

FPS08-35K Data Sheet

Abstract

The FPS08-35K is a dual-channel, high-insulation DC/DC power supply for 3.3kV, 4.5kV and 6.5kV IGBT gate driver power sources. The output voltage is +15V and -10V, and the maximum power is 8W. The FPS08-35K can provide power supply for the high-voltage gate driver core HV1027P, or other gate drivers with the same voltage.



Fig. 1 FPS08-35K

Highlights:

- ✓ Primary and secondary side isolation 35KV_{RMS}
- ✓ Primary and secondary side creepage distance 150mm
- ✓ Output power 8W
- ✓ 14~25V wide range of input voltage
- ✓ Withstand short-circuit of output power supply
- ✓ Primary and secondary side coupling capacitance 5pF

Typical applications:

- ✓ Traction
- ✓ Rail
- ✓ Industrial drives
- ✓ HVDC
- ✓ FACTS
- ✓ Medium voltage inverter

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Mechanical Dimensions

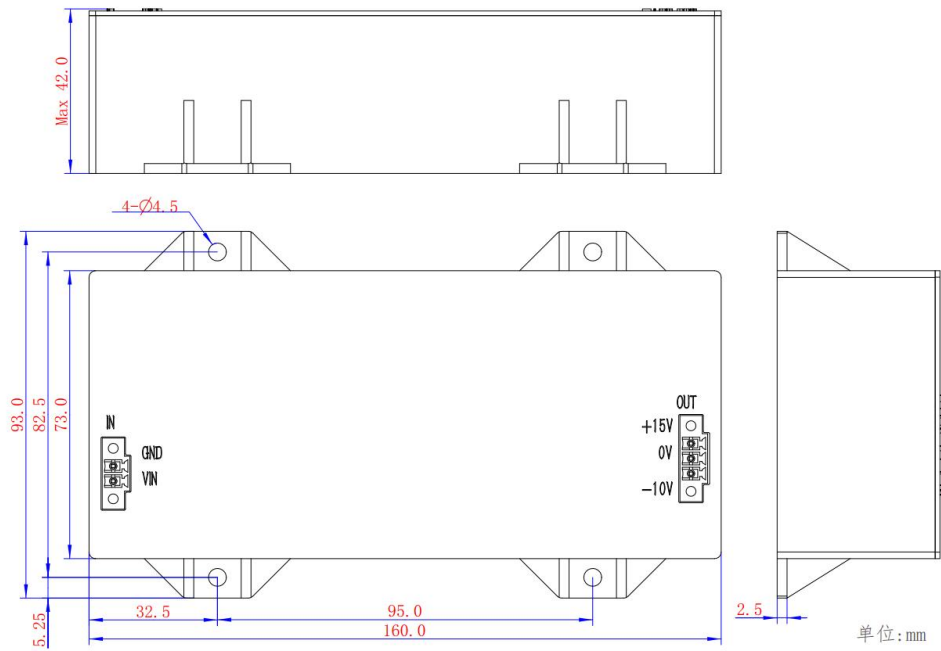


Fig.2 Mechanical dimensions (unit: mm)

Note: 1. The thickness tolerance of the board is $\pm 10\%$;

