|------|
| 单路 Single | AC(L) | AC(N) | -Vo | -Vo | -Vo | +Vo | +Vo | +Vo |
| 功能 | 输入火线 | 输入零线 | 输出负极 | 输出负极 | 输出负极 | 输出正极 | 输出正极 | 输出正极 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | | | |
| / | 105.00*60.00*31.00mm | | | | | | | |
| / | 4.134*2.362*1.220inch | | | | | | | |

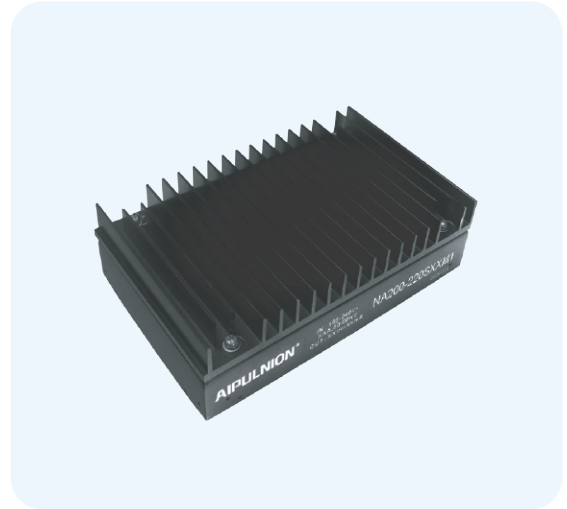
封装尺寸/Packing Dimension



单位 (Unit) : mm
 端子直径公差 (Pin section tolerances) : ±0.10mm
 未注尺寸公差 (General tolerance) : ±0.5mm
 器件布局仅供参考, 具体以实物为准
 (Component arrangement is just for reference, it should be subject to actual product.)

◆ 产品特性/Product Features

- 超宽输入电压范围 Universal wide input voltage range:165-265VAC/230-370VDC
 - 超低待机功耗 ≤0.20W Ultra low stand-by power consumption ≤ 0.20W
 - 效率高达88% Transfer efficiency up to 88%
 - 隔离电压 (Isolation voltage) : 2500VAC
 - 外壳:金属外壳屏蔽 Case : Metal case shielded
 - 工作环境温度 Operating Temp:-25°C~+65°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS A
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
 - CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
 - 符合CE认证标准 Meet CE standard
- 应用领域:工业控制、仪器仪表、通信、电力、智能家居、物联网等领域
Application Field:Industrial control, instrumentation, communication, electric power, smart home, internet of things etc.
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List



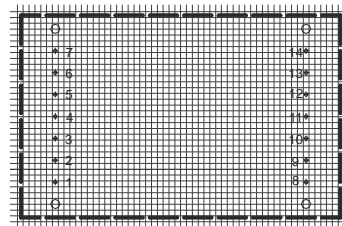
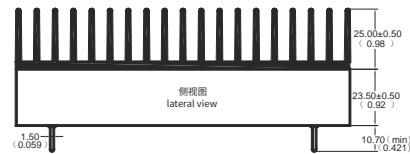
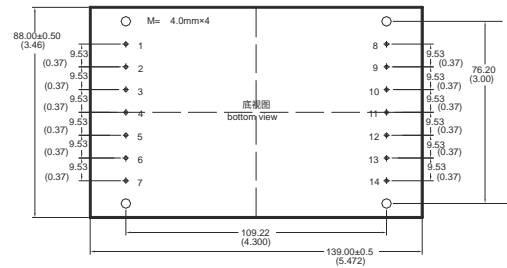
| 产品型号 Part no. | 输入电压 Input voltage | | 输出电压电流 Output voltage/current | | 输出效率 Output efficiency (%TYP) |
|------------------|-----------------------|--|----------------------------------|---------------|-------------------------------------|
| | 范围值 Range | | 电压 Voltage | 电流 Current | |
| | (VAC/VDC) | | (VDC) | (mA) | |
| NA200-220S12M1 | 165-265/ 230-370 | | 12 | 16600 | 88 |
| NA200-220S15M1 | | | 15 | 13300 | 88 |
| NA200-220S24M1 | | | 24 | 8333 | 87 |

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4,5,6 | 7 | 8,9 |
|--------------------------------|-------|------|-------|-------|-----------------------|------|
| 单路 Single | AC(N) | NP | AC(L) | NP | FG | +Vo |
| 功能 | 输入零线 | 空脚 | 输入火线 | 空脚 | 接地 | 输出正极 |
| 管脚号码 Pin-out | 10,11 | 12 | 13 | 14 | L*W*H | |
| 单路 Single | -Vo | +S | TRIM | -S | | |
| 功能 | 输出负极 | 正反馈端 | 电压调节端 | 负反馈端 | 139.00*88.00*23.50mm | |
| 封装代号 Packing Code/Dimension | M | | | | 5.472*3.465*0.925inch | |

