

2025

# 为元电子·产品手册

WIEN POWER PRODUCT MANUAL



工业领域用电解决方案

DC/DC 变换器 | 滤波器 | 功率控制器 | 浪涌抑制器

## Enterprise profile

Beijing Weiyuan Electronics Technology Co., Ltd. is a private high-tech enterprise jointly founded by Beijing Zhengxinyuan Technology Development Co., Ltd. and Beijing Saiweida Technology Co., Ltd. The company is dedicated to research, development, production, and sales of high-frequency switching power supplies (DC/DC, AC/DC Converters Module), DC EMI filters Module, surge suppressors, solid-state power controllers, and electronic switches.

Tianjin Weiyuan Electronics Technology Co., Ltd. is a wholly owned subsidiary of Beijing Weiyuan Electronics Technology Co., Ltd., established within the Wuqing Development Zone, Tianjin, conducting full business operations including research and development, production, and sales.

We focus on research and development in power electronics technology. Currently, personnel engaged in core technology R&D account for approximately 40% of the company's total workforce. Our products are widely applied in industrial automation, rail transit, power commissioning, instrumentation, and other fields.



DC/DC  
变换器

EMI  
滤波器

浪涌抑制器

固态功率  
控制器

组合式定制电  
源开发

**Innovation●**  
**Quality●Service**

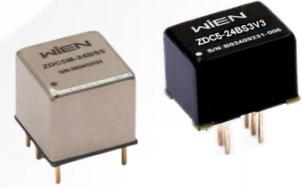
——Our on going pursuit

# ZDC5( M ) Series

5W 9-40V Input Isolated Regulated DC/DC Converter in DIP Package

Features:

- ◆ Small DIP package
- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 500-1500Vdc
- ◆ High efficiency can reach up to 84%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise

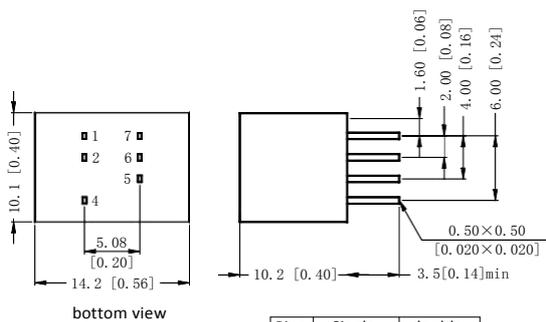


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDC5(M)-24BS3V3	9~36 (24Vdc)	3.3	1000	76	ZDC5(M)-28S3V3	16~40 (28Vdc)	3.3	1000	77
ZDC5(M)-24BS5		5	1000	81	ZDC5(M)-28S5		5	1000	82
ZDC5(M)-24BS12		12	420	83	ZDC5(M)-28S12		12	420	83
ZDC5(M)-24BS15		15	330	83	ZDC5(M)-28S15		15	330	83
ZDC5(M)-24BS24		24	210	84	ZDC5(M)-28S24		24	210	84
ZDC5(M)-24BS28		28	180	85	ZDC5(M)-28S28		28	180	85
ZDC5(M)-24BS48		48	100	83	ZDC5(M)-28S48		48	100	83
ZDC5(M)-24BD5		±5	±500	81	ZDC5(M)-28D5		±5	±500	82
ZDC5(M)-24BD12		±12	±210	83	ZDC5(M)-28D12		±12	±210	83
ZDC5(M)-24BD15	±15	±170	83	ZDC5(M)-28D15	±15	±170	83		
ZDC5M-6D5	4.5~9 (6Vdc)	±5	±500	83	ZDC5M-6S5	4.5~9 (6Vdc)	5	1000	82
ZDC5M-6D12		±12	±210	86	ZDC5M-6S12		12	420	84
ZDC5M-6D15		±15	±168	86	ZDC5M-6S15		15	330	85

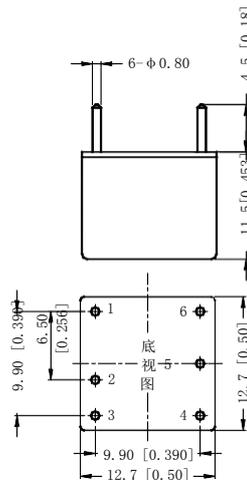
Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specifications.

## Encapsulation size



NoteUnits:mm[inches]  
Unspecified tolerance  
X.X±0.5[X.XX±0.02]  
X.XX±0.25[X.XXX±0.010]  
Pin diameter tolerance:  
±0.10[±0.004]

Pins	Single	double
1	+Vin	+Vin
2	-Vin	-Vin
4	NC/Cnt	NC/Cnt
5	+Vo	+Vo
6	-Vo	Com
7	NC	-Vo



Pins	Single	double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	-Vo
5	NP	Com
6	+Vo	+Vo

NoteUnits:mm[inches]  
Unspecifiedtolerane:  
X.X±0.5[X.XX±0.02]  
X.XX±0.25[X.XXX±0.010]  
Pin diameter tolerance  
±0.10[±0.004]

All products feature metal casings with shielding cover plates; the pins are made of gold-plated or tin-plated brass

ZDC5 Series

ZDC5M Series

# ZDB6 Series

6W 9-40V Input Isolated Regulated DC/DC Converter in SIP Package

Features:

- ◆ Small DIP package, Fixed-pins
- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 500-1500Vdc
- ◆ High efficiency can reach up to 86%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise



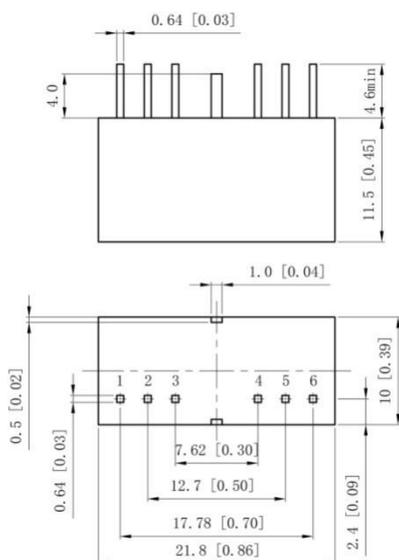
## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDB6-24BS3V3	9~36 (24Vdc)	3.3	1200	76	ZDB6-28S3V3	16~40 (28Vdc)	3.3	1200	77
ZDB6-24BS5		5	1200	82	ZDB6-28S5		5	1200	82
ZDB6-24BS9		9	670	82	ZDB6-28S9		9	670	82
ZDB6-24BS12		12	500	83	ZDB6-28S12		12	500	83
ZDB6-24BS15		15	400	84	ZDB6-28S15		15	400	84
ZDB6-24BS28		28	210	85	ZDB6-28S28		28	210	85
ZDB6-24BS48		48	125	85	ZDB6-28S48		48	125	85
ZDB6-24BD5		±5	±600	82	ZDB6-28D5		±5	±600	82
ZDB6-24BD6		±6	±500	82	ZDB6-28D6		±6	±500	82
ZDB6-24BD12		±12	±250	85	ZDB6-28D12		±12	±250	85
ZDB6-24BD15		±15	±200	85	ZDB6-28D15		±15	±200	86
ZDB6-48BS5		18~75 (48Vdc)	5	1200	82		ZDB6-48BD5	18~75 (48Vdc)	±5
ZDB6-48BS12	12		500	83	ZDB6-48BD12	±12	±250		85
ZDB6-48BS15	15		400	84	ZDB6-48BD15	±15	±200		86

Note 1: This dual-channel output model features stable positive-channel output with negative-channel output following the positive channel. The cross-regulation ratio typically ranges from 10% to 15%. For detailed specifications, please refer to the product technical datasheet.

Note 2: The product's fixed pins are optional and can be omitted. For packaging dimensions, please contact our company.

## Encapsulation size



Pins	Single	Double
1	-Vin	-Vin
2	+Vin	+Vin
3	REM	REM
4	Vo	Vo1
5	GND	Com
6	NC	Vo2

Note:

Shell material: Metal shell with shielding plate

Pin material: Gold-plated or tin-plated brass.

Units: mm[inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02] X.XX±0.25 [X.XXX±0.010]

Tolerance of the outer shell fixing foot: ±0.15mm

# ZDV10 Series

10W 9-40V Input Isolated Regulated DC/DC Converter in DIP Package

Features:

- ◆ Small DIP package
- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 500-1500Vdc
- ◆ High efficiency can reach up to 86%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise

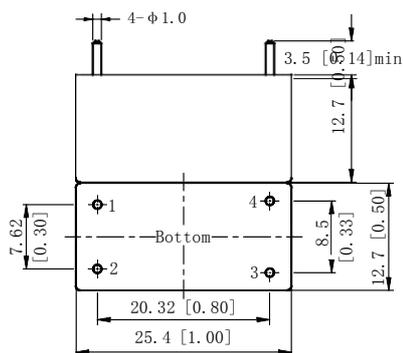


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDV10-24BS3V3Z	9~36 (24Vdc)	3.3	2000	81	ZDV10-28S3V3Z	16~40 (28Vdc)	3.3	2000	81
ZDV10-24BS5Z ZDV10M-24BS51		5	2000	83	ZDV10-28S5Z		5	2000	83
ZDV10-24BS9Z ZDV10M-24BS91		9	1100	84	ZDV10-28S9Z		9	1100	84
ZDV10-24BS12Z ZDV10M-24BS121		12	830	85	ZDV10-28S12Z		12	830	86
ZDV10-24BS15Z ZDV10M-24BS151		15	670	85	ZDV10-28S15Z		15	670	86
ZDV10-24BS28Z ZDV10M-24BS281		28	360	85	ZDV10-28S28Z		28	360	86
ZDV10-24BS48Z		48	210	85	ZDV10-28S48Z		48	210	85
ZDV10M-24BD121		±12	±416	85	ZDV10M-28D121		±12	±416	85

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification

## Encapsulation size



Pins	ZDV10	ZDV10 M
1	+Vin	+Vin
2	-Vin	-Vin
3	-Vo	CNT
4	+Vo	-Vo
5		Trim
6		+Vo

Note:

Shell material: Metal shell with shielding plate

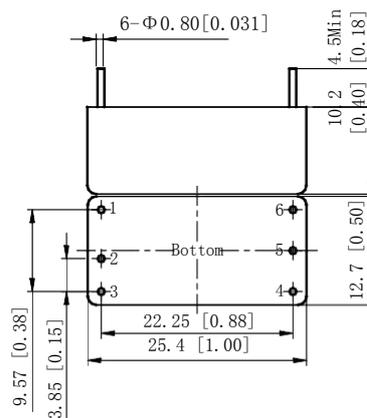
Pin material: Gold-plated or tin-plated brass.

Units: mm [inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02] X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance: ±0.1 [±0.004]



ZDV10-\*Z

ZDV10M  
ZDV10-\*1 (Add suffix 1)

# ZDV12 / ZDV15 Series

15W 9-36V Input Isolated Regulated DC/DC Converter in DIP Package

Features:

- ◆ Small DIP package
- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 500-1500Vdc
- ◆ High efficiency can reach up to 86%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise

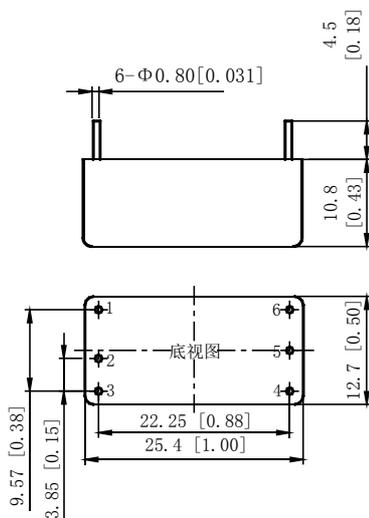


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDV15M-24BS3V31	9~36 (24Vdc)	3.3	4000	88	ZDV15M-24BS151	9~36 (24Vdc)	15	1000	90
ZDV15M-24BS51		5	3000	89	ZDV15M-24BS281		28	540	90
ZDV15M-24BS121		12	1250	90	ZDV15M-24BD151		±15	±500	90
ZDV12-24BS81		8	1500	85	ZDV15M-24BD121		±12	±625	90

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification

## Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	CNT	CNT
4	-Vo	-Vo
5	Trim	COM
6	+Vo	+Vo

Note:

Shell material: Metal shell with shielding plate

Pin material: Gold-plated or tin-plated brass

Units:mm[inchs]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02] X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance:±0.1[±0.004]



# ZDG5/ ZDG12 M Series

5/12W 4:1 Input Isolated Regulated DC/DC Converter in DIP Package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise

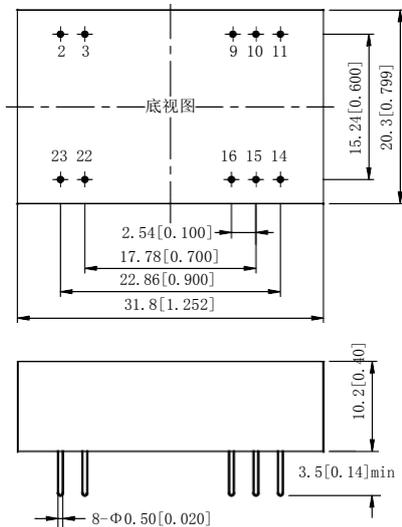


Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDG5-24BS3V3	9~36 (24Vdc)	3.3	1.52	79	ZDG5-48BS3V3	18~75 (48Vdc)	3.3	1.52	80
ZDG5-24BS5		5	1	82	ZDG5-48BS5		5	1	82
ZDG5-24BS12		12	0.42	83	ZDG5-48BS12		12	0.42	84
ZDG5-24BS15		15	0.33	83	ZDG5-48BS15		15	0.33	84
ZDG5-24BS24		24	0.21	83	ZDG5-48BS24		24	0.21	84
ZDG5-24BD5		±5	±0.5	80	ZDG5-48BD5		±5	±0.5	81
ZDG5-24BD12		±12	±0.21	82	ZDG5-48BD12		±12	±0.21	82
ZDG5-24BD15		±15	±0.17	82	ZDG5-48BD15		±15	±0.17	82
ZDG12M-24BS5T		5	2.4	89	ZDG12M-48BS5T		5	2.4	89
ZDG12M-24BS12T		12	1	90	ZDG12M-48BS12T		12	1	90

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

## Encapsulation size

Z D G Series



引脚	ZDG5		ZDG12M
	单路	双路	单路
1	NP	NP	CNT
2	-Vin	-Vin	-Vin
3	-Vin	-Vin	-Vin
9	NC	COM	NC
10	NP	NP	NP
11	NC	Vo2	NC
14	+Vo	Vo1	+Vo
15	NP	NP	NP
16	-Vo	COM	-Vo
22	+Vin	+Vin	+Vin
23	+Vin	+Vin	+Vin
25	-	-	FG

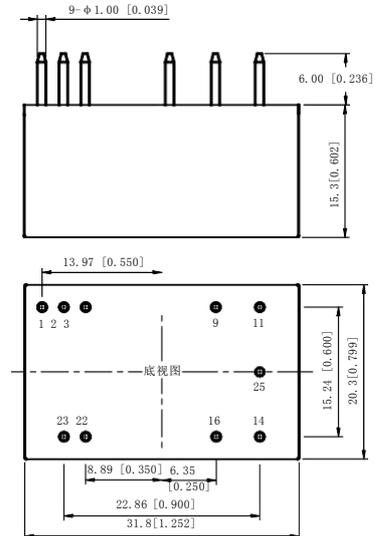
Units:mm[inchs]

Unspecified tolerane:

X.X±0.5 [X.XX±0.02] X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance:±0.1[±0.004]

Z D G 1 2 M Series



All products feature metal casings with shielding cover plates; the pins are made of gold-plated or tin-plated brass

# ZDR10 Series

10W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 87%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

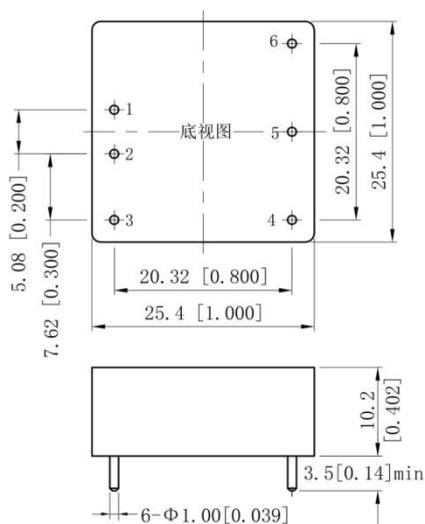


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDR10-24BS3V3	9~36 (24Vdc)	3.3	2000	81	ZDR10-48BS3V3	18~75 (48Vdc)	3.3	2000	81
ZDR10-24BS5		5	2000	85	ZDR10-48BS5		5	2000	85
ZDR10-24BS6		6	1667	85	ZDR10-48BS9		9	1100	86
ZDR10-24BS9		9	1100	86	ZDR10-48BS12		12	830	87
ZDR10-24BS12		12	830	87	ZDR10-48BS15		15	670	87
ZDR10-24BS15		15	670	87	ZDR10-48BS24		24	410	87
ZDR10-24BD3V3		±3.3	±1000	82	ZDR10-48BS28		28	360	87
ZDR10-24BD5		±5	±1000	85	ZDR10-48BS48		48	210	87
ZDR10-24BD9		±9	±550	86	ZDR10-48BD3V3		±3.3	±1000	82
ZDR10-24BD10		±10	±500	87	ZDR10-48BD5		±5	±1000	85
ZDR10-24BD12		±12	±420	87	ZDR10-48BD9		±9	±550	86
ZDR10-24BD15		±15	±330	87	ZDR10-48BD12		±12	±420	87
ZDR10-24BD5W		+5, +5	1500/500	83	ZDR10-48BD15		±15	±330	87
ZDR10-24BD6V521W		+6.5, +21	1000/50	82					

Note: In the table above, models ending with 'W' indicate dual-stable output channels. Models without 'W' feature a stable positive output channel with the negative channel synchronizing the main output, typically with an 10% cross-regulation rate. For details, refer to the product technical specifications.

## Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	Vo2
5	Trim	Com
6	+Vo	Vo1

Note:

Shell material: Metal shell with shielding plate, black  
 Pin material: brass, gold-plated.

Units:mm[inchs]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02] X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance:±0.1[±0.004]

## ZDR15 Series

15W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 91%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

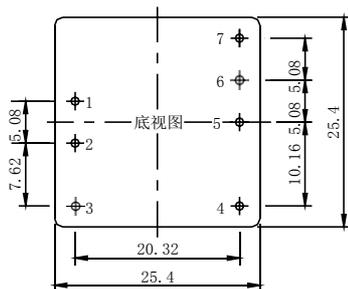
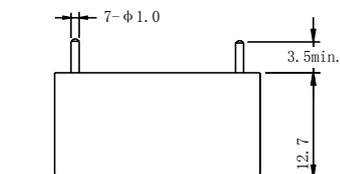


### Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDR15-24BS3V3	9~36 (24Vdc)	3.3	4600	87	ZDR15-24BS15	9~36 (24Vdc)	15	1000	89
ZDR15-24BS5		5	3000	88	ZDR15-24BS24		24	625	90
ZDR15-24BS12		12	1250	89	ZDR15-24BS48		48	315	88

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

### Encapsulation size

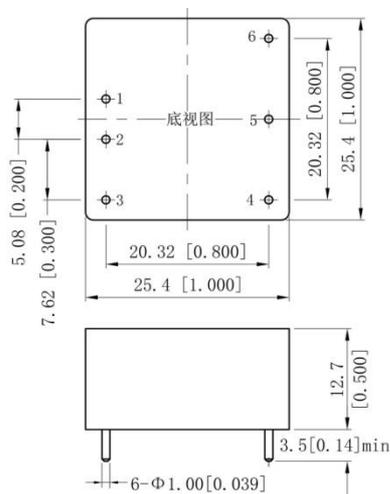


Suffix Z Series

Pins	Suffix Z	Standard
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	Trim	-Vo
5	-Vo	Trim
6	+Vo	+Vo
7	NC	—

Note:

Shell material: Metal shell with shielding plate, black  
 Pin material: brass, gold-plated  
 Units:mm[inches]  
 Unspecified tolerane: X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 Pin diameter tolerance:±0.1[±0.004]



Standard Series

# ZDR20 Series

20W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 91%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

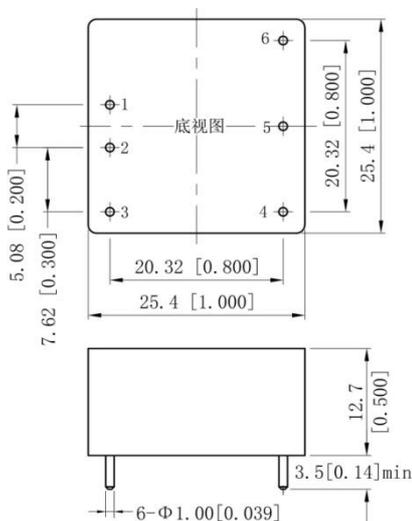


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDR20-24BS3V3	9~36 (24Vdc)	3.3	4000	87	ZDR20-48BS3V3	18~75 (48Vdc)	3.3	4000	87
ZDR20-24BS5		5	4000	90	ZDR20-48BS5		5	4000	90
ZDR20-24BS6		6	3330	90	ZDR20-48BS9		9	2200	90
ZDR20-24BS9		9	2200	90	ZDR20-48BS12		12	1660	91
ZDR20-24BS12		12	1660	91	ZDR20-48BS15		15	1330	91
ZDR20-24BS15		15	1330	91	ZDR20-48BS24		24	830	91
ZDR20-24BS24		24	830	91	ZDR20-48BD5		±5	±2000	90
ZDR20-24BD5		±5	±2000	90	ZDR20-48BD9		±9	±1100	90
ZDR20-24BD9		±9	±1100	90	ZDR20-48BD12		±12	±830	91
ZDR20-24BD12		±12	±830	91	ZDR20-48BD15		±15	±660	91
ZDR20-24BD15	±15	±660	91	ZDR20-48BD24	±24	±416	91		
ZDR20-28S5	16-40 (28Vdc)	5	4000	89.0	ZDR20-110BS5	34-160 (110Vdc)	5	4000	87
ZDR20-28S9		9	2200	89.0	ZDR20-110BS9		9	2200	88
ZDR20-28S12		12	1660	90.0	ZDR20-110BS12		12	1660	88
ZDR20-28S15		15	1330	90.0	ZDR20-110BS15		15	1330	89
ZDR20-24S18		18	1110	90.0	ZDR20-110BS24		24	830	89
ZDR20-28S24		24	830	91.5	ZDR20-110BS48		48	416	89

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

## Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	-Vo
5	Trim	Com
6	+Vo	+Vo

Note:

Shell material: Metal shell with shielding plate, black;

Pin material: brass, gold-plated

Units:mm[inchs]

Unspecified tolerance: X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance:±0.1[±0.004]



## ZDR 50 Series

50W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 91%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

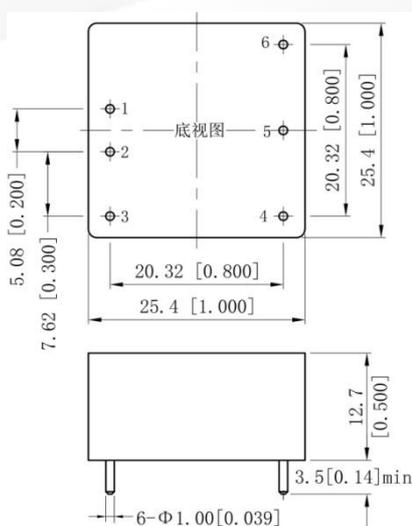


### Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency( %)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDR50-48BS5	18~75 (48Vdc)	5	8	90	ZDR50-48BS15	18~75 (48Vdc)	15	3.3	91
ZDR50-48BS6		6	7	90	ZDR50-48BS24		24	2.08	91
ZDR50-48BS12		12	4.2	90	ZDR50-48BS28		28	1.78	92

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

### Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	-Vo
5	Trim	Com
6	+Vo	+Vo

Note:

Shell material: Metal shell with shielding plate, black;

Pin material: brass, gold-plated

Units:mm[inchs]

Unspecified tolerance:  $X.X \pm 0.5 [X.XX \pm 0.02]$

$X.XX \pm 0.25 [X.XXX \pm 0.010]$

Pin diameter tolerance:  $\pm 0.1 [\pm 0.004]$

## ZDK20 Series

20W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 90%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage



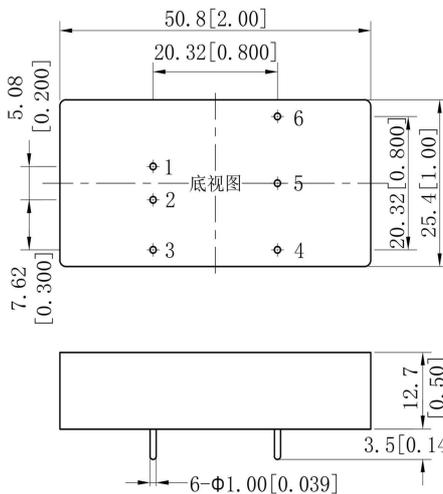
### Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDK20-24BS5	9~36 (24Vdc)	5	4000	88	ZDK20-48BS5	18~75 (48Vdc)	5	4000	88
ZDK20-24BS12		12	1670	90	ZDK20-48BS12		12	1670	90
ZDK20-24BS15		15	1330	90	ZDK20-48BS15		15	1330	90
ZDK20-24BS28		28	710	90	ZDK20-48BS28		28	710	90
ZDK20-24BD5		±5	±2000	88	ZDK20-48BD5		±5	±2000	88
ZDK20-24BD12		±12	±840	90	ZDK20-48BD12		±12	±840	90
ZDK20-24BD15		±15	±670	90	ZDK20-48BD15		±15	±670	90

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output.

The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

### Encapsulation size



引脚	单路	双路
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	-Vo
5	Trim	Com
6	+Vo	+Vo

Note:

Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units:mm[inchs]

Unspecified tolerane:

X.XX±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

Pin diameter tolerance:

±0.10[±0.004]

# ZDK30 Series

30W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 90%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

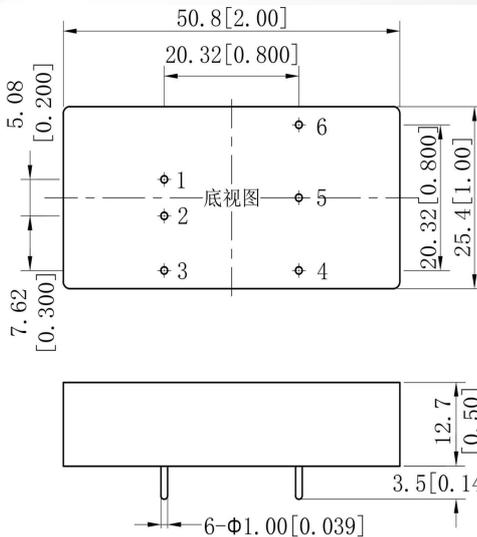


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDK30M-24BS5	9~36 (24Vdc)	5	6000	88	ZDK30M-24BS24	9~36 (24Vdc)	24	1250	91
ZDK30M-24BS15		15	2000	90	ZDK30M-24BD15		±15	±1000	91

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output. The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

## Encapsulation size



引脚	单路	双路
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	-Vo	-Vo
5	Trim	Com
6	+Vo	+Vo

Note:

Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units:mm[inchs]

Unspecified tolerance:

X.X±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

Pin diameter tolerance:

±0.10[±0.004]

## ZDK40 Series

40W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 92%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage



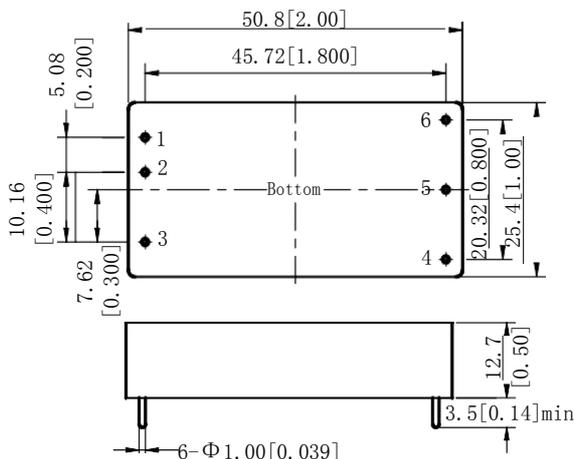
### Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency (%)
ZDK40-24BS5	9~36 (24Vdc)	5	8.00	90	ZDK40-48BS5	18~75 (48Vdc)	5	8.00	90
ZDK40-24BS12		12	3.33	91	ZDK40-48BS12		12	3.33	91
ZDK40-24BS15		15	2.67	91	ZDK40-48BS15		15	2.67	91
ZDK40-24BS28		28	1.43	92	ZDK40-48BS28		28	1.43	92
ZDK40-28S5	16~40 (28Vdc)	5	8.00	91	ZDK40-110BS5	34~160 (110Vdc)	5	8.00	89
ZDK40-28S12		12	3.33	92	ZDK40-110BS12		12	3.33	91
ZDK40-28S28		28	1.43	92	ZDK40-110BS24		24	1.67	90
ZDK40-28BD15		±15	±1.33	92	ZDK40-110BD15		±15	±1.33	92

Note: This is a dual-output model with positive output voltage stabilization and negative output following the positive output.

The cross-regulation rate is typically 10%. For details, refer to the product technical specification.

### Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	Trim	-Vo
5	-Vo	Com
6	+Vo	+Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm [inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance: ±0.10 [±0.004]

# ZDK60 Series

60W 4:1 Voltage input, isolated regulated output, DC/DC, DIP package

Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ High efficiency can reach up to 92.5%.
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Remote control and adjustable output voltage

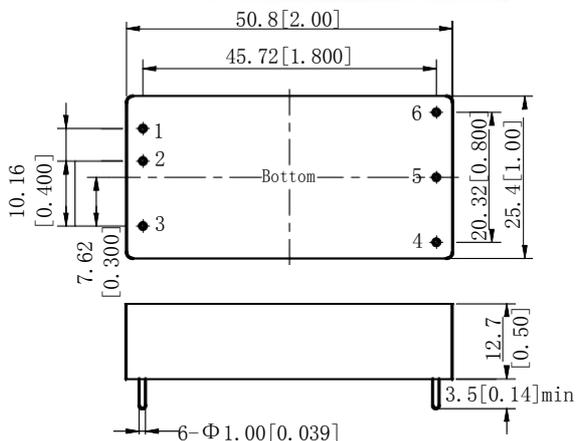


## Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency( %)	Product model	Input Voltage (Vdc)	Output voltage (Vd)	Output current (mA)	Efficiency( %)
ZDK60-24BS5	9~36 (24Vdc)	5	12.00	91	ZDK60-48BS5	18~75 (48Vdc)	5	12.00	91
ZDK60-24BS12		12	5.00	92	ZDK60-48BS12		12	5.00	92
ZDK60-24BS15		15	4.00	92	ZDK60-48BS15		15	4.00	92
ZDK60-24BS24		24	2.50	92.5	ZDK60-48BS24		24	2.50	92.5
ZDK60M-24BS3V3D		3.3	12.00	89	ZDK60-48BS28D		28	2.14	93

Note: For dual-output models, please contact our company

## Encapsulation size



Pins	Single	Double
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	Trim	-Vo
5	-Vo	Com
6	+Vo	+Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm[inchs]

Unspecified tolerance:

X.X±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

Pin diameter tolerance: ±0.10[±0.004]

# ZDL 10 Series

10W Isolated multi-channel regulated DC/DC converter

Features:

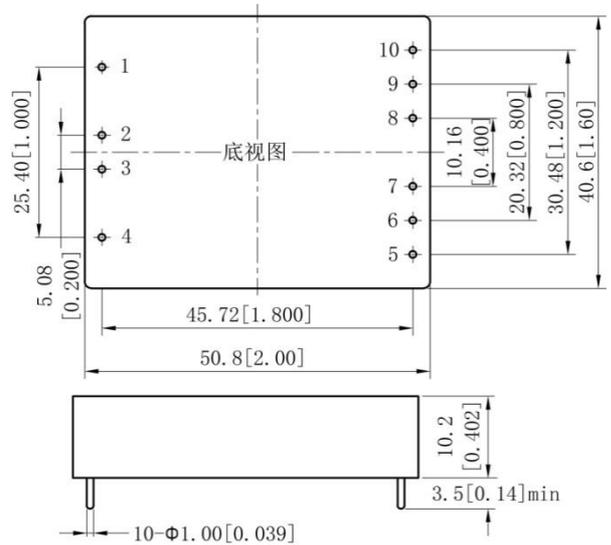
- ◆ Independent voltage regulation for each output channel
- ◆ Shell temperature range: -40℃ to +105℃
- ◆ Isolation voltage: 1500Vdc input to output, 500Vdc between outputs
- ◆ Output short-circuit protection, self-recovery
- ◆ logical remote control function
- ◆ Used in multi-power products



Product Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (A)	Efficiency (%)
ZDL10-24T050505	18~36 (24Vdc)	5/5/5	1.5/0.15/0.15	77
ZDL10-24T050515		5/5/15	1.5/0.15/0.10	77
ZDL10-24T050512		5/5/12	1.5/0.15/0.10	77
ZDL10-24T051515		5/15/15	1.5/0.10/0.10	79
ZDL10-24T051212		5/12/12	1.5/0.10/0.10	79
ZDL10-24ET050505	10~60 (24Vdc)	5/5/5	1.5/0.15/0.15	77
ZDL10-24ET050515		5/5/15	1.5/0.15/0.10	77
ZDL10-24ET050512		5/5/12	1.5/0.15/0.10	77
ZDL10-24ET051515		5/15/15	1.5/0.10/0.10	79
ZDL10-24ET051212		5/12/12	1.5/0.10/0.10	79

Encapsulation size



Note:

1. The 1.4:1 input voltage range is optional. In the 4:1 input model, 24 is replaced by 24B.
2. This series delivers a maximum power output of 30W, supporting either fully independent voltage regulation or dual-channel regulation with one channel in follower mode.
3. This product line is available for customization. For details, please contact our company.
4. This series is recommended for use only in three-channel output applications, and single-channel or dual-channel designs are not advised.
5. The metal housing is equipped with a shielding cover plate, and the pins are made of gold-plated or tin-plated brass.