2. Other dimensional tolerances refer to GB/T1804-m.

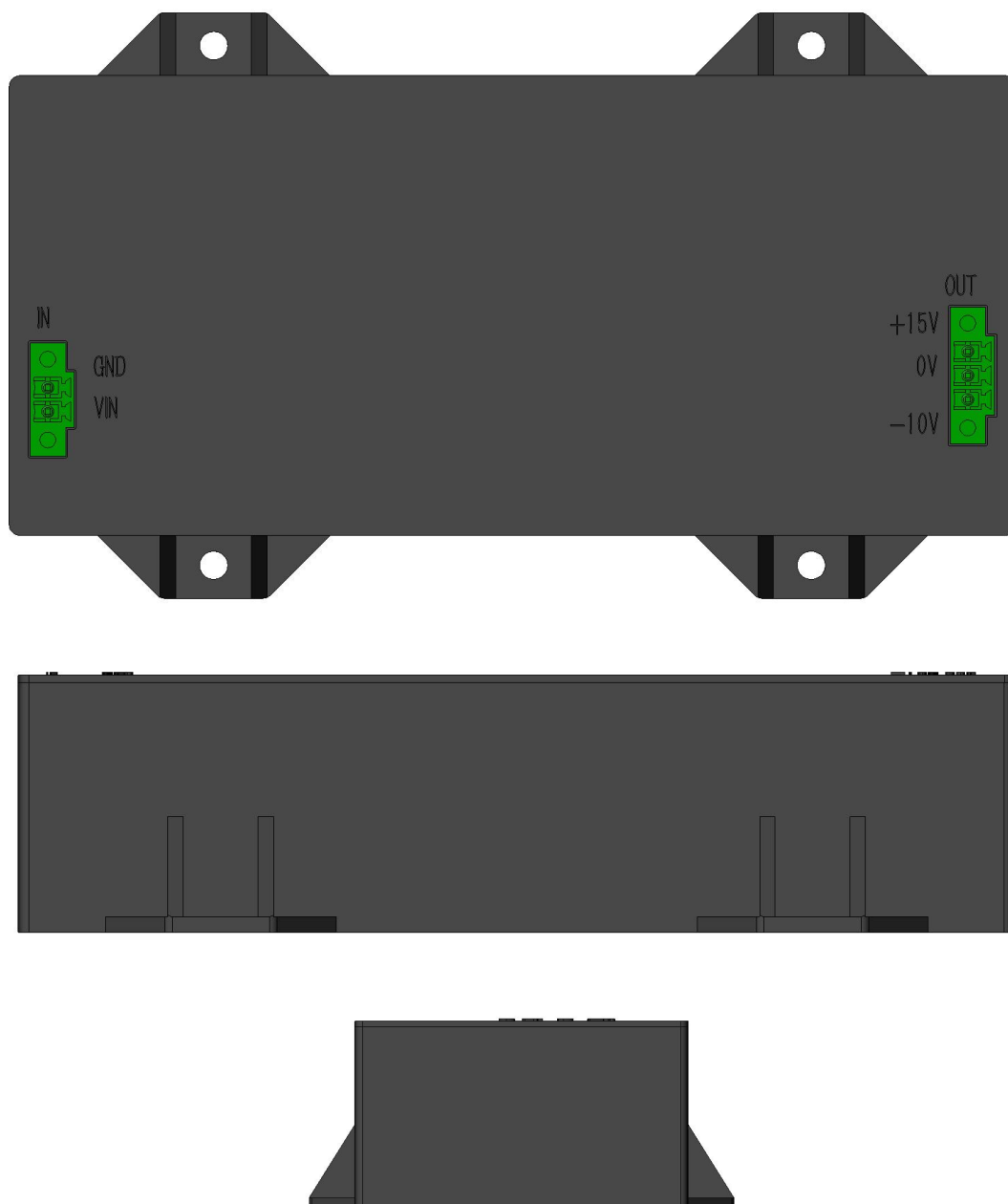


Fig.3 3D diagram

Pin Functional Description

J1 is the DC input terminal

J1-1=GND J1-2=VIN

J2 is the DC output terminal

J2-1=+15V J2-2=GND J2-3=-10V

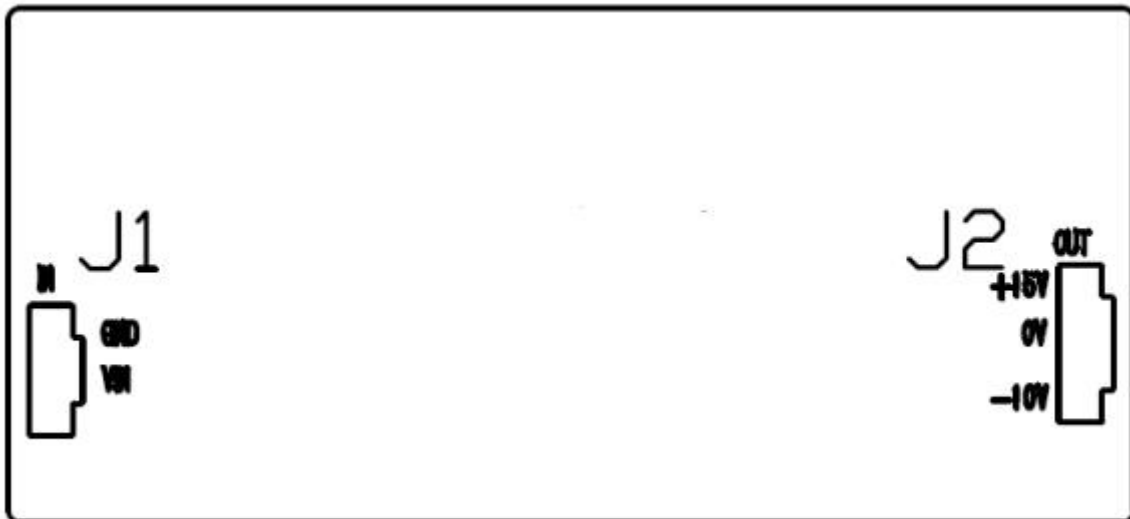


Fig. 4 I/O terminal diagram

Electrical Parameters

Absolute Maximum Ratings

Parameter	Description	Min.	Max.	Unit
Input voltage	Input VCC to input GND	0	25	V
Input current	13V input		1	A
Power supply output power	Ambient temperature $\leq 65^{\circ}\text{C}$		8	W
Dielectric withstand voltage	Primary to secondary side	35		KV_{RMS}
Operating temperature	See the temperature derating curve	-40	+85	$^{\circ}\text{C}$
Storage temperature		-40	+85	$^{\circ}\text{C}$

Electrical Characteristics

Output characteristics	Description	Min.	Typ.	Max.	Unit
+15V output voltage	Without load, Note 1	14.7	15.2	15.8	V
	Load=0.35A, Note 1		15.2		V
-10V output voltage	Without load, Note 1	9.2	-9.6	-10.4	V
	Load=0.25A, Note 1		-9.6		V

Input characteristics	Description	Min.	Typ.	Max.	Unit
Operating voltage	Input VCC to input GND	14	15/24	25	V
Supply current	Without load (15V input)		0.04		A
	Load 3W (15V input)		0.25		A
	Load 3W (24V input)		0.17		A

Electrical Isolation	Description	Min.	Typ.	Max.	Unit
Dielectric test voltage	Primary vs secondary side, AC/1min	35			KV_{RMS}
Withstand voltage	Primary vs secondary side			6.5	KV_{peak}

Creepage distance	Primary vs secondary side, Note 2	150	mm
Clearance distance	Primary vs secondary side, Note 3	100	mm
Coupling Capacitance	Primary vs secondary side	5	pF

Note:

1. Output voltage range may deviate with and without load.
2. The shortest distance between input and output along the insulating surface.
3. The shortest distance between input and output.