封装尺寸/Packing Dimension



单位 (Unit): mm
 印刷板俯视图 (Printed board vertical view)
 栅格间距 (lattice spacing): 2.54mm(0.1inch)
 未注尺寸公差 (General tolerance): ±0.5mm
 未注明引脚直径公差 (Pin section tolerances): ±0.10mm

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC
- 体积小、温度特性好 Small size, good temperature characteristics
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 卧式、接线式、导轨式三种封装形式 Three types of packaging: horizontal, wiring, and rail
- 工作环境温度 Operating Temp:-40°C~+70°C
- 抑制交流电源线浪涌电压,实现一级保护 Suppress AC power line surge voltage to achieve primary protection
- 搭配电源使用可满足 CE 的 CLASS-B 限制要求 Used with power supply to meet CE's CLASS-B restriction requirements
- 搭配电源模块使用可过浪涌:DM-4KV、CM-6KV Can survive surge when used with power module: DM-4KV, CM-6KV
- 测试条件:如无特殊指定,所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得 Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

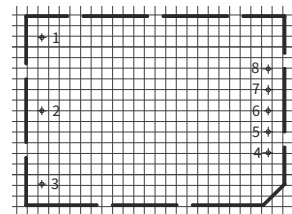
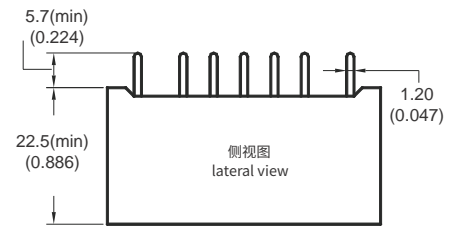
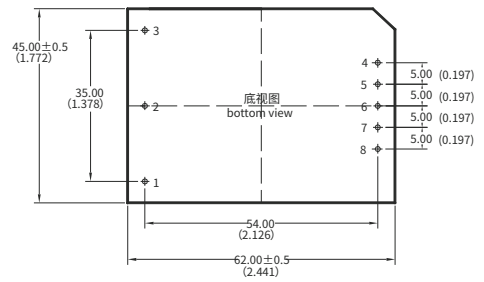


| 产品型号 Part no. | 输入电压 Input voltage | 额定输出电流 Rated output current | 符合标准 Conforming standards |
|------------------|-----------------------|--------------------------------|---|
| | 范围值 Range (VAC) | (mA&MAX) | EN61000-4-5 CISPR32/EN55032 CLASS-B |
| LC-AC01F2 | 85-305 | 500 | |

注 1:符合 EMC 标准 IEC/EN61000-4-5 及 CISPR32/EN55032。
 Note 1: Comply with EMC standards IEC/EN61000-4-5 and CISPR32/EN55032.
 注 2:该滤波器模块可兼容我司 AC-DC 电源模块输入 85-265AC, 输出 2-20W 的产品满足 MEC 标准要求。
 Note 2: The filter module is compatible with our AC-DC power supply module input 85-265AC, output 2-20W products, and meet the MEC standard requirements.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5,6,7 | 8 |
|--------------------------------|-------|-----------------------|-------|--------|-------|--------|
| 双路 Dual | PE | IN(N) | IN(L) | OUT(L) | NC | OUT(N) |
| 功能 | 功能接地 | 零线输入 | 火线输入 | 火线输出 | 空脚 | 零线输出 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | | |
| F2 | 卧式封装 | 62.00*45.00*22.50mm | | | | |
| | | 2.441*1.772*0.886inch | | | | |

封装尺寸/Packing Dimension



印刷板俯视图
Printed board vertical view

单位(Unit):mm
 印刷板俯视图(Printed board vertical view)
 栅格间距(latic spacing):2.54mm(0.1inch)
 未注尺寸公差(General tolerance):±0.5mm
 未注明针脚直径公差(Pin section tolerances):±0.10mm

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
 Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC
- 体积小、温度特性好 Small size, good temperature characteristics
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- PCB板上直插式安装 PCB Mounting
- 工作环境温度 Operating Temp:-40°C~+80°C
- 搭配电源使用可满足 EMI 的 CLASS-B 限制要求
Used with power supply to meet EMI's CLASS-B restriction requirements
- 搭配电源模块使用可过浪涌:DM-2KV、CM-4KV
Can survive surge when used with power module: DM-2KV, CM-4KV
- 测试条件:如无特殊指定,所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