引脚	1	2	3	4	5	6	7	8	9	10
功能	NC	+Vin	-Vin	Cnt	-Vo3	+Vo3	-Vo1	+Vo1	-Vo2	+Vo2

注: 单位: mm[inches]

未注公差: X.X±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

引脚直径公差: ±0.10[±0.004]

# ZDL20 Series

20W 4:1 Voltage input, isolated regulated output, DC/DC, DIP



Features:

- ◆ Shell temperature range: -40°C to +105°C
- ◆ Isolation voltage: 1500Vdc
- ◆ Output short-circuit protection, self-recovery
- ◆ low ripple noise
- ◆ Applicable to environments with poor natural heat dissipation conditions for products

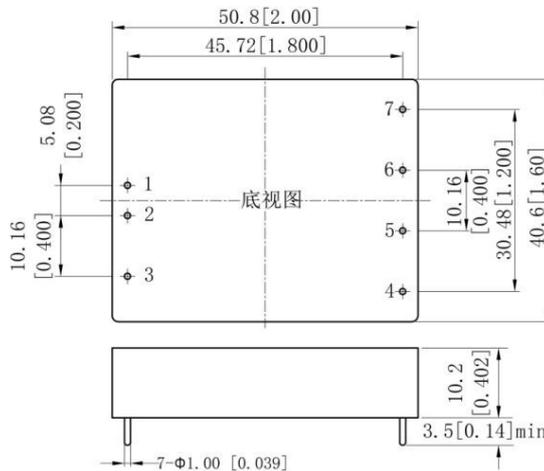
## Production Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (A)	Efficiency (%)
ZDL20-24BS3V3	9~36 (24Vdc)	3.3	5	85
ZDL20-24BS5		5	4	88
ZDL20-24BS12		12	1.67	88
ZDL20-24BS15		15	1.33	88
ZDL20-24BS24		24	0.83	88
ZDL20-24BD5		±5	±2	86
ZDL20-24BD12		±12	±0.83	87
ZDL20-24BD15		±15	±0.67	87
ZDL20-48BS3V3		18~75 (48Vdc)	3.3	5
ZDL20-48BS5	5		4	89
ZDL20-48BS12	12		1.67	88
ZDL20-48BS15	15		1.33	88
ZDL20-48BS28	28		0.71	88
ZDL20-48BD5	±5		±2	85
ZDL20-48BD12	±12		±0.83	87
ZDL20-48BD15	±15		±0.67	87

Note:

- 1) Single-channel output products are only for replacing existing products. The new design recommends using ZDR and ZDK series products;
- 2) This series is primarily designed for dual-channel applications. For requirements where the main channel requires voltage stabilization while the auxiliary channel follows or both channels need voltage stabilization, this series of products can be adopted.

## Encapsulation size



引脚	单路	双路
1	+Vin	+Vin
2	-Vin	-Vin
3	Cnt	Cnt
4	Trim	Trim
5	-Vo	Vo2
6	+Vo	Com
7	NP	Vo1

注: 单位: mm[inches]  
 未注公差:  
 X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 引脚直径公差:  
 ±0.10[±0.004]

# ZDM25 Series

25W 2x2 inch package with isolated regulated DC/DC output



Features:

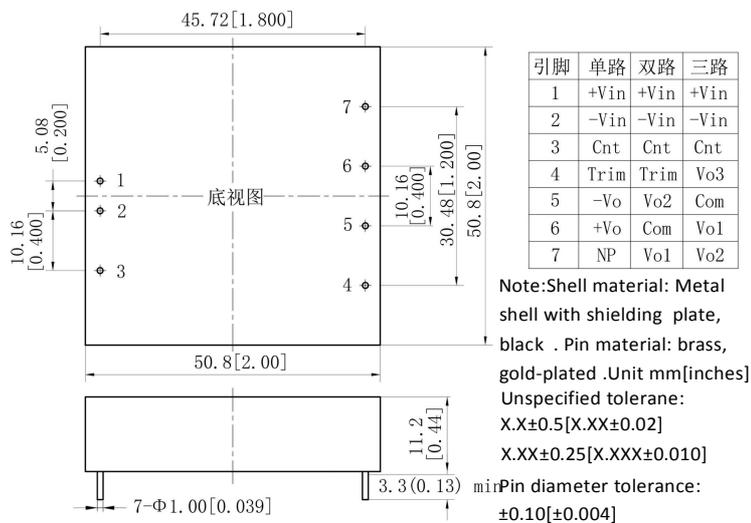
- Shell temperature range: -40°C to +105°C
- Isolation voltage: 1500Vdc
- Output short-circuit protection, self-recovery
- logical remote control function
- Applicable to multi-output products integrated in a encapsulation package

## Production Selection Table

Product model	Input Voltage( Vdc)	Output voltage( Vdc)	Output current( mA)	Efficiency( %)	Product model	Input Voltage( Vdc)	Output voltage( Vd)	Output current (mA)	Efficiency (%)
ZDM25-24S5	18~36 (24Vdc)	5	5	86	ZDM25-48S5	36~75 (48Vdc)	5	5	86
ZDM25-24S12		12	2.08	89	ZDM25-48S12		12	2.08	89
ZDM25-24S15		15	1.67	89	ZDM25-48S15		15	1.67	89
ZDM25-24S24		24	1.04	90	ZDM25-48S24		24	1.04	90
ZDM25-24D5		±5	±2.5	88	ZDM25-48D5		±5	±2.5	88
ZDM25-24D12		±12	±1.04	89	ZDM25-48D12		±12	±1.04	89
ZDM25-24D15		±15	±0.83	89	ZDM25-48D15		±15	±0.83	89

- Note: 1) The single-channel output product is only for replacing existing equipment. For new designs, we recommend using the ZDR and ZDK series.  
 2) This series is primarily designed for dual or triple-channel applications. It provides stable voltage for the main channel while supporting the auxiliary channel or multiple channels simultaneously.  
 3) For three-channel output products, please contact our company if required.

## Encapsulation size



# ZDS60 Series

60W 1/16 -inch Brick ,Isolation Voltage Stabilized Output DC/DC



### Features:

- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 91.5%.
- ◆ Logical remote control function
- ◆ The output voltage is  $\pm 10\%$  of  $V_o$  and is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

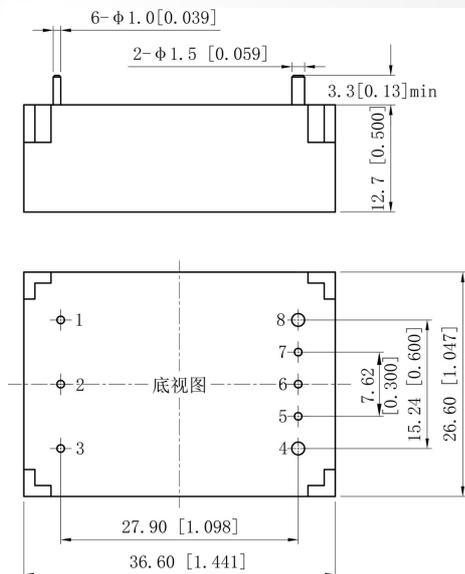
### Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDS60-24BS5	9~36 (24Vdc)	7-9	200	5	12.0	91.5	75	0.5	0.2
ZDS60-24BS12		7-9	200	12	5.0	91.5	100	0.5	0.2
ZDS60-24BS15		7-9	200	15	4.0	91.5	100	0.5	0.2
ZDS60-24BS28		7-9	50	28	2.1	91.0	200	0.5	0.2

Note: The 20MHz bandwidth is tested using the parallel line fixture method for ripple noise.

Models with 'M' suffix in the series name are domestic versions. For details, please contact our company.

### Encapsulation size



引脚	功能
1	-Vin
2	Cnt
3	+Vin
4	+Vo
5	+S
6	Trim
7	-S
8	-Vo

Note: Shell material: metal heat sink plate, plastic shell

Pin material: brass, gold-plated

Unit mm[inches]

Unspecified tolerane:

X.X $\pm$ 0.5 [X.XX $\pm$ 0.02] X.XX $\pm$ 0.25

[X.XXX $\pm$ 0.010]

Pin diameter tolerance:

$\pm 0.10$  [ $\pm 0.004$ ]

# ZDS 100 Series

100W 1/16-inch Brick ,Isolation Voltage Stabilized Output DC/DC



**Features:**

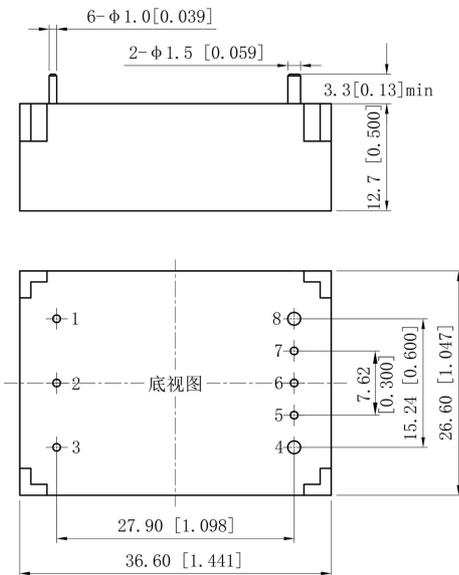
- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 92%.
- ◆ Logical remote control function
- ◆ The output voltage is  $\pm 10\%$  of  $V_o$  and is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDS100-28S5	16~40 (28Vdc)	14-16	150	5	20.0	93.0	75	0.5	0.2
ZDS100-28S12		14-16	150	12	8.3	93.5	100	0.5	0.2
ZDS100-28S15		14-16	150	15	6.7	93.5	120	0.5	0.2
ZDS100-28S28		14-16	150	28	3.6	93.0	200	0.5	0.2
ZDS100-24S12	18~36 (24Vdc)	15-17	150	12	8.3	93.5	100	0.5	0.2
ZDS100-48S5	36~75 (48Vdc)	33-36	150	5	20.0	93.0	75	0.5	0.2
ZDS100M-48S12		33-36	75	12	8.3	93.5	100	0.5	0.2

Note: The 20MHz bandwidth is tested using the parallel line fixture method for ripple noise.

## Encapsulation size



引脚	功能
1	-Vin
2	Cnt
3	+Vin
4	+Vo
5	+S
6	Trim
7	-S
8	-Vo

Note: Shell material: metal heat sink plate, plastic shell  
 Pin material: brass, gold-plated  
 Unit mm[inches]  
 Unspecified tolerance:  
 $X.X \pm 0.5$  [ $X.XX \pm 0.02$ ]  $X.XX \pm 0.25$   
 $[X.XXX \pm 0.010]$   
 Pin diameter tolerance:  
 $\pm 0.10 [\pm 0.004]$

# ZDE100 Series

100W 1/8-inch Brick, Isolation Voltage Stabilized Output DC/DC

Features:

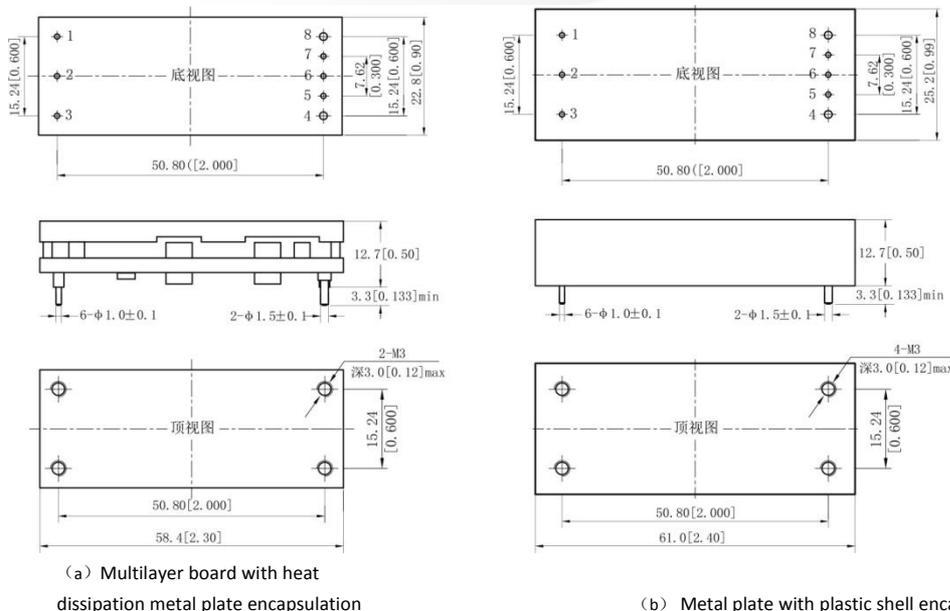
- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 92%.
- ◆ Logical remote control function
- ◆ The output voltage is  $\pm 10\%$  of  $V_o$  and is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc



## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDE100-24BS5	9~36 (24Vdc)	7-9	200	5	20.0	92.0	75	0.5	0.2
ZDE100-24BS12		7-9	200	12	8.3	93.0	100	0.5	0.2
ZDE120M-24BS12		7-9	180	12	10.0	92.0	100	0.5	0.2
ZDE100-24BS15		7-9	200	15	6.7	93.0	120	0.5	0.2
ZDE100-24BS28		7-9	200	28	3.6	93.0	200	0.5	0.2
ZDE100-48S5	36~75 (48Vdc)	33-36	100	5	20.0	91.0	75	0.5	0.2
ZDE120-48S12		33-36	100	12	10.0	92.0	100	0.5	0.2
ZDE120-48S28		33-36	50	28	4.3	92.0	200	0.5	0.2

## Encapsulation size



Note: Shell material: metal with shielding plate and plastic shell; Pin material: brass with gold plating. Unit: mm [inches]; Unspecified tolerances: X.X $\pm$ 0.5 [X.XX $\pm$ 0.02], X.XX $\pm$ 0.25 [X.XXX $\pm$ 0.010]; Pin diameter tolerance:  $\pm 0.1$ mm

Pins	1	2	3	4	5	6	7	8
Function	-Vin	Cnt	+Vin	+Vo	+S	Trim	-S	-Vo

## ZDE150 Series

150W 1/8-inch Brick, Isolation Voltage Stabilized Output DC/DC

Features:

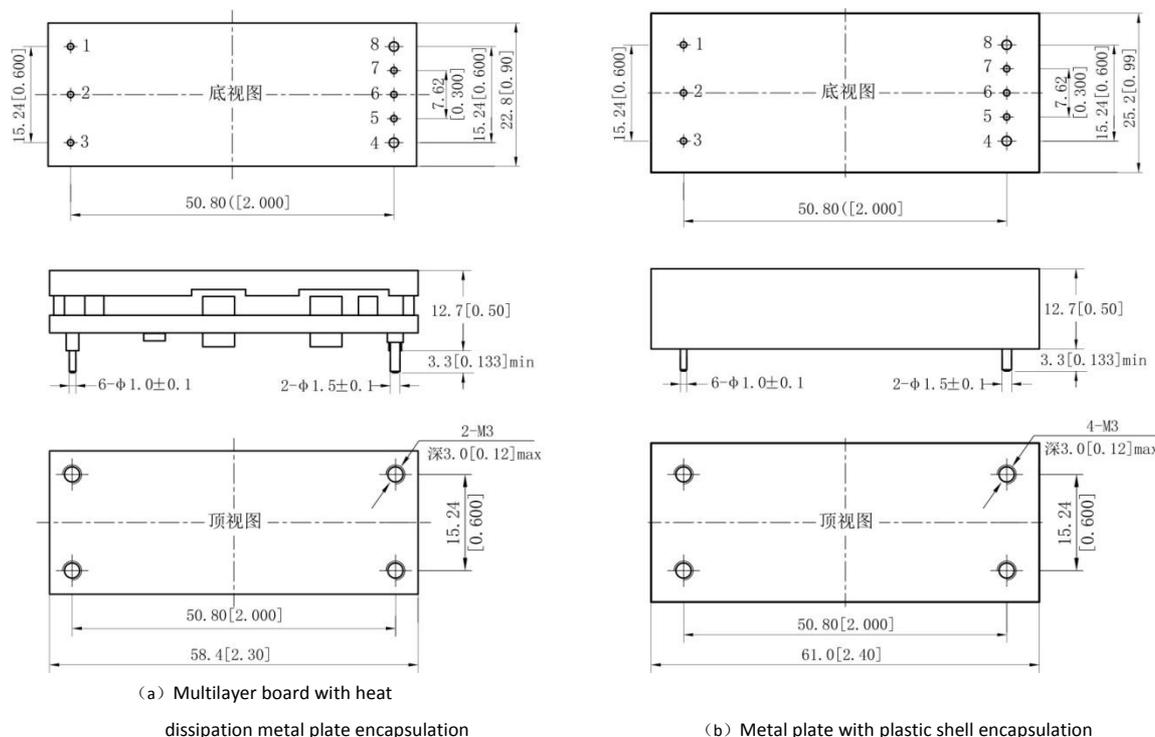
- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 93.5%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc



### Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDE150-28S5	16~40 (28Vdc)	14-16	150	5	30.0	92.0	75	0.5	0.2
ZDE150-28S12		14-16	150	12	12.5	93.5	120	0.5	0.2
ZDE150-28S15		14-16	150	15	10.0	93.5	120	0.5	0.2
ZDE150-28S28		14-16	150	28	5.4	93.5	200	0.5	0.2

### Encapsulation size



Note: Shell material: metal with shielding plate and plastic shell; Pin material: brass with gold plating. Unit: mm [inches]; Unspecified tolerances: X.X±0.5 [X.XX±0.02], X.XX±0.25 [X.XXX±0.010]; Pin diameter tolerance: ±0.1mm

Pins	1	2	3	4	5	6	7	8
Function	-Vin	Cnt	+Vin	+Vo	+S	Trim	-S	-Vo

# ZDQ100 Series

100W 1/4-inch Brick, Isolation Voltage Stabilized Output DC/DC

Features:

- ◆ Operating case temperature:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- ◆ The conversion efficiency is as high as 92.5%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

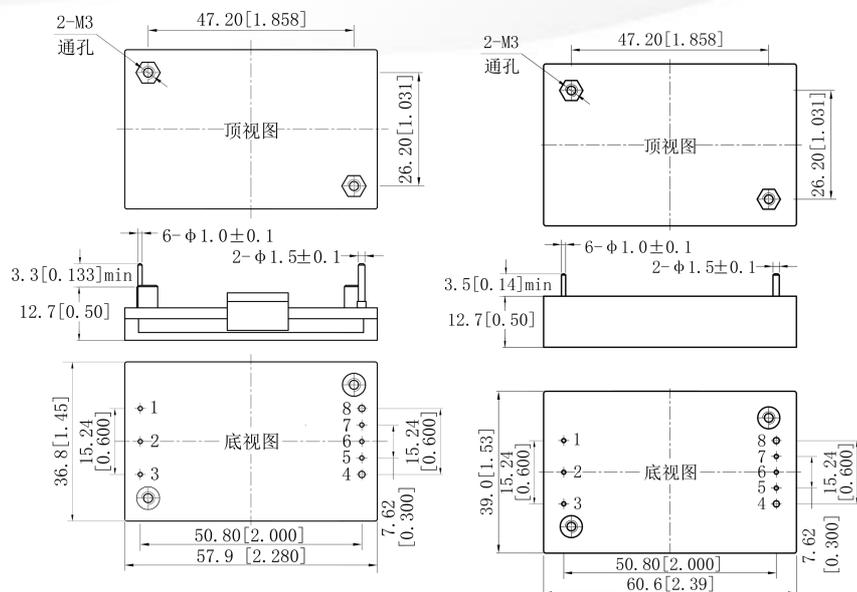


## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDQ20A-24BS5	9~36 (24Vdc)	7-9	200	5	20.0	91.0	75	0.5	0.2
ZDQ8A-24BS12		7-9	200	12	8.3	92.0	120	0.5	0.2
ZDQ6A-24BS15		7-9	200	15	6.7	92.0	120	0.5	0.2
ZDQ4A-24BS24		7-9	50	24	4.2	92.5	200	0.5	0.2
ZDQ4A-24BS28		7-9	50	28	3.6	92.5	200	0.5	0.2
ZDQ2A-24BS48		7-9	50	48	2.1	92.0	200	0.5	0.2

Note: The 1/4-inch brick offers dual-output products. For details, please contact our company.

## Encapsulation size



Pins	Function
1	-Vin
2	Cnt
3	+Vin
4	+Vo
5	+S
6	Trim
7	-S
8	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm[inches]

Unspecified tolerance:

$X.X \pm 0.5 [X.XX \pm 0.02]$

$X.XX \pm 0.25 [X.XXX \pm 0.010]$

Pin diameter tolerance:  $\pm 0.10 [\pm 0.004]$

(a) Multilayer board with heat dissipation metal plate encapsulation

(b) Heat dissipation metal plate with plastic shell encapsulation

# ZDQ150 Series

150W 1/4-inch Brick, Isolation Voltage Stabilized Output DC/DC

## Features:

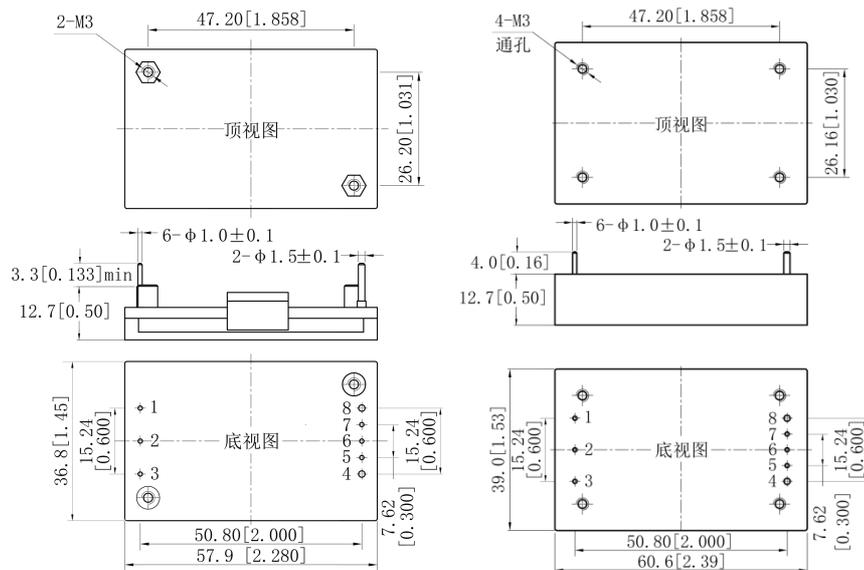
- ◆ Operating case temperature:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- ◆ The conversion efficiency is as high as 93%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc



## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDQ150-24S3V3	9~36 (24Vdc)	7-9	200	3.3	30.0	90.0	75	0.5	0.2
ZDQ150-24BS5		7-9	200	5	30.0	91.0	75	0.5	0.2
ZDQ150-24BS12		7-9	200	12	12.0	93.0	100	0.5	0.2
ZDQ150-24BS15		7-9	200	15	10.0	93.0	120	0.5	0.2
ZDQ150-24BS24		7-9	50	24	6.3	92.5	200	0.5	0.2
ZDQ150-24BS28		7-9	50	28	5.4	92.5	200	0.5	0.2
ZDQ150-24BS48		7-9	50	48	3.1	92.0	200	0.5	0.2
ZDQ150-48S3V3	36~75 (48Vdc)	33-36	100	3.3	50.0	91.0	75	0.5	0.2
ZDQ150-48S5		33-36	100	5	30.0	91.0	75	0.5	0.2
ZDQ150-48S12		33-36	100	12	12.0	92.5	100	0.5	0.2
ZDQ150-48S15		33-36	100	15	10.0	92.5	120	0.5	0.2
ZDQ150-48S28		33-36	50	28	5.4	92.5	200	0.5	0.2

## Encapsulation size



Pins	Function
1	-Vin
2	Cnt
3	+Vin
4	+Vo
5	+S
6	Trim
7	-S
8	-Vo

# ZDQ400 Series

400W 1/4 -inch Brick ,Isolation Voltage Stabilized Output DC/DC



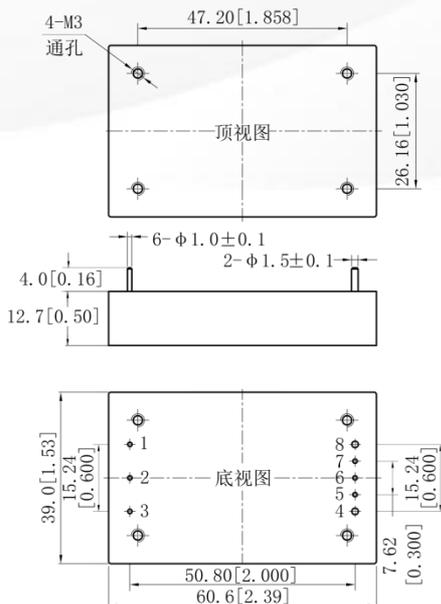
### Features :

- ◆ Operating case temperature: -40℃ to +105℃
- ◆ The conversion efficiency is as high as 94.0%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable
- ◆ Isolation voltage: 1500 Vdc
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection

### Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDQ400-28S12	16~40 (28Vdc)	14-16	200	12	33.0	94.0	120	0.5	0.3
ZDQ400-28S28		14-16	200	28	14.0	94.0	200	0.5	0.3

### Encapsulation size



Pins	Function
1	-Vin
2	Cnt
3	+Vin
4	+Vo
5	+S
6	Trim
7	-S
8	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm[inchs]

Unspecified tolerance:

X.X±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

Pin diameter tolerance: ±0.10[±0.004]

# ZDH200 Series

200W 1/2-inch Brick, Isolation Voltage Stabilized Output DC/DC



Features:

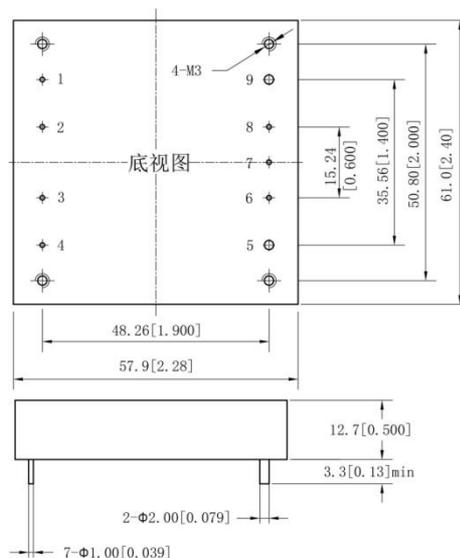
- ◆ Operating case temperature:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- ◆ The conversion efficiency is as high as 93.0%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDH200-24BS5	9~36 (24Vdc)	7-9	200	5	40.0	91.0	75	0.5	0.2
ZDH200-24BS12		7-9	200	12	16.7	93.0	100	0.5	0.2
ZDH200-24BS28		7-9	100	28	7.1	92.5	200	0.5	0.2
ZDH200-24BS48		7-9	100	48	4.2	92.0	200	0.5	0.2
ZDH200-48BS5	18~75 (48Vdc)	15-18	150	5	40.0	91.0	75	1.0	0.2
ZDH200-48BS12		15-18	150	12	16.7	91.0	100	0.5	0.2
ZDH200-48BS24		15-18	150	24	8.3	92.5	200	0.5	0.2
ZDH200-48BS48		15-18	80	48	4.2	92.5	200	0.5	0.2
ZDH200-48D48		15-18	80	$\pm 48$	2.1	92.5	200	0.5	0.2
ZDH260-48S250	36~75 (48Vdc)	33-36	100	250	1.0	93.0	2000	0.5	0.2

Note: 1) This series offers dual-output half-brick products, including  $\pm 48\text{V}$  and  $\pm 120\text{V}$  outputs. For details, please contact our company.

## Encapsulation size



引脚	功能
1	-Vin
2	NP
3	Cnt
4	+Vin
5	+Vo
6	+S
7	Trim
8	-S
9	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm[inchs]

Unspecified tolerance:

X.X $\pm$ 0.5[X.XX $\pm$ 0.02]

X.XX $\pm$ 0.25[X.XXX $\pm$ 0.010]

Pin diameter tolerance:  $\pm 0.10[\pm 0.004]$

# ZDH300 Series

300W 1/2-inch Brick, Isolation Voltage Stabilized Output DC/DC

Features:

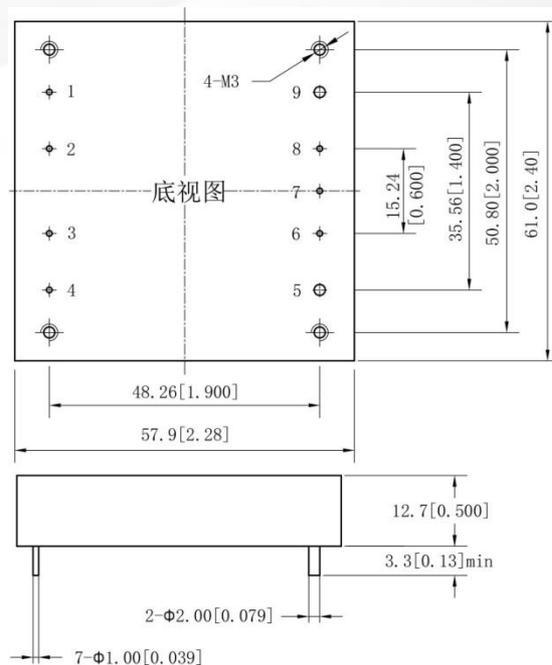
- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 94.0%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection, overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc



## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDH300-24BS12	9~36 (24Vdc)	7-9	200	12	25.0	93.5	120	0.5	0.2
ZDH300-24BS28		7-9	200	28	10.7	94.0	200	0.5	0.2
ZDH300-24BS48		7-9	80	48	6.3	94.0	300	0.5	0.2
ZDH350-48BS28	18~75 (48Vdc)	14-17	100	28	12.5	94.0	200	0.5	0.2

## Encapsulation size



引脚	功能
1	-Vin
2	NP
3	Cnt
4	+Vin
5	+Vo
6	+S
7	Trim
8	-S
9	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm [inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance: ±0.10 [±0.004]

# ZDH600 Series

600W 1/2-inch Brick, Isolation Voltage Stabilized Output DC/DC



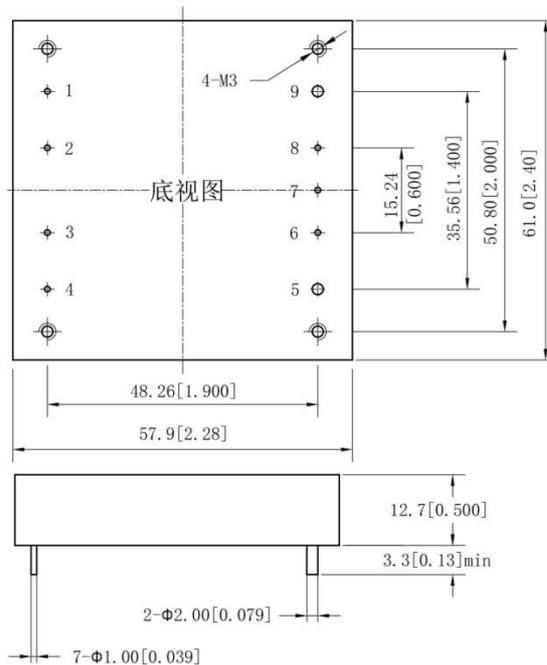
### Features:

- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 95.0%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection,
- ◆ overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

### Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDH600-28S28	16~40 (28Vdc)	14-16	200	28	21.0	94.0	200	0.5	0.2
ZDH600-28S48		14-16	200	48	12.5	93.0	300	0.5	0.2

### Encapsulation size



引脚	功能
1	-Vin
2	NP
3	Cnt
4	+Vin
5	+Vo
6	+S
7	Trim
8	-S
9	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm [inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance: ±0.10 [±0.004]

# ZDF600 Series

600W Full Brick ,Isolation Voltage Stabilized Output DC/DC



DC-DC 模块电源

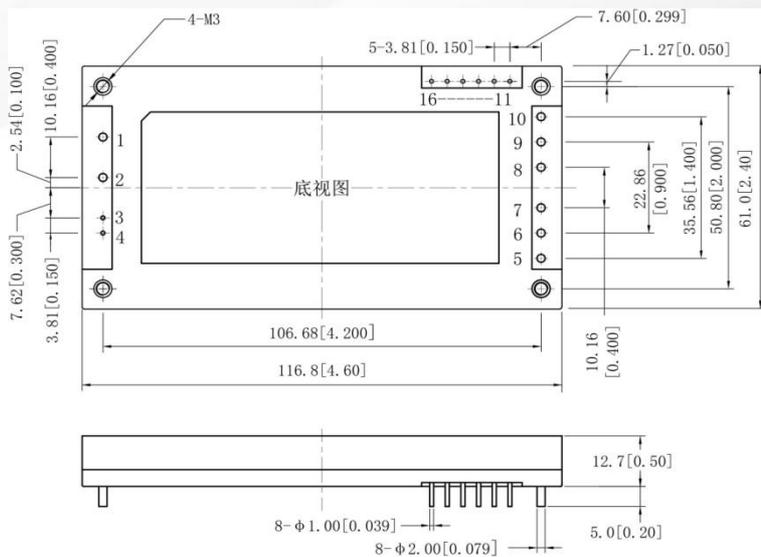
### Features:

- ◆ Operating case temperature: -40°C to +105°C
- ◆ The conversion efficiency is as high as 94.0%.
- ◆ Logical remote control function
- ◆ The output voltage is adjustable.
- ◆ Output overcurrent protection, output overvoltage protection,
- ◆ overtemperature protection, output short-circuit protection, and input undervoltage protection
- ◆ Isolation voltage: 1500 Vdc

### Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
ZDF600-28S28	16~40 (28Vdc)	14-16	200	28	21.5	95.0	200	0.5	0.2
ZDF600-28S48		14-16	200	48	12.5	95.0	300	0.5	0.2
ZDF600-280S28	200~400 (280Vdc)	180-195	100max.	28	21.5	93.0	200	0.5	0.2

### Encapsulation size



引脚	1	2	3	4	5-7	8-10	11	12	13	14	15	16
28V Input 功能	-Vin	+Vin	-ON/OFF	+ON/OFF	-Vo	+Vo	AUX	IOG	PC	Trim	+S	-S
280V Input Pins	1	2	3	4	5-7	8-10	11	12	13	14	15	16
280V Input Function	-Vin	+Vin	SG	Cnt	+Vo	-Vo	-S	+S	Trim	PC	IOG	AUX

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm[inchs]

Unspecified tolerance:

X.X±0.5[X.XX±0.02]

X.XX±0.25[X.XXX±0.010]

Pin diameter tolerance: ±0.10[±0.004]

# YDF 40 Series

40W 2:1 Input isolated high-voltage output DC-DC

Features:

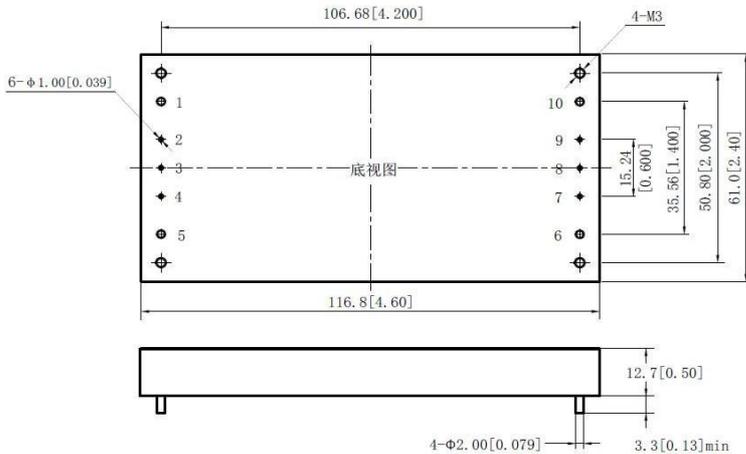
- ◆ Adjustable output voltage: 100V to 600V
- ◆ The output voltage can be set using an external control voltage, with adjustments possible on either the input or output side.
- ◆ Low noise, low ripple
- ◆ Small volume, light weight
- ◆ Input-output isolation voltage: 1500Vdc



## Production Selection Table

Product model	Input Voltage (Vdc)	Undervoltage protection point (Vdc)	No-load input current (mA)	Output voltage (Vdc)	Output current (A)	Efficiency (%)	Ripple noise (mV)	Load regulation (%)	Voltage regulation (%)
YDF40-24BS600C	9~36 (24Vdc)	7-9	50	100-600	0.4max.	85.0	1%	0.5	0.3
YDF40-12S600C	9~18 (12Vdc)	16-18	50	100-600	0.4max.	85.0	1%	0.5	0.3
YDF40-24S600C	18~36 (24Vdc)	7-9	50	± (50-300)	±0.2max.	85.0	1%	0.5	0.3
YDF40-24D300C	18~36 (24Vdc)	16-18	50	± (50-300)	±0.2max	85.0	1%	0.5	0.3

## Encapsulation size



引脚	1	2	3	4	5	6	7	8	9	10
单路	-Vin	-SVin	Cnt	ADJ	+Vin	+Vo	Trim	NP	-SVo	-Vo
双路	-Vin	-SVin	Cnt	ADJ	+Vin	+Vo	Trim	Com	-SVo	-Vo

Note: Shell material: Metal shell with shielding plate, black

Pin material: brass, gold-plated

Units: mm [inches]

Unspecified tolerance:

X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

Pin diameter tolerance: ±0.10 [±0.004]

## ZBC Series

20A DOSA Standard Non-isolated DC/DC SMD Package

Features:

- ◆ Operating temperature range: -40°C to +85°C
- ◆ The efficiency is as high as 94%.
- ◆ low ripple noise
- ◆ The output voltage can be adjusted via an external resistor.
- ◆ Can be used for PMbus power extraction and load point power supply scenarios



### Production Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency (%)
ZBC20-12BS	4.5~14	0.69-5.5	20	94(5.0V)

Pins	Symbol	Function
1	CNT	Remote control
2	+Vin	Positive input
3	SEQ	Time sequence
4	GND	Common ground
5	+Vo	Positive output
6	Trim	Output voltage regulation
7	+S	Positive remote sense
8	-S	Negative remote sense
9	PG	Power Good
10	SYNC	Synchronize clock

### Encapsulation size



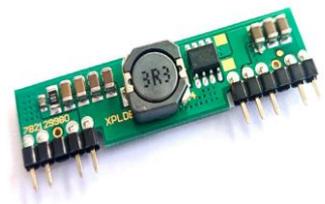
Units: mm: Unspecified tolerance: X.X±0.5(X.XX±0.02) X.XX±0.25(X.XXX±0.010)

## ZBM Series

10-16A DOSA Standard Non-isolated DC/DC SIP Packa

Features:

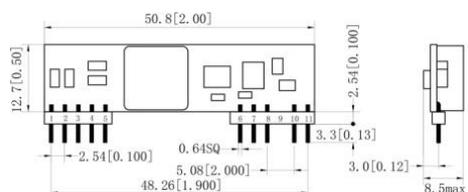
- ◆ Operating temperature range: -40°C to +85°C
- ◆ The efficiency is as high as 94%.
- ◆ low ripple noise
- ◆ The output voltage can be adjusted via an external resistor.
- ◆ Can be used for PMbus power extraction and load point power supply scenarios.



### Production Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency (%)
ZBM10-5S	3.0~5.5	0.75-3.3	10	93(3.3V)
ZBM16-5S	(3.3/5Vdc)	0.75-3.3	16	94(3.3V)
ZBM10-12S	9.6~14.4	0.75-5.0	10	93(5V)
ZBM16-12S	(12Vdc)	0.75-5.0	16	93(5V)

### Encapsulation size



注: 单位: mm[inches]

未注公差: X.X±0.5 [X.XX±0.02]

X.XX±0.25 [X.XXX±0.010]

引脚直径公差: ±0.10[±0.004]

引脚	1-2	3	4	5-6	7-8	9	10	11
功能	Vo	SENSE	Vo	GND	Vin	NP	Trim	Cnt

## ZBK Series

10A POLA standard non-isolated DC/DC SIP package

Features:

- ◆ Operating temperature range: -40°C to +85°C
- ◆ The efficiency is as high as 95%
- ◆ Small package, high power density
- ◆ The output voltage can be adjusted via an external resistor.
- ◆ Can be used for PMbus power extraction and load point power supply scenarios.

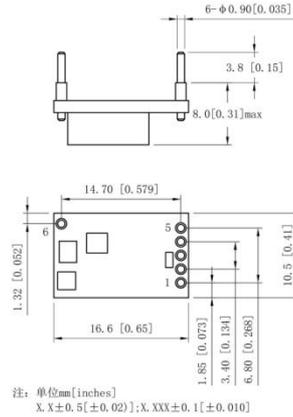


### Production Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency (%)
ZBK10-5S	3.0~5.5 (3.3/5Vdc)	0.75-3.63	10	95(3.3V)
ZBK10-12BST	3.3~14 (12Vdc)	0.69-5.0	10	95(5.0V)

Pins	1	2	3	4	5	6
Symbol	Cnt	Vin	GND	Vo	Trim	+S

### Encapsulation size



## ZBP Series

6-10A non-isolated DC/DC SIP package

Features:

- ◆ Operating temperature range: -40°C to +85°C
- ◆ The efficiency is as high as 95%
- ◆ Small package, high power density
- ◆ The output voltage can be adjusted via an external resistor.
- Can be used for PMbus power extraction and load point power supply scenarios.

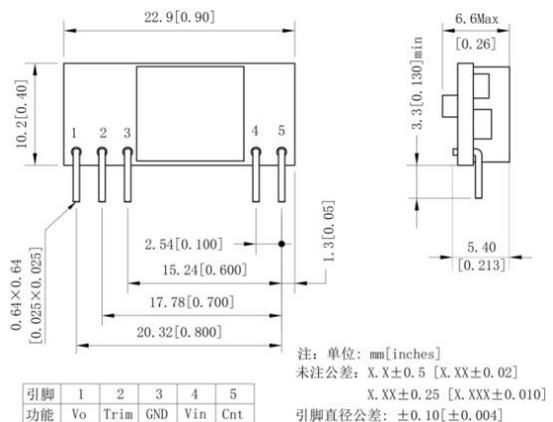


### Production Selection Table

Product model	Input Voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency (%)
ZBP6-5S	3.0~5.5 (3.3/5Vdc)	0.75-3.63	6	93(3.3V)
ZBP10-5S		0.75-3.63	10	95(3.3V)
ZBP6-12BS	4.5~14 (12Vdc)	0.69-5.0	6	94(5.0V)
ZBP10-12BS		0.69-5.0	10	95(5.0V)

Note: This product series also offers a packaging option with pins extending from the opposite side of the board. Both packaging options are available. Please contact us if you require this configuration.

### Encapsulation size



## ZBS Series

50A DIP package non-isolated DC/DC

Features:

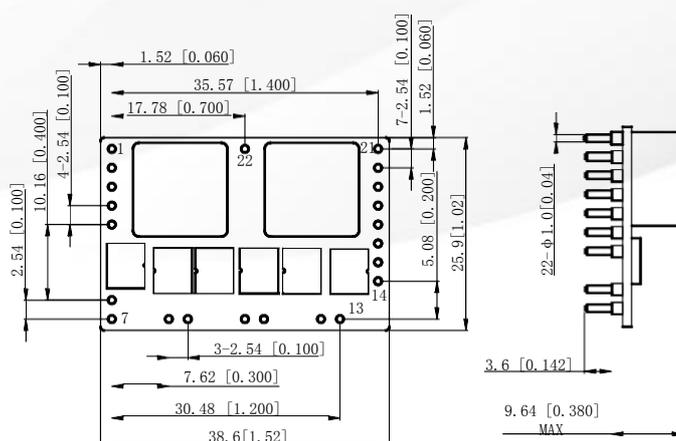
- ◆ Operating temperature range: -40℃ to +85℃
- ◆ The efficiency is as high as 95%
- ◆ Small package, high power density
- ◆ The output voltage can be adjusted via an external resistor.
- Can be used for PMbus power extraction and load point power supply scenarios



### Production Selection Table

Product model	Input Voltage(Vdc)	Output voltage(Vdc)	Output current(mA)	Efficiency(%)
ZBS50-12DS	9~14 (12Vdc)	0.7-3.6	50	95

### Encapsulation size



Pins	Symbol	Function	Pins	Symbol	Function
1	CONFIG	When two modules are connected for current sharing, configure the master-slave module.	10、11	+Vo	Positive output
2	Share	current sharing pin	16	-Sense	-Sense is connected to GND
3	Comp	When both modules are connected for current sharing, they are directly linked. When current sharing is not performed, they remain floated.	17	+Sense	+Sense is connected to +Vo.
4	AGND	When the built-in analog environment and modules connected with sharing current, they are directly connected together. Rset is only connected to the main module.	18	Trim	Adjust the output voltage
5	CLKIO	When both modules are connected for current sharing, they are directly linked. When current sharing is not performed, they remain floated.	19	TT	The "Fast Response Function" (TT) enhances the module's transient load regulation capability.
6、7、14、15	+Vin	Positive input	20	Track	The output follows the change of the applied voltage.
8、9、12、13	GND	Common ground	21	CNT /UVLO	Set to low level to turn off the output; high level or floating for normal output.
			22	NC	connectionless

## ZBE Series

10-15A DIP package non-isolated DC/DC

Features:

- ◆ Operating temperature range: -40°C to +85°C
- ◆ The efficiency is highly to 95%.
- ◆ 1/8 -inch brick package, high power density
- ◆ The output voltage can be adjusted via an external resistor.
- ◆ Can be used for 18-75V PMbus power extraction and load point power supply scenarios

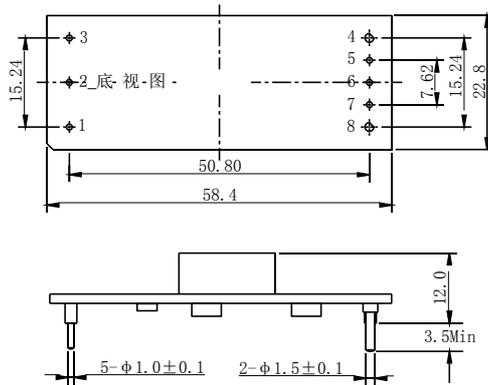


### Production Selection Table

Product model	Input Voltage(Vdc)	Output voltage(Vdc)	Output current(mA)	Efficiency(%)
ZBE10A-48BS15	18~75 (24/48Vdc)	15	10	95
ZBE10A-48BS	18~75 (24/48Vdc)	3.3-24	10	95

Note: This product series comes in two designs: open and enclosed. The version with the suffix 'C' indicates an enclosed design, while the one without the suffix is an open design.

### Encapsulation size



Pins	Symbol
1	+Vin
2	Ctrl
3	-Vin
4	-Vo
5	NP
6	Trim
7	+S
8	+Vo

Units: mm;  
Unspecified tolerance:  
X.X±0.5, X.XX±0.25

Note: The image above shows the unencapsulated product. The encapsulated version has an enlarged length and width, while the pin configuration remains unchanged. For details, please contact our company.

