

HLK-5D1215

CONVERTIDOR DC-DC ENTRADA (9V-18V) SALIDA 15V 83mA 5W



A variety of specifications for power module selection

MULTIPLE SPECIFICATIONS AVAILABLE

Same size, package and pin of same type power module

MODEL	POWER	VOLTAGE	ELECTRICITY
HLK-5D1205	5W	5V	1000mA
HLK-5D1212	5W	12V	417mA
HLK-5D1215	5W	15V	83mA
HLK-5D1224	5W	24V	210mA

*Wide pressure 9~18V (2:1) input voltage regulator output

*International standard pin:25.4X25.4X11mm

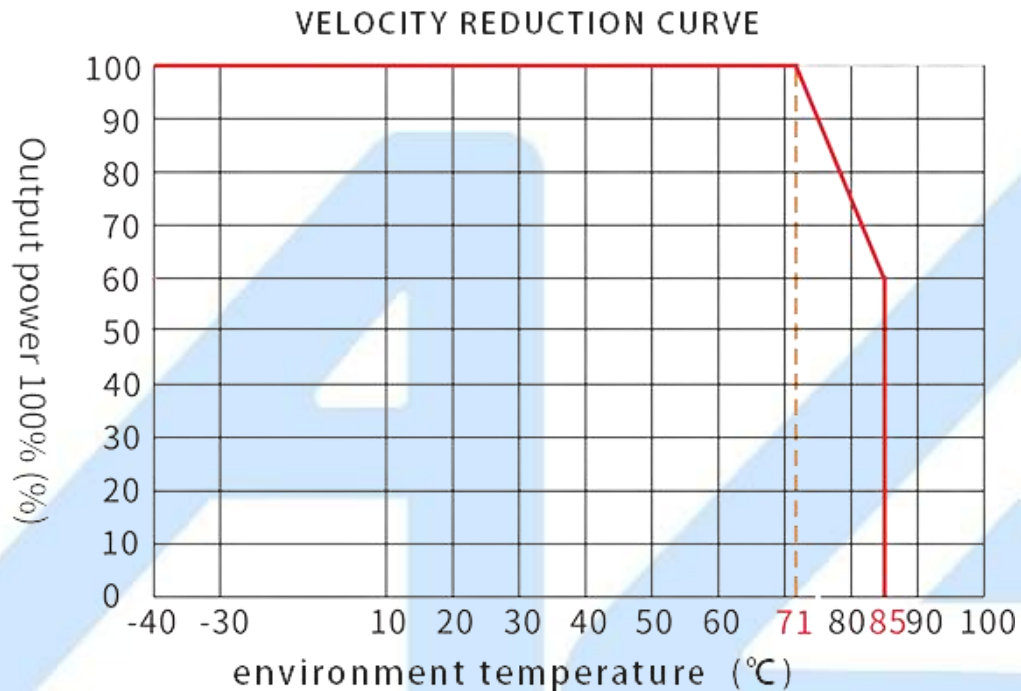
product features

PRODUCT FEATURES

- Ultra-thin small size standard package and standard pins
- Wide range input (2:1) voltage: 9~18VDC
- Low power consumption, environmental protection, standby power consumption is only 0.3W (typical value)
- Input and output isolation withstand voltage 1500VDC
- Ultra-fast startup: 100ms (typical value)
- High efficiency, conversion efficiency up to 78% (Typ)
- Operating temperature range: -40°C~+85°C
- Good output short circuit and over current protection and self-recovery
- High reliability, long life design, continuous work over 100000H
- Potting and sealing with high-quality environmentally friendly waterproof and thermal conductive glue, dustproof, moistureproof, shockproof and flame retardant
- Meet UL/CE/EMC and safety testing requirements
- Can be used in medical, industrial control, electric power, instrumentation, communication, railway and other fields