Characteristic Curve

1. Output U-I curve

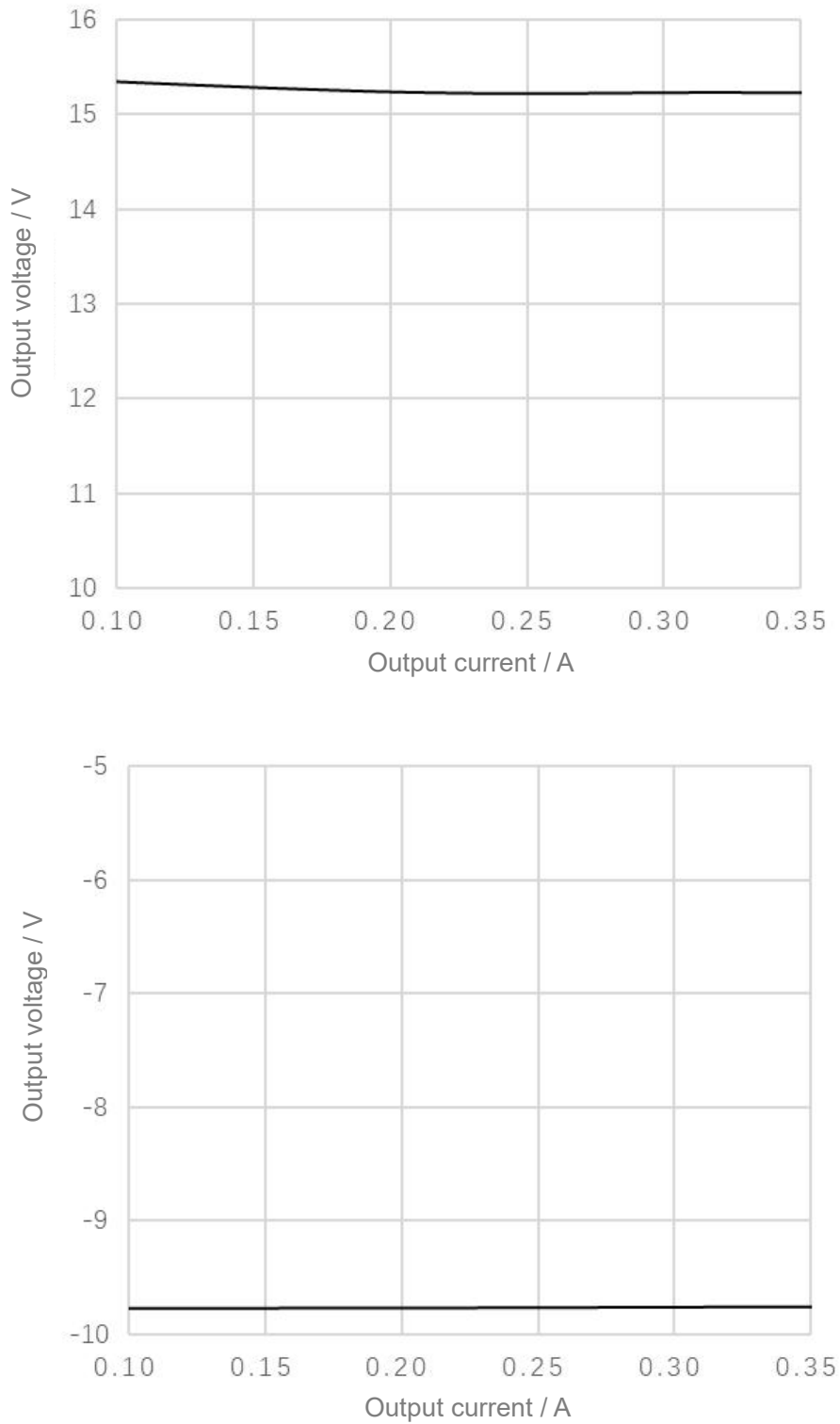


Fig.5 Output voltage VS output current

2. Derating curve

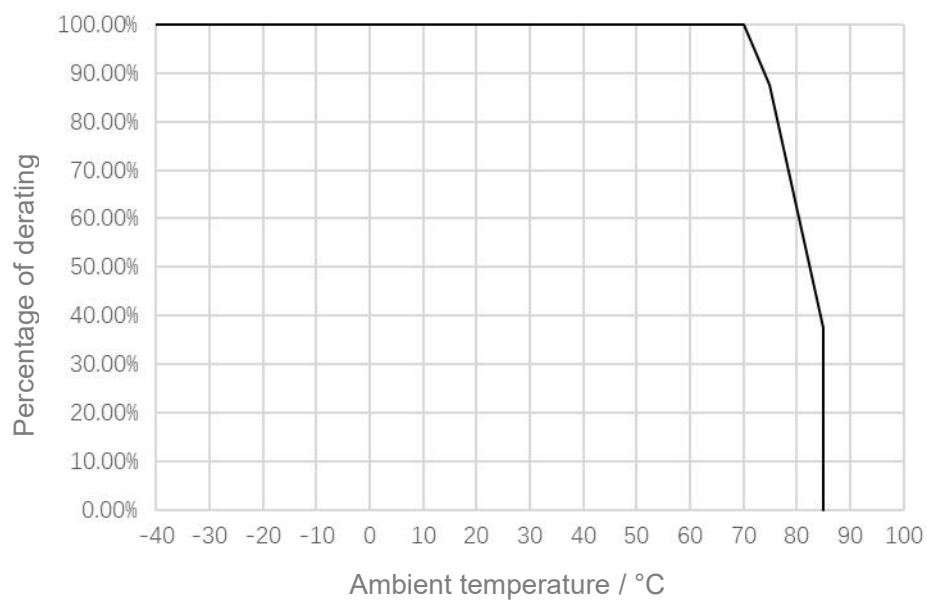


Fig. 6 Derating curve

Technical Support

Firstack's professional team will provide you with business consultation, technical support, product selection, price, lead time and other related information, and guarantee to answer your questions within 48 hours.

Legal Disclaimer

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Contact Information

Tel: +86-571 8817 2737

Website: www.firstack.com

Email: fsales@firstack.com

Address: 4-5/F, Building/5, Xizi Wisdom Park, No.1279 Tongxie Road, Hangzhou, China