## TFB Series

3-5A 0-100Vdc input DC/DC EMI filter

Features:

- ◆ Input voltage range: 0-100VDC, current capacity: 5A
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Small size, height 10.2mm
- ◆ High interference suppression ratio

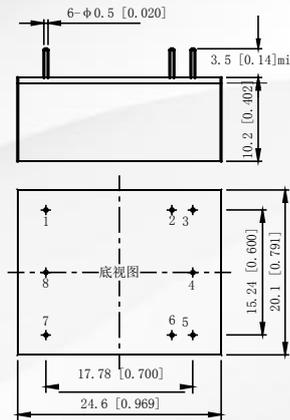


### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance			70	mΩ	
Differential mode loss		35		dB	Tested at 500 kHz, 50 Ω
Common mode loss		50		dB	Tested at 500 kHz, 50 Ω
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Efficiency	99.2	99.4		%	Input 48Vdc@5A

Product model	Input voltage range	Through current	Filter form
TFB100BA3	0~100Vdc	3A	Differential @ Common mode
TFB100BA5	0~100Vdc	5A	Differential @ Common mode

### Encapsulation size



Pins	Symbol	Function
1	+Vin	Positive input
2	+Vo	Positive output
3	+Vo	Positive output
4	FG	shell pin
5	-Vo	Negative output
6	-Vo	Negative output
7	-Vin	Negative input
8	FG	shell pin

Shell material: Nickel-plated copper shell with shielding cover plate (black); Pin material: brass, gold-plated  
 Units: mm(inches)  
 Unspecified tolerance: X.X±0.5(X.XX±0.02)  
 X.XX±0.25(X.XXX±0.010)

EMI 滤波器

## TFP Series

5-10A 0-100Vdc input DC/DC EMI filter

Features:

- ◆ Input voltage range: 0-100VDC, current capacity: 10A
- ◆ Operating temperature range: -40°C to +85°C
- ◆ 1/16 brick package, small size
- ◆ High interference suppression ratio

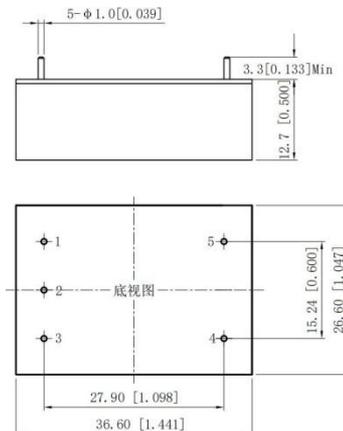


### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance			25	mΩ	
Differential mode loss		50		dB	Tested at 500 kHz, 50 Ω
Common mode loss		45		dB	Tested at 500 kHz, 50 Ω
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Efficiency	99	99.5		%	Input 48Vdc@5A

Product model	Input voltage range	Through current	Filter form
TFP100BA5	0~100Vdc	5A	Differential @ Common mode
TFP100BA10	0~100Vdc	10A	

### Encapsulation size



Pins	Symbol	Function
1	-Vin	Negative input
2	FG	shell pin
3	+Vin	Positive input
4	+Vo	Positive output
5	-Vo	Negative output

Shell material: metal shell, plastic cover plate; Pin material: brass, gold-plated  
 Units: mm(inches)  
 Unspecified tolerance: X.X±0.5(X.XX±0.02)  
 X.XX±0.25(X.XXX±0.010)

# TFC Series

5~10A 0-200Vdc input DC/DC EMI filter

Features:

- ◆ Input voltage range: 0-200VDC
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Six-sided metal shielding, height 12.7mm
- ◆ High interference suppression ratio

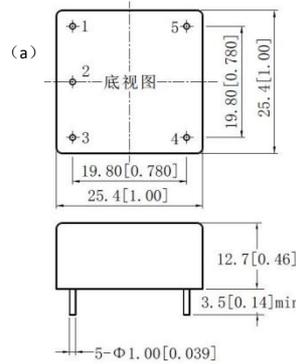


## Performance parameters

3-5A Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance		27		mΩ	
Differential mode loss		50		dB	Tested at 500 kHz, 50 Ω
Common mode loss		35		dB	Tested at 500 kHz, 50 Ω
Working temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Efficiency	98	99.4		%	Input 48Vdc@5A, maximum load condition
Anti-reverse function	Add "F" letters after the mode				Maximum input voltage
Delay startup	Add "L" letters after the mode				Maximum output power: 45W

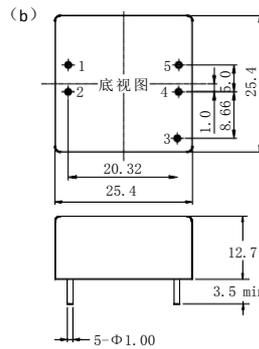
10A Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance		18		mΩ	
Differential mode loss		35		dB	Tested at 500 kHz, 50 Ω
Common mode loss		30		dB	Tested at 500 kHz, 50 Ω
Working temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Efficiency	98	99.4		%	Input 48Vdc@5A, maximum load condition

## Encapsulation size



引脚	功能
1	+Vin
2	FG
3	-Vin
4	-Vo
5	+Vo

注: 单位: mm[inches]  
未注公差:  
X.X±0.5[X.XX±0.02]  
X.XX±0.25[X.XXX±0.010]  
引脚直径公差:  
±0.10[±0.004]



引脚	功能
1	Vo+
2	Vo-
3	CASE
4	Vin-
5	Vin+

## Production Selection Table

Product model	Input voltage range	Through current	Outside drawing	Product model	Input voltage range	Through current	Outside drawing
TFC100BA5	0~100Vdc	5A	(a)	TFC24BA5	0~50Vdc	5A	(a)
TFC100BA10	0~100Vdc	10A	(a)	TFC24BA10	0~50Vdc	10A	(a)
TFC200BA5	0~200Vdc	5A	(a)	TFC100BA3Z	0~100Vdc	3A	(b)
TFC200BA10	0~200Vdc	10A	(a)	TFC100BA5Z	0~100Vdc	5A	(b)

## TFK Series

10A 0-200Vdc input DC/DC EMI filter, DIP package

Features:

- ◆ Input voltage range: 0-200VDC
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Six-sided metal shielding, 1x2 -inch package height 12.7mm
- ◆ High interference suppression ratio

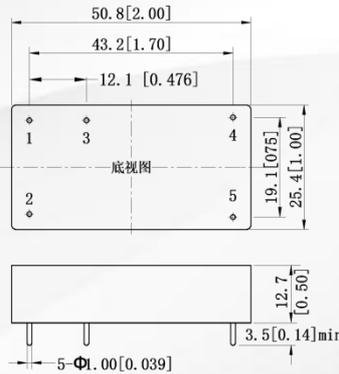


### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance		18		mΩ	
Differential mode loss		32		dB	Tested at 500 kHz, 50Ω
Common mode loss		26		dB	Tested at 500 kHz, 50Ω
Isolation voltage		1500		Vdc	Input and output to the shell
Working temperature	-40		+85	°C	
Efficiency	98	99.2		%	Input 48Vdc@10A
Anti-reverse function	Add "F" letters after the mode				Maximum input
Delay startup	Add "L" letters after the mode				Maximum output power: 100W

Product model	Input voltage range	Input current
TFK100A10	0~100Vdc	10A
TFK200A10	0~200Vdc	10A

### Encapsulation size



引脚	功能
1	+Vin
2	-Vin
3	FG
4	+Vo
5	-Vo

注: 单位: mm[inches]  
 未注公差:  
 X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 引脚直径公差:  
 ±0.10 [±0.004]

## TFL Series

20A 0-200Vdc input DC/DC EMI filter, DIP package

Features:

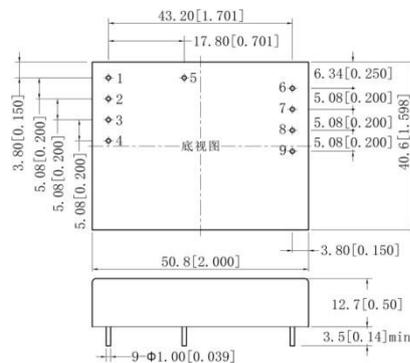
- ◆ Input voltage range: 0-200VDC
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Six-sided metal shielding, 2x1.6 -inch package height 12.7mm
- ◆ High interference suppression ratio



### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance		5		mΩ	
Differential mode loss		32		dB	Tested at 500 kHz, 50Ω
Common mode loss		26		dB	Tested at 500 kHz, 50Ω
Isolation voltage		1500		Vdc	Input and output to the shell
Working temperature	-40		+85	°C	
Efficiency	98	99.2		%	Input 48Vdc@20A, maximum load condition
Anti-reverse function	Add "F" letters after the mode				Maximum input
Delay startup	Add "L" letters after the mode				Maximum output power: 200W

### Encapsulation size



引脚	功能
1	-Vin
2	-Vin
3	+Vin
4	+Vin
5	FG
6	-Vo
7	-Vo
8	+Vo
9	+Vo

注: 单位: mm[inches]  
 未注公差:  
 X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 引脚直径公差:  
 ±0.10 [±0.004]

### Production Selection Table

Product model	Input voltage range	Input current
TFL100A20	0~100Vdc	20A
TFL200A20	0~200Vdc	20A

## TFE Series

10A 0-100Vdc input DC/DC EMI filter, DIP package

Features:

- ◆ Input voltage range: 0-100VDC
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Six-sided metal shielding, 1/8 -inch package height 12.7mm
- ◆ High interference suppression ratio

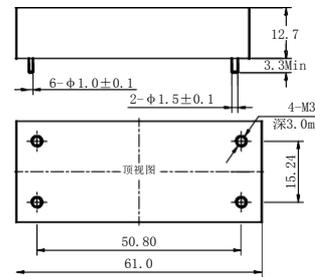
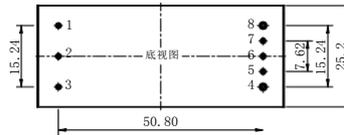


### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance			16	mΩ	
Differential mode loss		24		dB	Tested at 500 kHz, 50 Ω
Common mode loss		57		dB	Tested at 500 kHz, 50 Ω
Isolation voltage		1500		Vdc	Input and output to the shell
Working temperature	-40		+85	°C	
Efficiency	99	99.7		%	Input 48Vdc@10A, maximum load condition
Anti-reverse function	Add "F" letters after the mode				Maximum input
Delay startup	Add "L" letters after the mode				Maximum output power: 100W

Product model	Input voltage range	Input current
TFE50A10	0~50Vdc	10A
TFE100A10	0~100Vdc	10A

### Encapsulation size



引脚	功能
1	-Vin
2	CNT
3	+Vin
4、5	+Vo
6	FG
7、8	-Vo

单位: mm[inches]  
未注公差:  
X.X±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XXX±0.010]  
引脚直径公差±0.1[±0.004]

## TFQ Series

15A 0-100Vdc input DC/DC EMI filter, DIP package

Features:

- ◆ Input voltage range: 0-100VDC
- ◆ Operating temperature range: -40°C to +85°C
- ◆ Six-sided metal shielding, 1/4 -inch package height 12.7mm
- ◆ High interference suppression ratio



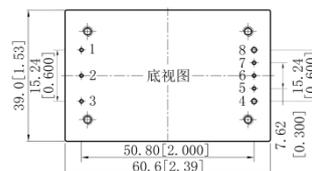
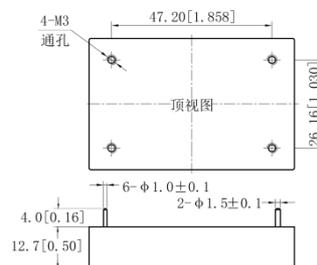
### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Pin DC resistance		5		mΩ	
Differential mode loss		35		dB	Tested at 500 kHz, 50 Ω
Common mode loss		30		dB	Tested at 500 kHz, 50 Ω
Isolation voltage		1500		Vdc	Input and output to the shell
Working temperature	-40		+85	°C	
Efficiency	98	99.2		%	Input 48Vdc@15A, maximum load condition
Anti-reverse function	Add "F" letters after the mode				Maximum input
Delay startup	Add "L" letters after the mode				Maximum output power: 200W

### Production Selection Table

Product model	Input voltage range	Input current
TFQ50A15	0~50Vdc	15A
TFQ100A15	0~100Vdc	15A

### Encapsulation size



Pins	Symbol
1	-Vin
2	CNT
3	+Vin
4、5	+Vo
6	FG
7、8	-Vo

单位: mm[inches]  
未注公差:  
X.X±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XXX±0.010]  
引脚直径公差±0.1[±0.004]

## TSZ Series

1A 0-200VDC input voltage surge protection,DIP package

Features:

- ◆ Input clamp voltage: 36Vdc/75Vdc
- ◆ Compact size, low power consumption, and high reliability
- ◆ Complies with GJB 298 and GJB 181B requirements for voltage surge protection.

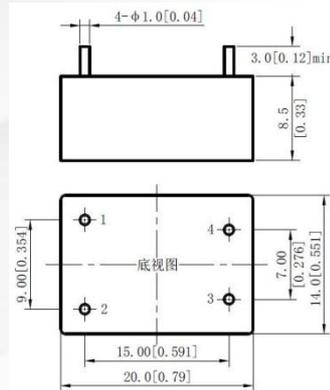


### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-55		+85	°C	
Storage Temperature	-55		+125	°C	
Input to output voltage difference		50	100	mV	Non-overflow
Steady-state maximum output current		1		A	Clamping

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TSZ36S1A	9~36	36	100/50V	1
TSZ75S1A	18~75	75	100/100V	1

### Encapsulation size



引脚	功能	说明
1	+Vin	输入正
2	-Vin	输入负
3	-Vo	输出负
4	+Vo	输出正

注: 单位: mm[inches]  
未注公差:  
X.XX±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XX±0.010]  
引脚直径公差:  
±0.10 [±0.004]

## TSL Series

8A 0-250Vdc input voltage surge protection,DIP package

Features:

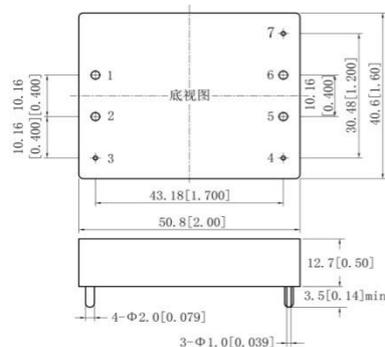
- ◆ Input clamping voltage: 50Vdc
- ◆ Low power consumption and high reliability
- ◆ Anti-reverse connection protection
- ◆ Complies with GJB 298 and GJB 181B requirements for voltage surge protection.



### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Input to output voltage difference		200	500	mV	Non-overflow
Steady-state maximum output current		8		A	
Insertion loss	28			dB	300kHz / 50 Ω

### Encapsulation size



引脚	功能	说明
1	+Vin	输入正
2	-Vin	输入负
3	FG	大地
4	Cnt	控制信号
5	-Vo	输出负
6	+Vo	输出正
7	NC	空管脚

注: 单位: mm[inches]  
未注公差:  
X.XX±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XX±0.010]  
引脚直径公差:  
±0.10 [±0.004]

### Production Selection Table

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TSL50S8	16~50	50	100/80V	8
TSL80S8	16~100	80	100/100V	8

# TSD Series

6A 9-50Vdc input voltage surge protection, DIP package

Features:

- ◆ Input protection voltage: 9Vdc for undervoltage, 40Vdc for overvoltage
- ◆ Low power consumption and high reliability
- ◆ Anti-reverse connection protection
- ◆ Turn on or off design

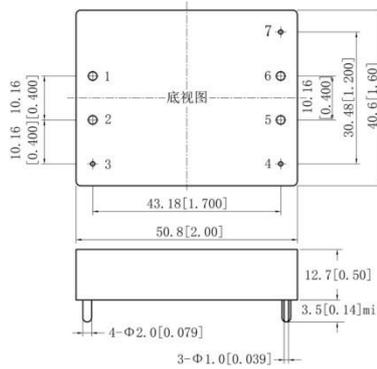


## Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit
Working temperature	-40	25	105	°C
Storage Temperature	-55	25	105	°C
Input voltage range	9	28	36	V
Steady-state output current	0	6	-	A

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Undervoltage protection (Vdc)	Maximum current (A)
TSD36MS6AT	9-36	40	9	6

## Encapsulation size



引脚	功能	说明
1	+Vin	输入正
2	-Vin	输入负
3	FG	大地
4	Cnt	控制信号
5	-Vo	输出负
6	+Vo	输出正
7	NC	空管脚

注：单位：mm[inches]  
 未注公差：  
 X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 引脚直径公差：  
 ±0.10 [±0.004]

# TSR/ TISR Series

Voltage and current surge protection, DIP package

Features:

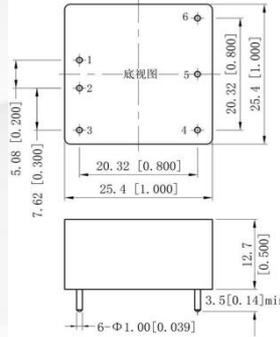
- ◆ Options include voltage suppression, current suppression
- ◆ Compact size, low power consumption, and high reliability
- ◆ Complies with GJB 298 and GJB 181B requirements for voltage surge protection
- ◆ Customized current suppression function



## TSR Overvoltage and Undervoltage Surge Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Overvoltage suppression	36	37	38	V	100V/50ms
Undervoltage suppression	16	20	21	V	6V/1s

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TSR100S5-OU	6~100	37	50/100V	5



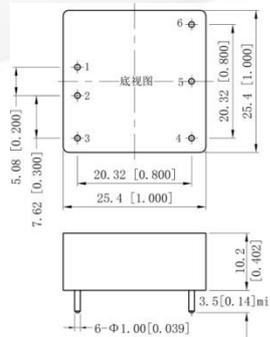
引脚	功能	说明
1	+Vin	输入正
2	COM	输入输出公共地
3	CNT	遥控
4	COM	输入输出公共地
5	NP	无引脚
6	+Vo	输出正

外壳材质: 铝壳, 环氧盖板;  
 引脚材质: 黄铜, 表面镀金。  
 单位: mm[inch]  
 未注公差:  
 X.X±0.5 X.XX±0.1  
 引脚直径公差: ±0.1mm

## TISR Surge Voltage and Current Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Surge current suppression		2	2.2	A	Maximum power 50W
Surge voltage suppression		39	40	V	100V/50ms
Maximum capacitive load	0		1000	μF	Power less than 50W

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TISR36S2AM	9~100	39	50/100V	2 (28V)
TISR75S2AM	16~100	80	100/100V	2 (48V)



引脚	功能	说明
1	+Vin	输入正
2	-Vin	输入负
3	CNT	遥控
4	-Vo	输出负
5	NP	无引脚
6	+Vo	输出正

输入负和输出负不能共地, 共地后冲击电流抑制 2A 失效;  
 外壳材质: 铜壳, 环氧盖板;  
 引脚材质: 黄铜, 表面镀金。  
 单位: mm[inch]  
 未注公差:  
 X.X±0.5 X.XX±0.1  
 引脚直径公差: ±0.1mm

# TSK/ TISK Series

Voltage and current surge protection, DIP package



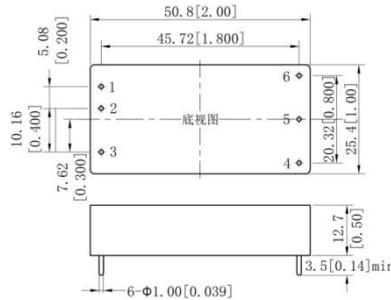
Features:

- ◆ Options include voltage suppression, current suppression
- ◆ Compact size, low power consumption, and high reliability
- Complies with GJB 298 and GJB 181B requirements for voltage surge protection
- Customized current suppression function

## TSK Overvoltage and Undervoltage Surge Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Overvoltage suppression	36	37	38	V	100V/50ms
Undervoltage suppression	16	20	21	V	6V/1s

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TSK100S10-OU	6~100	37	50/100V	10



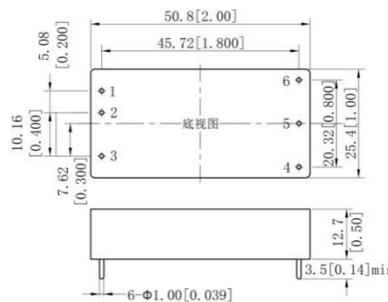
引脚	功能
1	+Vin
2	-Vin
3	CNT
4	Trim
5	-Vo
6	+Vo

单位: mm[inches]  
未注公差:  
X.X±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XXX±0.010]  
引脚直径公差±0.1[±0.004]

## TISK Surge Voltage and Current Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Surge current suppression		5	5.5	A	Maximum power 100W
Surge voltage suppression		39	40	V	100V/50ms
Maximum capacitive load	0		2200	μF	Power less than 100W

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TISK36S5A	9~100	39	50/100V	5 (28V)
TISK75S5A	16~100	80	100/100V	5 (48V)



引脚	功能
1	+Vin
2	-Vin
3	CNT
4	Trim
5	-Vo
6	+Vo

单位: mm[inches]  
未注公差:  
X.X±0.5 [X.XX±0.02]  
X.XX±0.25 [X.XXX±0.010]  
引脚直径公差±0.1[±0.004]

# TSE/ TISE Series

Voltage and current surge protection, DIP package

Features:

- ◆ Options include voltage suppression, current suppression
- ◆ Compact size, low power consumption, and high reliability
- Complies with GJB 298 and GJB 181B requirements for voltage surge protection
- Customized current suppression function



## TSE Overvoltage and Undervoltage Surge Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Overvoltage suppression	36	37	38	V	100V/50ms
Undervoltage suppression	16	20	21	V	6V/1s
Insertion loss		28		dB	Normal temperature

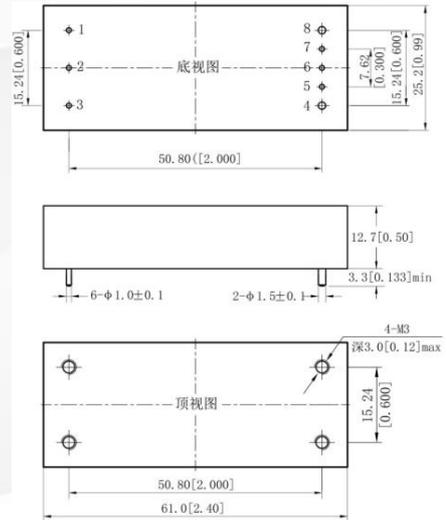
Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TSE100S10-OU	6~100	37	50/100V	10

## TISE Surge Voltage and Current Suppression Series

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions
Working temperature	-45		+85	°C	
Storage Temperature	-55		+125	°C	
Surge current suppression		8		A	Maximum power 150W
Surge voltage suppression		39	40	V	100V/50ms
Maximum capacitive load	0		1000	μF	Power less than 150W
Insertion loss		28		dB	

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Surge time (ms)	Maximum current (A)
TISE36S8AM	9~100	39	50/100V	8 (28V)
TISE75S8AM	16~100	80	100/100V	8 (48V)

## Encapsulation size



引脚	功能
1	-Vin
2	CNT
3	+Vin
4、5	+Vo
6	Trim
7、8	-Vo

单位: mm[inches]  
 未注公差:  
 X.X±0.5 [X.XX±0.02]  
 X.XX±0.25 [X.XXX±0.010]  
 引脚直径公差±0.1[±0.004]

# TSG Series

80A 12~36Vdc input voltage surge protection ,mounting screw

Features:

- ◆ low power consumption and high reliability
- ◆ The internal component has a fuse.
- ◆ Has an indicative function
- ◆ Complies with GJB 298 and GJB 181B requirements for voltage surge protection



## Performance parameters

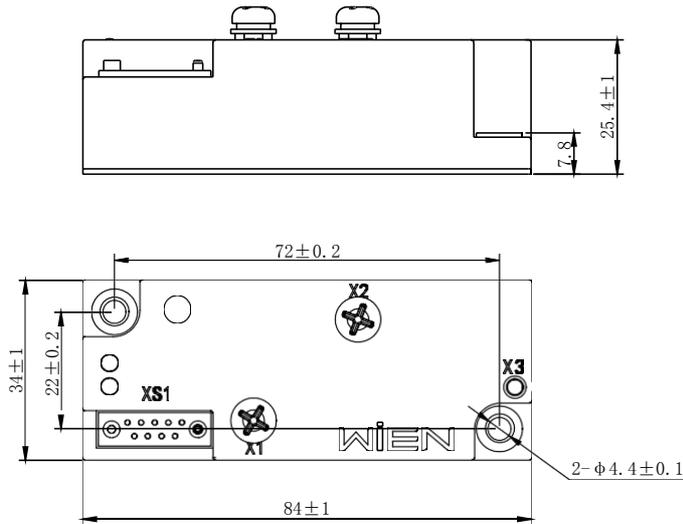
Performance parameters	Minimum	Typical	Maximum	Unit
Working baseplate temperature	-40	+25	+105	℃
Storage temperature	-55	+25	+105	℃
Clamp voltage	40	42	44	V
Steady-state output current	0	80	—	A
Indication function	Indication light and optocoupler open-leak output			

## Production Selection Table

Product model	Input voltage (Vdc)	Clamp voltage (Vdc)	Overvoltage surge (ms)	Maximum current (A)
TSGM-42ID	12-36V	42	100/50	80
TSGM-84ID	12-72V	84	100	80

Note: This product employs a passive absorption method, capable of absorbing transient energy up to 13kW/1ms.

## Encapsulation size



- Note: 1) Unit: mm  
 2) Unspecified tolerane: X.X±0.5 X.XX±0.25

Power - link definition :

Terminal number	X1	X2	X3
Symtol	VIN+	VIN-	NP
Function	Positive power input	Negative power input	leadless

X S 1 definition :

Terminal number	1-6, 8	7	9
Symtol	NC	ISO1	ISO2
Function	connectionless	optocoupler collector	optocoupler emitter

# ZK2 A Series

Low-leakage lithium battery, electronic switch, SMD/lead

and other packages

Features:

- ◆ Input voltage range: 3-8Vdc, 4.5-12Vdc
- ◆ Operating temperature: -43°C to +70°C
- ◆ Small volume ,the steady-state current is 2A.
- ◆ No external signal input, may include safety protection mechanisms
- ◆ Suitable for applications requiring high leakage current (below  $10^{-6} \mu\text{A}$ ) and high shock resistance

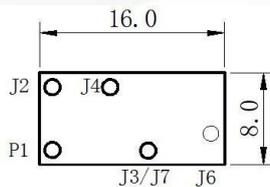


## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current at break	Safety interlock switch	Encapsulation form
ZK2A-8V4-S	4.5~12	Long press to turn on, short press to turn off	2	$< 10^{-6} \mu\text{A}$	NC	SMD
ZK2A-8V4-T	4.5~12	Long press to turn on, short press to turn off	2	$< 10^{-6} \mu\text{A}$	NC	TH
ZK2A-4V2-T	3~8	Long press to turn on, short press to turn off	2	$< 10^{-6} \mu\text{A}$	NC	TH

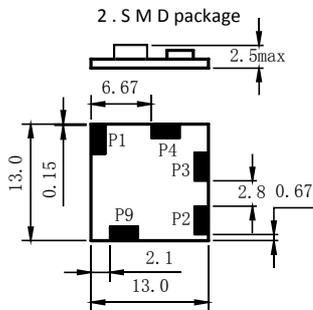
## Encapsulation size

Lead package size



Unit: mm  
 Thickness: 4max.  
 Unspecified tolerane:  
 $X.X \pm 0.5$  ( $X.XX \pm 0.02$ )  $X.XX \pm 0.25$   
 ( $X.XXX \pm 0.010$ )

Connection feature	
Symbol	Function
J1	Switch Wire SW (white)
J2	Input positive +Vin (red)
J3、J7	Output negative-Vo / Input negative-Vin (black)
J4	Output positive + Vo (pad hole)
J6	 Brown, two wires



Note: The solder pad is 3mm long and 2mm wide

Pin	Symbol	Function
P1	+Vin	Input positive
P9	-Vin	Input negative
P2	Cnt	Switching line Cnt
P3	-Vo	Output negative
P4	+Vo	Output positive

Note: Unit:mm

Unspecified tolerane:  
 $X.X \pm 0.5$   $X.XX \pm 0.25$

## SW 3640 Series

40A Solid-State Power Controller (SSPC), screw connection  
, with mounting holes



Features:

- ◆ Operating baseplate temperature: -45°C to +105°C.
- ◆ Screw fixation, lead connection
- ◆ The indicator light shows the working status.
- ◆ Overcurrent protection
- ◆ The analog signal is controlled to turn on or off.
- ◆ low static current, low loss

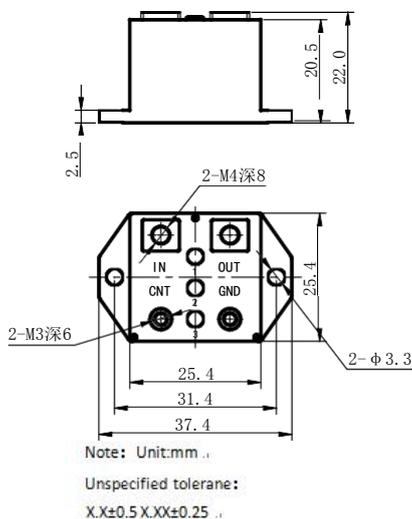
### Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Indication light	Safety interlock switch	Encapsulation form
SW3640	16-40	Signal trigger: High level on, low level off	40	Yes	NC	screw
SW7520	18-75	Signal trigger: High level on, low level off	20	Yes	NC	screw

### Performance parameters

Performance parameters	Minimum	Typical	Maximum	Unit	Test Conditions and Notes
Case temperature	-45		105	°C	
storage temperature	-55		125	°C	
input voltage	16		40	Vdc	
Maximum current output			40	A	Normal temperature 25°C
Indication light	Three indicator lights				
Control	12-32Vdc/0.1Amax				

### Encapsulation size



Terminal definition

Symbol	Function
IN	Switching input
OUT	Switching Output
CNT	control
GND	control-

Indicator definition

Symbol	Function
1(Green light)	Output voltage status indicator
2(Red light)	Switch protection alert
3(Green light)	CNT control indication

# SW 3640-8 Series

40A×8 Solid-State Power Controller (SSPC), screw connection , with mounting holes, Full-brick package



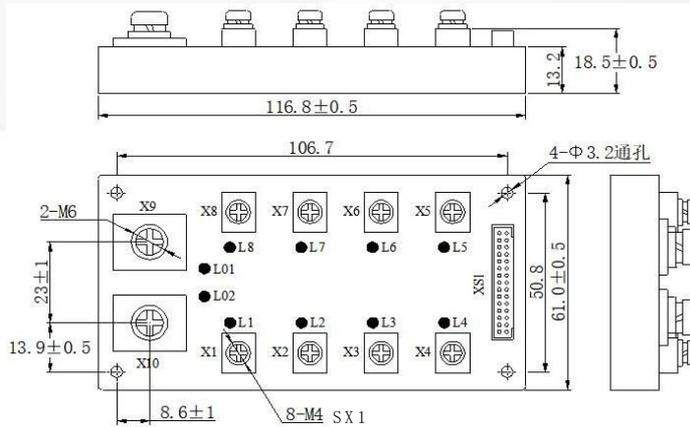
Features:

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ low leakage current, low loss
- ◆ Screw fixation, lead connection
- ◆ The indicator light shows the working status
- ◆ Output overcurrent protection
- ◆ Control on/off of analog signal

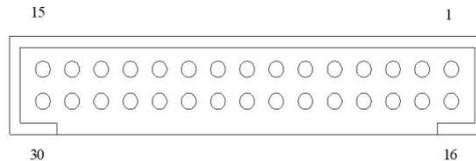
## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SW3640-8	12-32	External voltage control, optocoupler isolation	40×8 Group	<10μA	Yes	Yes
SW7520-8	18-75	External voltage control, optocoupler isolation	20×8 Group	<10μA	Yes	Yes

## Encapsulation size



单位: mm; 未注公差: X.X±0.5 X.XX±0.25



X 1 - X 1 0 Pins definitions :

Terminal number	X1	X2	X3	X4	X5
Symbol	VO1	VO2	VO3	VO4	VO5
Function	1-route output	2 -routes output	3-routes output	4-routes output	5 -routes output
Terminal number	X6	X7	X8	X9	X10
Symbol	VO6	VO7	VO8	IN2+	IN1+
Function	6 -routes output	7 -routes output	8 -routes output	2-routes positive power supply	1-route positive power supply

For X S 1 lead definitions, please contact us.