◆ 产品列表/Product List

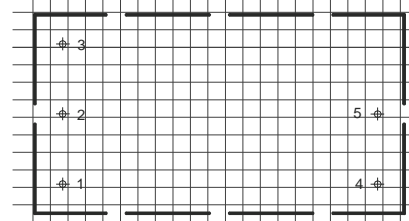
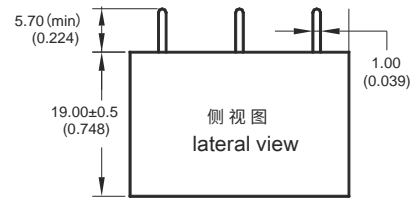
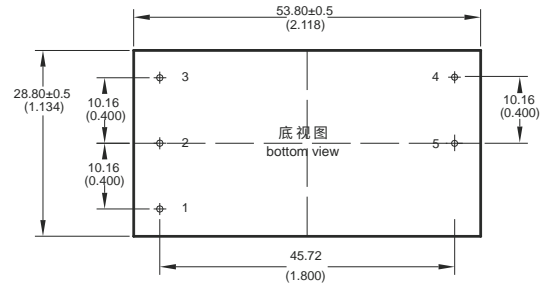


| 产品型号 Part no. | 输入电压 Input voltage | 额定输出电流 Rated output current (mA&MAX) | 符合标准 Conforming standards |
|------------------|-----------------------|--|------------------------------|
| | 范围值 Range | | EN61000-4-5 |
| | (VAC) | | CLASS-4 EN55032 |
| LC-AC01P2 | 85-265 | 1200 | CLASS-B |

注 1:符合 EMC 标准 IEC/EN61000-4-5 及 CISPR32/EN55032。
 Note 1: Comply with EMC standards IEC/EN61000-4-5 and CISPR32/EN55032.
 注 2:该滤波器模块可配套我司 AC-DC 电源模块输入 85-305VAC, 85-265VAC。
 Note 2: The filter module can be matched with our AC-DC power supply module that input 85-305VAC, 85-265VAC.
 注 3:满足输出功率 2-20W 的产品顺利通过 CE、SURGE 等标准要求检测。
 Note 3: Meets the product with output power 2-20W. Have successfully passed the CE, SURGE and other standard requirements.

| 管脚号码 Pin-out | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|-----------------------|-------|-------|--------|--------|
| 双路 Dual | PE | IN(N) | IN(L) | OUT(L) | OUT(N) |
| 功能 | 功能接地 | 零线输入 | 火线输入 | 火线输出 | 零线输出 |
| 封装代号 Packing Code/Dimension | L*W*H | | | | |
| F2 | 53.80*28.80*19.00mm | | | | |
| | 2.118*1.134*0.748inch | | | | |