# SW 3640-8CAN Series

40A×8 Solid-State Power Controller (SSPC), screw connection  
 , with mounting holes, Full-brick package



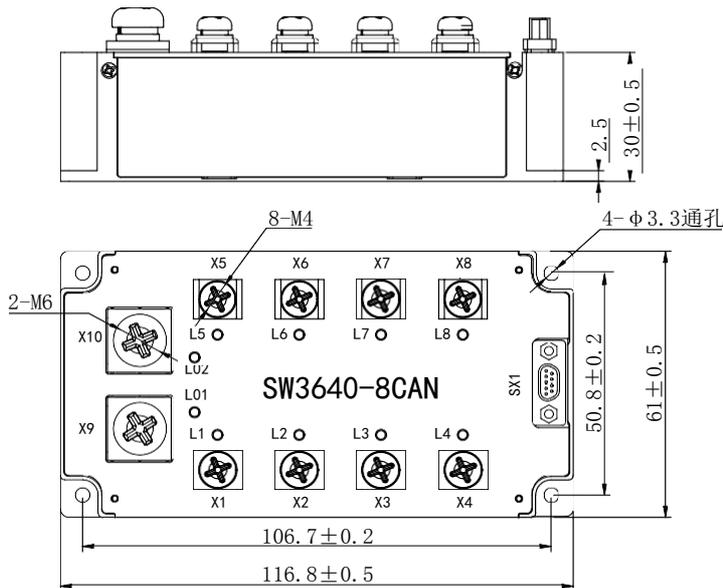
**Features:**

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ Screw fixation, lead connection
- ◆ The indicator light shows the working status
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off

### Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SW3640-8CAN	12-32	Communication control, with an external control voltage of 5V	40×8 Group	<10μA	Yes	Yes
SW7520-8CAN	18-75		40×8 Group	<10μA	Yes	Yes

### Encapsulation size



Unit: mm; Unspecified tolerane: X.X±0.5 (X.XX±0.02) X.XX±0.25 (X.XXX±0.010)

X 1 - X 1 0 Pins definitions :

Terminal number	X1	X2	X3	X4	X5
Symbol	VO1	VO2	VO3	VO4	VO5
Function	1-route output	2 -routes output	3-routes output	4-routes output	5 -routes output
Terminal number	X6	X7	X8	X9	X10
Symbol	VO6	VO7	VO8	IN2+	IN1+
Function	6 -routes output	7 -routes output	8 -routes output	2-routes positive power supply	1-route positive power supply

For X S 1 lead definitions, please contact us.

# SWR3610 Series

10A Solid-State Power Controller (SSPC), board mounted installation



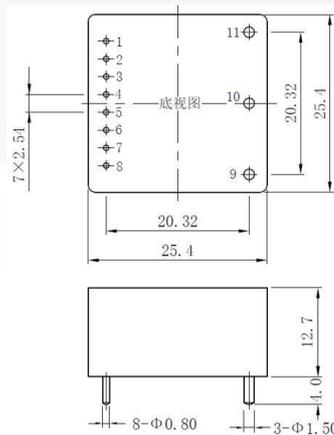
Features:

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ DIP package
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off

## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWR3610M-CAN-T105	12-32	CAN communication on control	10	<10μA	Yes	Yes
SWR1210M-CAN-T105	9-18		10	<10μA	Yes	Yes

## Encapsulation size



Note: Unit: mm; Unspecified tolerance: X.X±0.5 (X.XX±0.02) X.XX±0.25 (X.XXX±0.010)

The pins are defined as follows:

Table 1 Power Pins

Pins number	11	10	9
Symbol	Vline	Vout	PGND
Function	controlled power supply input	controlled power supply output	ground of the controlled power supply

Table 2 Signal Pins

Pins number	1	2	3	4
Symbol	Vcc	CANTX	CANRX	NC
Function	Control power supply 5V positive	CAN communication TX port	CAN communication RX port	connectionless
Pins number	5	6	7	8
Symbol	NC	EN	Trip	GND
Function	connectionless	Analog control terminal (super control): High level for on, low level or floating for off	Connect to an external circuit. Refer to the basic application wiring in this document. Abnormal low level, normal high level	Control power supply: 5V negative

# SWQ3620 Series

20A Solid-State Power Controller (SSPC), board mounted installation



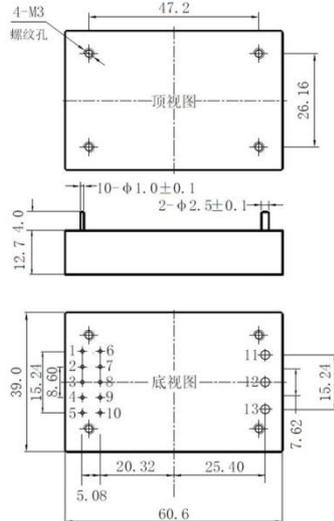
Features:

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ DIP package
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off

## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWQ3620M-CAN-T105	12-32	CAN communication control	20	<10μA	Yes	Yes
SWQ1220M-CAN-T105	9-18		20	<10μA	Yes	Yes

## Encapsulation size



Note: Unit: mm

Unspecified tolerance: X.X±0.5 (X.XX±0.02) X.XX±0.25 (X.XXX±0.010)

Table 1 Power Pins

Pins number	11	12	13
Symbol	Vline	Vout	PGND
Function	controlled power supply input	controlled power supply output	ground of the controlled power supply

Table 2 Signal Pins

Pins number	1	2	3	4
Symbol	Vcc	GND	EN	CANTX
Function	Control power supply 5V positive	Control power supply: 5V Ground	Analog control terminal (super control): High level for on, low level or floating for off	CAN communication TX port
Pins number	5	6	7	8
Symbol	CANRX	VCC	GND	Trip
Function	CAN communication RX port	Control power supply 5V positive	Control power supply 5V ground, CAN communication ground	Connect to an external circuit. Refer to the basic application wiring in this document. Abnormal low level, normal high level
Pins number	9	10	—	—
Symbol	NC	NC	—	—
Function	connectionless	connectionless	—	—

# SWH3650 Series

50A Solid-State Power Controller (SSPC), board mounted installation

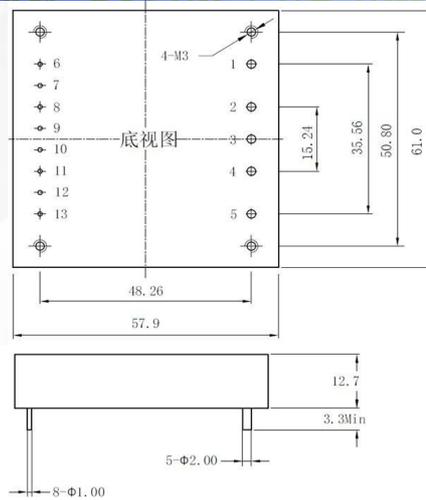
Features:

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ DIP package
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off



## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWH3650M-CAN-T105	12-32	CAN communication control	50	<10μA	Yes	Yes
SWH1250M-CAN-T105	9-18		50	<10μA	Yes	Yes



Note: 1) Note: Unit: mm  
2) Unspecified tolerance: X.X±0.5 X.XX±0.25

Table 1 Power Pins

Pins number	1	2	3	4	5
Symbol	Vout	Vout	PGND	Vline	Vline
Function	Controlled power supply output, connected to load	Controlled power supply output, connected to load	Ground of the controlled power supply	controlled power supply input, connected to power supply	controlled power supply input, connected to power supply

Table 2 Signal Pins

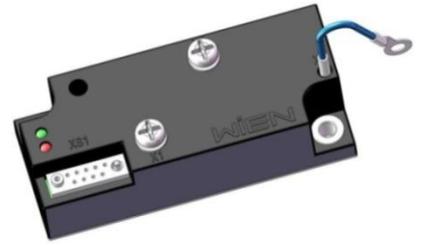
Pins number	6	7	8	9
Symbol	Vcc	CANTX	CANRX	NC
Function	Control power supply 5V positive	CAN communication TX port	CAN communication RX port	connectionless
Pins number	10	11	12	13
Symbol	NC	EN	Trip	GND
Function	connectionless	Analog control terminal (super control): High level for on, low level or floating for off	Connect to an external circuit. Refer to the basic application wiring in this document. Abnormal low level, normal high level	Control power supply 5V Ground

# SWG3280 / 120M Series

80A Solid-State Power Controller (SSPC) with screw mounting

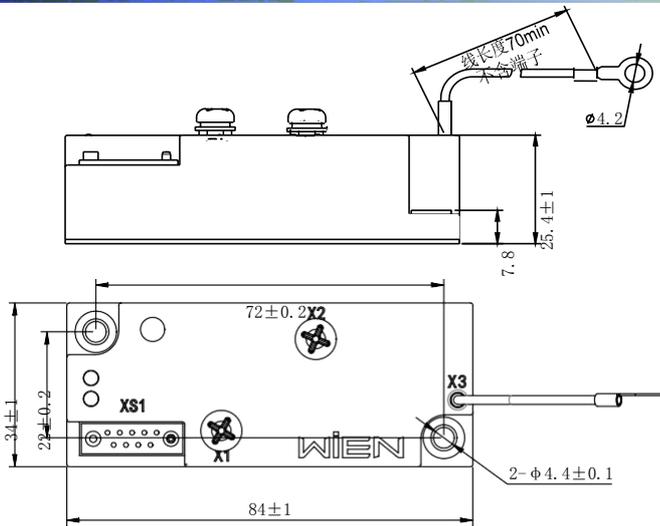
Features:

- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ DIP package
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off



## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWG3280M-CAN	12-32	CAN communication control	80	<0.1mA	Yes	Yes
SWG32120M-CAN	12-32		120	<0.1mA	Yes	Yes



Note: 1) Unit: mm 2) Unspecified tolerance: X.X±0.5 X.XX±0.25

power -link definitions :

Terminal number	X1	X2	X3
Symbol	VIN+	VO	VIN-
Function	Positive power input	Positive power Output	Negative power input

X S 1 definition

Number	1	2	3	4	5
Symbol	VC+	VC-	SC+	SC-	\
Function	Control positive input	Control input negative	Super control positive input	Super control negative input	\
Number	6	7	8	9	\
Symbol	\	BLK	L	H	\
Function	\	Module parallel port	CAN Bus L	CAN Bus H	

# SWG 3240 M Series

40A×2 Electronic switch with screw mounting

Features:

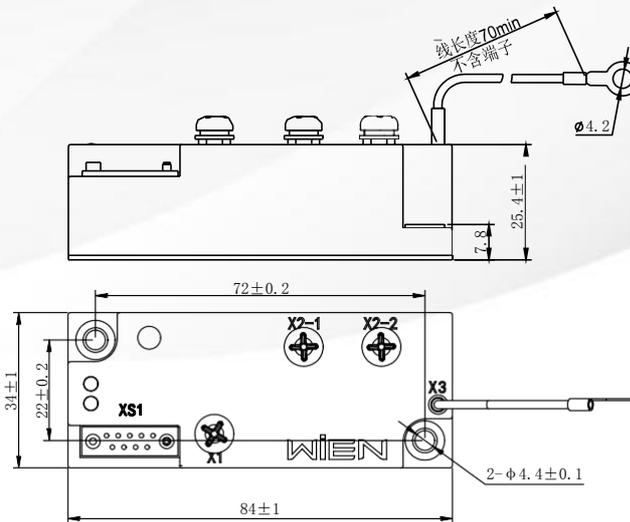
- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Metal heat sink baseplate
- ◆ Screw connection mounting
- ◆ Overcurrent/short circuit protection
- ◆ CAN communication controlled on/off



## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWG3240M-2CAN	12-32	CAN communication control	2 routes 40A	<0.1mA	Yes	Yes

## Encapsulation size



Note: 1) Unit: mm 2) Unspecified tolerance: X.X±0.5 X.XX±0.25

**Table 1 (X1-X3)**

Terminal number	X1	X2-1	X2-2	X3	\
Symbol	VIN+	VO1	VO2	VIN-	\
Function	Positive power input	1-route output positive	2-route output positive	Negative power input	\

**Table 2 (XS1)**

Number	1	2	3	4	5
Symbol	VC+	VC-	SC+	SC1-	SC2-
Function	Control positive input	Control negative input	Super control public terminal positive input	1- route super control terminal negative input	2- route super control terminal negative input
Number	6	7	8	9	\
Symbol	NC	NC	L	H	\
Function	connectionless	connectionless	CAN Bus L	CAN Bus H	\

# SWG 3210 M Series

10A×4 Solid-State Power Controller (SSPC) with screw mounting

Features:

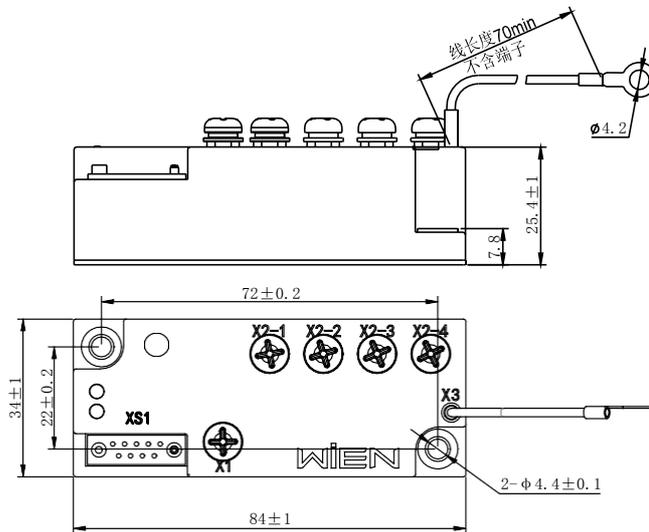
- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Metal heat sink baseplate
- ◆ Screw connection mounting
- ◆ Overcurrent/short circuit protection
- CAN communication controlled on/off



## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWG3210M-4CAN	12-32	CAN communication control	4 routes 10A	<0.1mA	Yes	Yes

## Encapsulation size



Note: 1) Unit: mm 2) Unspecified tolerance: X.X±0.5 X.XX±0.25

**Table 1 (X1-X3)**

Terminal number	X1	X2-1	X2-2	X2-3	X2-4	X3
Symbol	VIN+	VO1	VO2	VO3	VO4	VIN-
Function	Positive power input	1-route output positive	2-route output positive	3-route output positive	4-route output positive	Negative power input

**Table 2 (XS1)**

Number	1	2	3	4	5
Symbol	VC+	VC-	SC+	SC1	SC2
Function	Control positive input	Control negative input	Super control public terminal positive input	1- route super control terminal negative input	2- route super control terminal negative input
Number	6	7	8	9	\
Symbol	SC3	SC4	L	H	\
Function	3- route super control terminal negative input	4- route super control terminal negative input	CAN Bus L	CAN Bus H	\

# SWG 3205 M Series

5A×10 Solid-State Power Controller (SSPC) with screw mounting

Features:

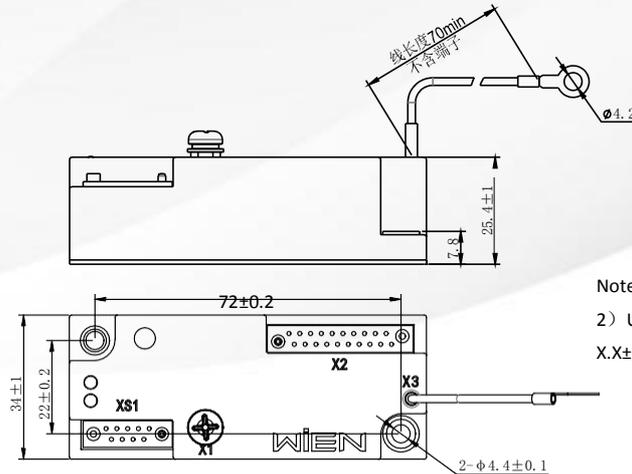
- ◆ Operating baseplate temperature: -45°C to +105°C
- ◆ Six-sided metal shield
- ◆ DIP package
- ◆ Output overcurrent protection
- ◆ CAN communication controlled on/off



## Production Selection Table

Product model	Input voltage (Vdc)	Trigger mechanism	Maximum current (A)	Leakage current in the absence of control signal	Temperature detection	Signal detection
SWG3205M-10CAN	12-32	CAN communication control	10 routes 5A	<0.1mA	Yes	Yes

## Encapsulation size



Note: 1) Unit: mm  
2) Unspecified tolerance: X.X±0.5 X.XX±0.25

Table 1 (X1 与 X3)

Terminal number	X1	X3
Symbol	VIN+	VIN-
Function	Positive power input	Negative power input

Table 2 (XS1)

Terminal number	1	2	3/4/5/6/7	8	9
Symbol	VC+	VC-	NC	L	H
Function	Control positive input	Control negative input	connectionless	CAN Bus L	CAN Bus H

Table 3 (X2)

Terminal number	1/11	2/12	3/13	4/14	5/15
Symbol	VO1	VO2	VO3	VO4	VO5
Function	1-route output positive	2-route output positive	3-route output positive	4-route output positive	5-route output positive

Terminal number	6/16	7/17	8/18	9/19	10/20
Symbol	VO6	VO7	VO8	VO9	VO10
Function	6-route output positive	7-route output positive	8-route output positive	9-route output positive	10-route output positive

# 专注于电力电子

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