封装尺寸/Packing Dimension

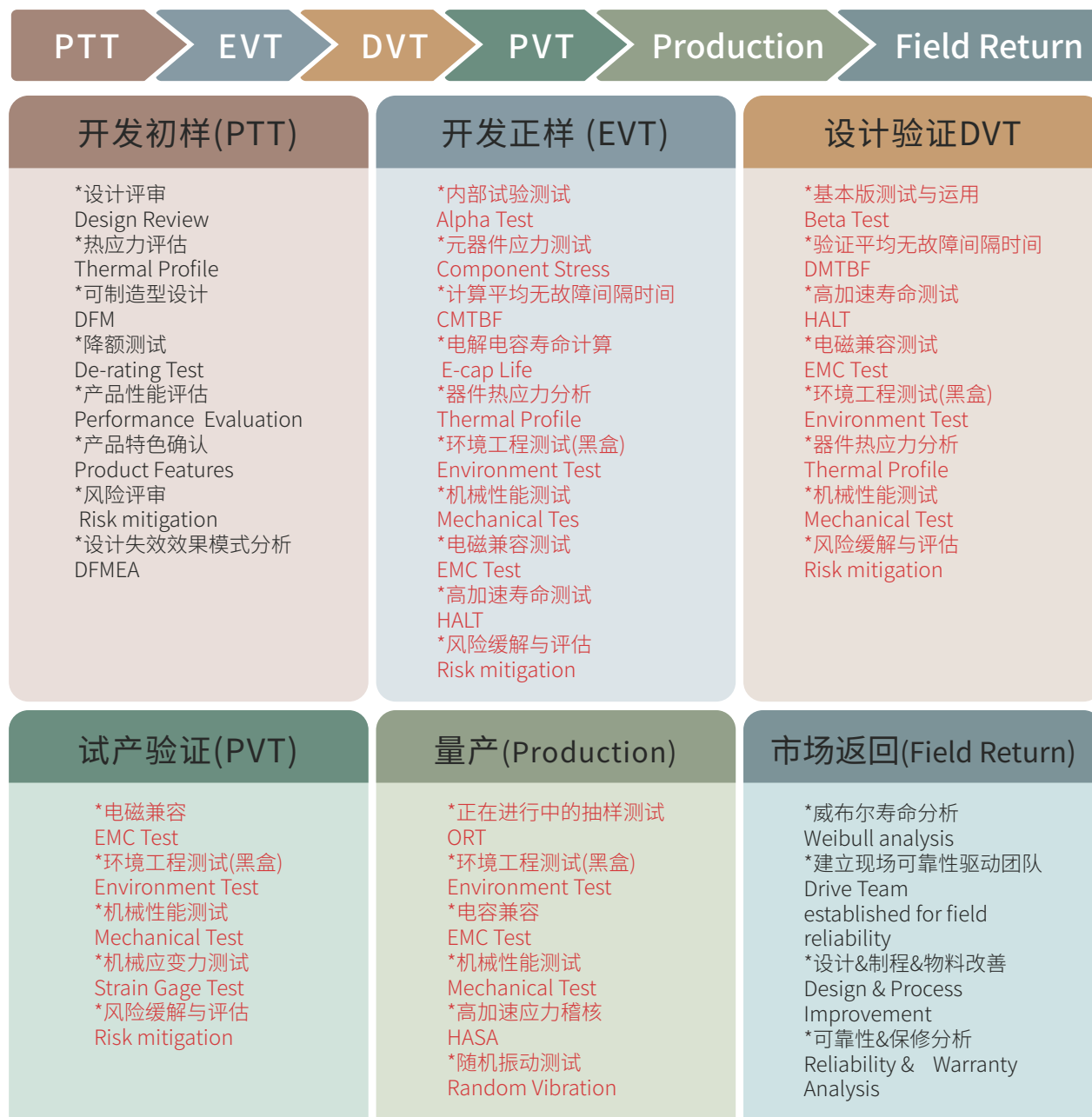


单位(Unit):mm
 印刷板俯视图(Printed board vertical view)
 栅格间距(lattice spacing):2.54mm(0.1inch)
 未注尺寸公差(General tolerance):±0.5mm
 未注明针脚直径公差(Pin section tolerances):±0.10mm

▶ 电源产品可靠性实验

产品可靠性包含可靠性设计、可靠性预计、可靠性分析、可靠性验证、可靠性实验，其中可靠度试验包含内容有环境试验、机械应力试验、耐气候测试试验、功能试验、EMC及安规试验等。

■ 产品在各个阶段运用到的可靠度试验项目



■ 参照标准(Reference standard)

GB T2421~GB T2424---中国国家标准;

MIL-HDBK-217/251/781---美国军标;

IEC60068---国际电工委员会;

IPC9592B---国际电子工业联接协会;

Bellcore SR 332---美国贝尔通信实验室;

IPC-A-610F---国际电子工业联接协会;



目的

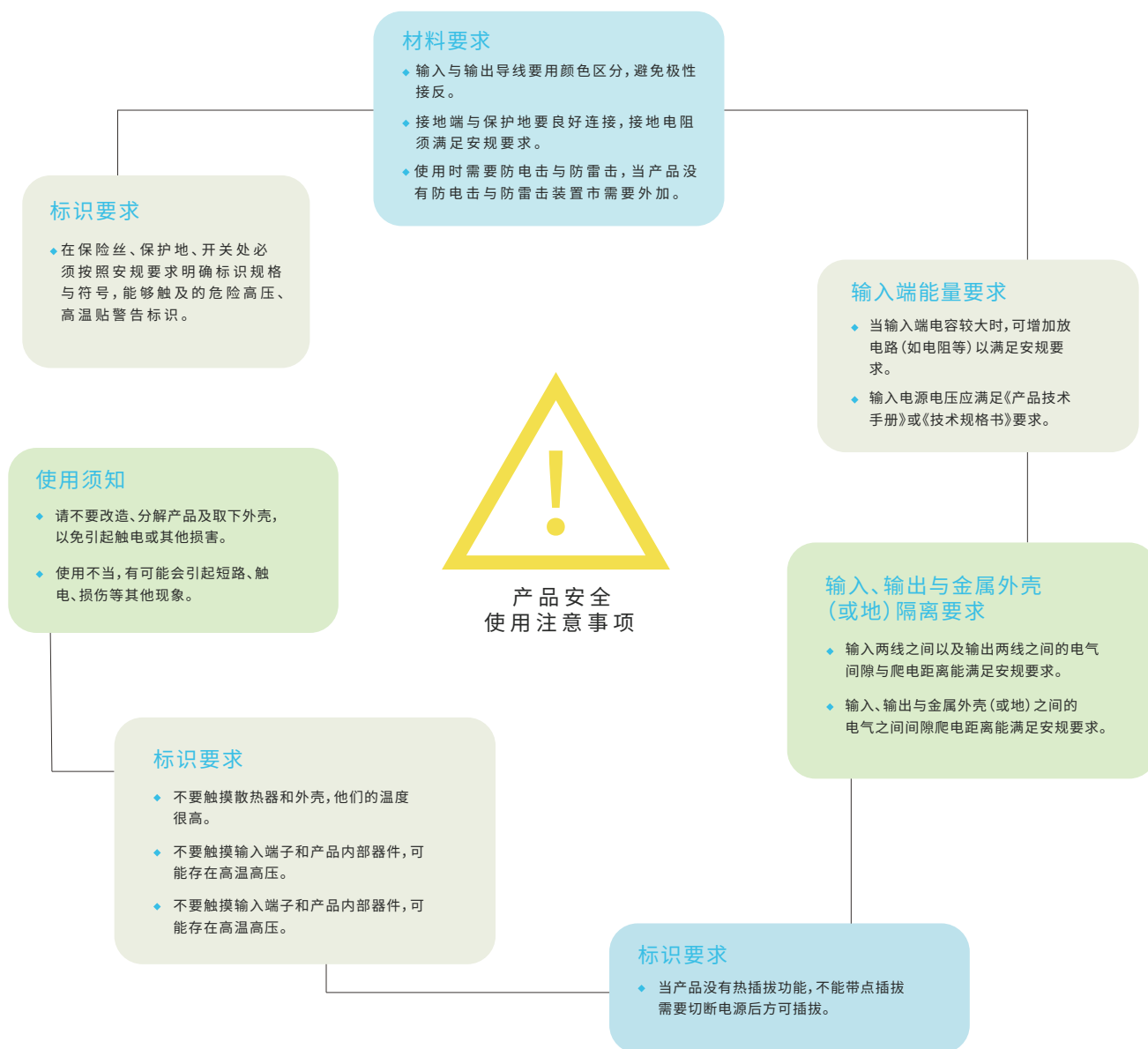
预防客户在使用产品过程中可能出现的安全问题。

适用范围

广州市爱浦电子科技有限公司生产的AC/DC&DC/DC&铃流系列模块电源

内容

客户在设计选型/批量投产之前,应确保仔细阅读《产品技术手册》中相关型号的所有内容,并按《产品技术手册》中的要求进行产品设计和使用的。



客户在使用过程中遇到问题时,请与我们联系。

电话:020-84206763 E-mail:sale@aipu-elec.com

电源测试



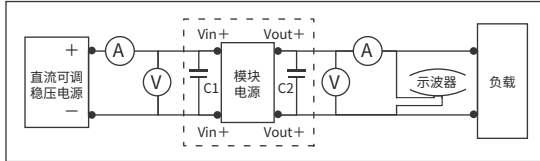
电源模块的测试

合适的电源选定后，仍然非常重要。重要的是应用于实际单元电路中的电气性能，使用前产品要经过严格测试合格才能使用，下面以DC-DC为例介绍模块电源的一般测试方法，AC-DC模块的测试在原理上完全一样，在此不重复描述。

1. 测试采用标准的开尔文四端测试法

如图：

测试条件：温室TA=25°C 湿度<75%。标称输入和额定负载。



模型的组成：

- a. 直流可调稳压电源：输入电压范围足够大
- b. 电流表A：精度在0.001A
- c. 电压表V：精度在0.001V
- d. 负载电阻：额定负载： U^2/P
轻载： $10\%*(U^2/P)$
- e. 连线：线损越小越好，以1mm多股铜线最佳，以免造成过大压降。

测试：

A: 连线

保证较高的测量精度就要减小连接导线引起的误差，过长过细的连接线及不良的接触会引起较大的回路压降，并大大降低电源模块负载调节率，尤其在负载电流较大时应尽量缩短输出引脚与各负载间的距离，并增加连接导线截面积来减小阻抗产生的压降。一般DC-DC模块的输入不能反接，输入输出电压表连接模块引脚，并选择满足功率大小的负载，将输入电压和负载调节到标称值，便可以测量。

B: 接地

不恰当的接地会引入附加的噪声，对于测量纹波和噪声，避免其他电器通过电源线串入模块，在测量时建议采用单通道探头直接测量法测量输出，避免输入输出共地和外界干扰产生的测量误差。（参见图“纹波和噪声”）

C: 负载

为了安全测量取得有效的测试数据，对于定电压产品必须保证在10-100%之间负载，容性负载不能大于技术资料规定值，才能保证较为准确的电压和纹波输出；对于宽压产品可先10%的负载测试确定好坏，再进行额定负载的准确性测试。具体外接图示参考产品技术资料。

2. 电源模块的性能

连接好电源模块就可以进行性能的测试和判定，确认性能参数是否达标。

1) 输出电压精度：

设置输入电压为标称值，输出为额定负载，测得输出电压记为VOUT；输出标称值记为VNOM。

计算公式：

$$\frac{V_{OUT}-V_{NOM}}{V_{NOM}} \times 100\%$$

如：稳压产品FW1-12S12B标称12V输出，额定负载为144Ohm。测得实际输出电压12.039V。

则有：

$$\frac{12.039VDC-12.000VDC}{12.000VDC} \times 100\%=0.3255\%$$

2) 线性电压调节率：

负载为满载时在允许变化范围内调节输入电压，测量输出电压的最大值和最小值之差值比例。

$$\text{线性调节率} = \frac{V_{OUTN}-V_{MDEV}}{V_{OUTN}} \times 100\%$$

在标称电压输入，额定负载下，测得输出电压记为VOUTN；在输入电压上限，额定负载下，测得输出电压记为VOUTH；在输入电压下限，额定负载下，测得输出电压记为VOUTL；VMDEV取VOUTH,VOUTL中偏离VOUTN最大值。

定电压输入隔离非稳压输出系列：

$$\text{线性调节率} = \left| \frac{\Delta V_{OUT}}{\Delta V_{IN}} \right|$$

$$\Delta V_{OUT} = \frac{V_{OUT(1+10\%)}-V_{OUT(1-10\%)}}{V_{OUTNOM}} \times 100\%$$

$$\Delta V_{IN} = \frac{V_{IN(1+10\%)}-V_{IN(1-10\%)}}{V_{INNOM}} \times 100\%$$

式中：

| | |
|-------------|----------------------|
| Vin(1+10%) | 将输入电压标称值+10%作为其输入电压 |
| Vin(1-10%) | 上限；将输入电压标称值-10%作为其输入 |
| Vout(1+10%) | 电压为下限；满载条件下，输入电压为 |
| Vout(1-10%) | 上限时所测得的输出电压值；满载条件下， |
| Vinnom | 输入电压为下限时所测得的输出电压值； |
| Voutnom | 指输入电压的额定值；满载条件下，输入 |
| | 电压为额定值时测得的输出电压值。 |

如：以定电压系列NN1-05S05AN为例，输出接25欧姆恒阻性负载，输入范围：±10%（即4.5V~5.5V）Vin(1+10%)=5.5V
Vin(1-10%)=4.5V；Vinnom=5V；
Vout(1+10%)测得为：5.32V；Vout(1-10%)测得为：4.2V；
Voutnom测得为：4.77V；

$$\Delta V_{OUT} = \frac{5.32V-4.2V}{4.77V} \times 100\%=23.5\%$$

$$\Delta V_{IN} = \frac{5.5V-4.5V}{5V} \times 100\%=20\%$$

$$\text{故线性电压调节率} = \left| \frac{\Delta V_{OUT}}{\Delta V_{IN}} \right| = 1.174$$

3) 负载调节率：

输入电压为额定值时，分别接10%和100%的恒阻性负载，分别测出输出电压为10%负载及100%负载与额定值之差的程度，并取与额定值之差最大值计算。

$$\text{负载调整率} = \frac{V_{b1}(V_{b2})-V_{b0}}{V_{b0}} \times 100\%$$

式中：

Vb0——输出电压整定值；
Vb1——输出电流最小值得输出电压；
Vb2——输出电流额定值时的输出电压。

定电压输入非稳压输出系列：

$$\text{计算公式：} \frac{V_{OUTNL}-V_{OUTFL}}{V_{OUTFL}} \times 100\%$$

VoutNL负载为10%时所测输出电压值；
VoutFL负载为100%时所测输出电压值 如：以定电压产品B0505XD-1W为例，额定负载为：U²/P=25欧姆，负载范围为：10~100%，测得：VoutNL=5.29V,VoutFL=4.77V

$$\text{负载调节率} = \frac{5.29V-4.77V}{4.77V} \times 100\% = 10.9\%$$

4) 效率：

标称输入和额定负载下输出功率与输入功率的比值。

$$\text{计算公式：} \frac{L_{OUT} \times V_{OUT}}{L_{IN} \times V_{IN}} \times 100\%$$

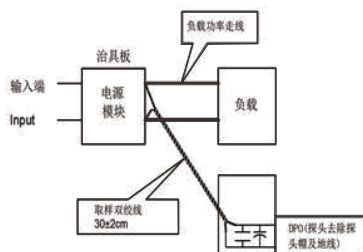
如：稳压产品IB1212LS-1W 额定12V输入，满负载下测得输出电压为12.039V；电流为83.3mA时；输入电流为115.0mA。

则有：

$$\frac{0.0833A \times 12.039V}{0.1150A \times 12.00V} \times 100\% = 73\%$$

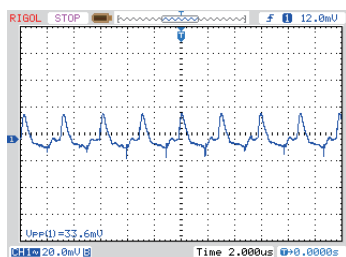
5) 纹波与噪声：

1、纹波噪声是利用12#双绞线连接，示波器带宽设置为20MHz,100M带宽探头，且在探头端上并联0.1uF聚丙烯电容和47uF高频低阻电解电容，示波器采样使用Sample取样模式。如下图所示：



注：把电源输入端连接到输入电源，电源输出通过治具板连接到电子负载，测试单独用30cm±2cm取样线直接从电源输出口取样。功率线根据输出电流的大小选取相应线径的带绝缘皮的导线。

由于电源输出端含有大量高频谐波，为了测量准确，将示波器的地线夹去掉，因为它会像天线一样吸收各种高频噪音、干扰测量结果。



波形中清晰明亮的部分为纹波，垂直而不太清晰的部分为噪声；
实际上的噪声和纹波会因电路和外接的元件的不同而有所差异。由于噪声的频率极高，大部分输出电路都不会受到噪声的影响。

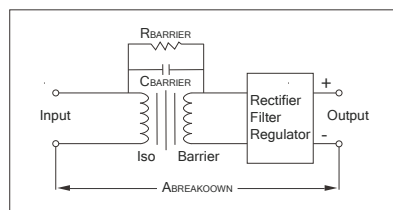
6) 启动时间：

由于一些特殊场合要求非常高的启动时间（例：配电控制系统），所以一般模块内部不放置电感。启动时间为输入开启后输出相对于输入达到目标电压值时响应延迟的时间。一般在额定满负载下测得，外接滤波器（包括输入输出电容）均会大大延迟启动的时间，实际设计与噪声要求权衡考虑。定压产品采用开环设计，启动较为缓慢。具体的产品及应用疑问请申请技术支持服务。

7) 隔绝及绝缘特性：

隔离能力是电源模块一个非常重要的特性，输入/出的隔离可以提供独立，不同极性的电源给负载，常常用于仪器仪表、数据处理和噪声敏感电路中负载与电源及系统的相互隔离，防止共模干扰，也用于工业、电力、医疗系统人身安全隔离和矿井中的防爆等。

如图：



$$I_{LEAKAGE} = \frac{V_{BREAKDOWN}}{R_{BARRIER}} = 2\pi (60\text{Hz})(C_{BARRIER})(240V)$$

C_{BARRIER}: 隔离电容；输入初级线圈同输出次级线圈的耦合电容；
R_{BARRIER}: 隔离电阻；输入/出间的阻性，一般在加500VDC电压测试；
I_{LEAKAGE}: 漏电流；由于隔离电容的存在，在输入/出间引起的电流；
V_{BREAKDOWN}: 测试电压；这里为240VAC/60HZ；也可以是其他值或噪声电压；

当为其他值时：

$$Z_f = \frac{1}{j2\pi f C_{IS}} \quad I_L = \frac{V_{test}}{Z_f}$$

C_{IS}: 隔离电容 f: 给定值（测试信号） V_{test}: 测试信号电压；

由上可见，一个低漏电、高噪声抗扰性、高隔离的电源模块一定需要很低耦合电容的隔离材料；实际的绝缘测试需要按照相应规定和专门的仪器，相关的隔离测试参数有：绝缘强度：在输入输出间加隔离电压（直流或交流的峰值）测试1分钟。绝缘电阻：在输入输出间加500VDC，测的输入输出间绝缘电阻大于1GOhm。

8) 遥控特性（仅限于有遥控端子的型号）：

1. 测试目的：测试模块提供的遥控端子来控制模块开关机的性能，应能正常实现遥控开关机。
2. 线路图：按图1接线



图一

- 1) 若输出有Sense端，则将Sense+(S+)与Vout+短接，Sense-(S-)与Vout-短接。
- 2) 部分模块在输入端设置有使能端（即REM端），分为高电平和低电平使能两种情况，如要使用，请按产品要求接入电平。
- 3) 部分模块需要在输入，输出端接上电容等外围器件，该器件的取值请参见产品的企业标准或使用说明书。
- 4) 对于非隔离的模块，要将所有的地统一共地。

电源测试



3. 测试方法：

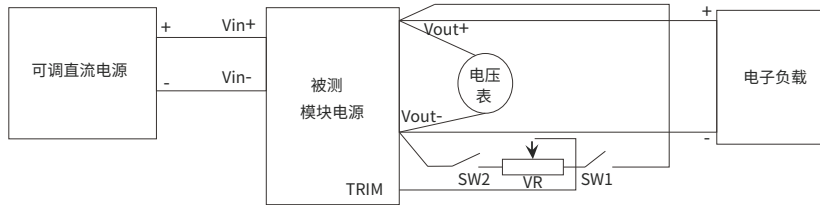
在额定输入电压，额定负载条件下，如果模块是正逻辑，则使能端REM接高电平或悬空时模块正常输出，反之，REM接低电平模块无输出；如果模块是负逻辑时，则使能端REM接低电平时，模块应正常输出，反之，REM接高电平或悬空时模块无输出。（其中的参考电平见产品资料说明）

注：测试时应单独对REM悬空的逻辑特性进行测试并记录

9) 输出电压微调性能 (仅限于有输出可调功能者)

1. 测试说明：测试通过模块给定的微调端子调节输出电压的能力。

2. 线路图：按图2接线



图二

注：电位器VR的取值，不同的型号依据使用说明有不同的取值其余的外部接线见图一中注释

3. 测试方法：

- (1) 额定输入电压，额定负载条件下，起机。
- (2) 闭合SW2，调VR，直到电压表读数能大于规定的输出可调节范围上限。
- (3) 闭合SW1，调VR，直到电压表读数能小于规定的输出可调节范围下限。

10) 温度系数

1. 测试目的：测试环境温度变化时输出电压的变化相对于整定值和温度的百分比。

2. 线路图：接线图如图1，并且将被测电源模块放到高低温箱中。

3. 测试方法：

- (1) 额定输入电压，额定负载，环境温度为常温 T0(25°C)条件下，测试输出电压V0；
- (2) 将电源的工作温度调节到上限值T1，稳定工作后（一般半小时），测试在此条件下的输出电压V1；
- (3) 将电源的工作温度降低到下限值T2，稳定工作后（一般半小时），测试在此条件下的输出电压V2；
- (4) 根据下式计算温度系数：

$$\text{温度系数} = |V1 - V2| / V0 / \Delta T \times 100\%$$

式中：Δ—温差（即T1-T2）

11) 动态负载特性

1. 测试目的：测试输出负载变化情况下，模块输出电压稳定在整定值的能力，过冲幅度和恢复时间应满足要求。

2. 线路图：按图1接线，并在输出管脚处接数字示波器。

3. 测试方法：

- (1) 输入电压为额定值，使输出负载在额定值的25%-50%-25%和50%-75%-50%周期性变化，其电流变化速度见厂家给定资料，如厂家没有给出，则按照周期1mS，变化速率1A/US设定。
- (2) 用示波器测量输出电压的过冲幅度及恢复时间，恢复时间以负载调整率规定电压为比较电平（或者参照厂家资料），注意此时器件不能出现啸叫。

12) 输入反射电流

1. 测试目的：为衡量模块对同一电源供电的其他设备的影响，测试模块输入电流上叠加的交流电流值。

2. 线路图：按图3接线

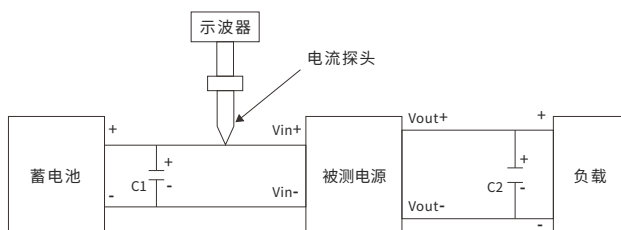


图3

注：C1,C2以及其他必要的外围器件的取值参照产品技术资料提供的参考资料

3. 测试方法：

在额定输入电压，额定负载条件下起机，观察示波器上的波形，读出反射电流值。



13) 高温贮存试验

- 1.测试目的:检查模块电源在高温环境存储之后有无损坏。
- 2.所用仪器:高温箱
- 3.线路图:无
- 4.测试步骤:
 - (1)初始检测:在正常条件下,对样品进行外观检查和各项指标测试。
 - (2)试验:把不包装,不通电的样品放入高温箱内,将温箱调至模块电源存储温度的最高值,试验时间从温箱达到规定值时算起。
 - (3)最后检测:经2小时试验后,将样品取出,在正常条件下,恢复2h后,对样品进行外观检查和输出电压,纹波测试。

14) 低温贮存试验

- 1.测试目的:检查模块电源在高温环境存储之后有无损坏。
- 2.所用仪器:高温箱
- 3.线路图:无
- 4.测试步骤:
 - (1)初始检测:在正常条件下,对样品进行外观检查和各项指标测试。
 - (2)试验:把不包装,不通电的样品放入高温箱内,将温箱调至模块电源存储温度的最高值,试验时间从温箱达到规定值时算起。
 - (3)最后检测:经2小时试验后,将样品取出,在正常条件下,恢复2h后,对样品进行外观检查和输出电压,纹波测试。

15) 高温带电老化实验

- 1.测试目的:测试模块电源在高温条件下正常工作的能力。
- 2.接线图:按图一接线,并将被测模块放入高温箱内。
- 3.测试方法:
 - (1)初始检测:在正常大气条件下,对样品进行外观检查和输出电压测试。
 - (2)试验:将样品按输入,输出接好线,放置实验箱内,温度达到要求值时,接通电源。
 - (3)在额定负载条件下,输入电压分别为标称值,最大值,最小值,各进行2小时试验,实验过程中反复开关机,模块起机应正常。
 - (4)在最小负载条件下,标称输入电压,进行2小时试验,实验过程中,反复开关机,模块起机应正常。每次实验条件改变之前,对输出电压和纹波进行测试。
 - (5)最后检测:将样品取出,在正常条件下,恢复2h后,对样品进行外观检查和输出电压和纹波测试。

16) 低温带电老化实验

- 1.测试目的:测试模块电源在低温条件下正常工作的能力。
- 2.接线图:按图一接线,并将被测模块放入低温箱内。
- 3.测试方法:
 - (1)初始检测:在正常大气条件下,对样品进行外观检查和输出电压测试。
 - (2)试验:将样品按输入,输出接好线,放置实验箱内,温度达到要求值时,接通电源。
 - (3)在额定负载条件下,输入电压分别为标称值,最大值,最小值,各进行2小时试验,实验过程中反复开关机,模块起机应正常。
 - (4)在最小负载条件下,标称输入电压,进行2小时试验,实验过程中,反复开关机,模块起机应正常。每次实验条件改变之前,对输出电压和纹波进行测试。
 - (5)最后检测:将样品取出,在正常条件下,恢复2h后,对样品进行外观检查和输出电压和纹波测试。



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