Operating temperature environment and load characteristics

WORKING ENVIRONMENT TEMPERATURE & LOAD CHARACTERISTICS



Typical application circuit

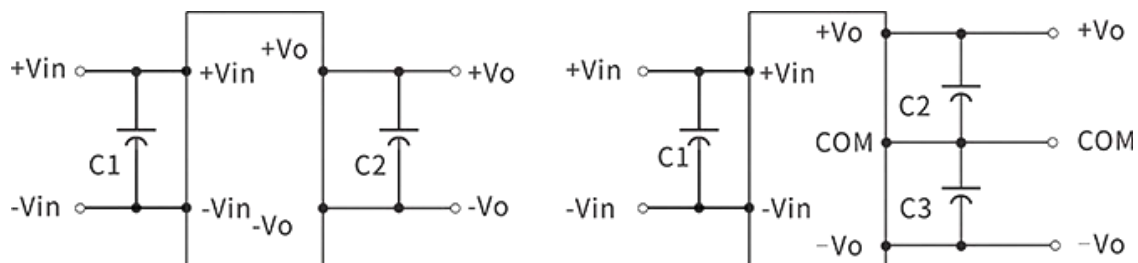
APPLICATION CIRCUIT

Recommended test circuit

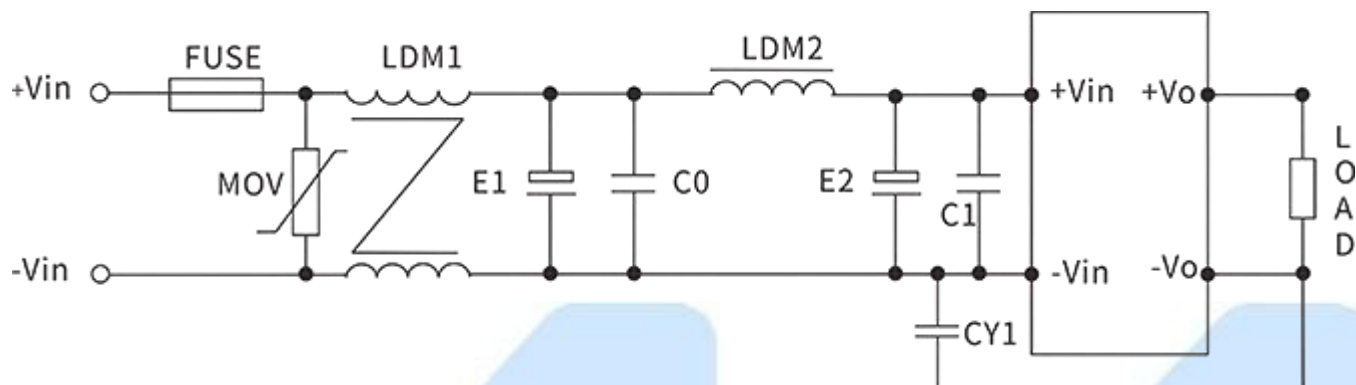
Generally recommended capacitance: C1: 47-100 μ F; C2, C3: 10-22 μ F.

All DC/DC converters of this series are tested according to the recommended test circuit shown in the figure below before leaving the factory.

If it is required to further reduce the input and output ripple, the input and output external capacitors C1, C2, C3 can be increased or selected in series with capacitors with a small equivalent impedance, but the capacitance cannot be greater than the maximum capacitive load of the product.



EMC solution-recommended circuit



Recommended parameters:

FUSE: Connect the corresponding fuse according to customer needs

MOV varistor: 14D330K

LDM1/common mode inductance: 10mH

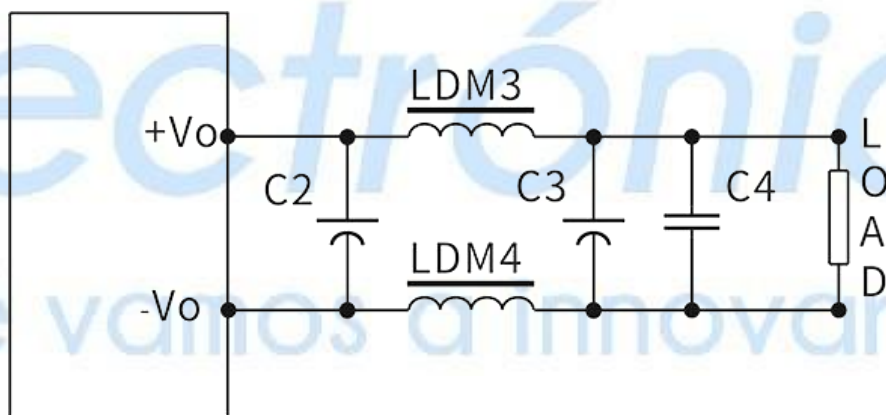
E1, E2 electrolytic capacitor: 100 μ F/50V

C0, C1 ceramic capacitors: 1 μ F/50V

LDM2 differential mode inductor: 10 μ H

CY1 safety Y2 capacitor: 1nF/250Vac

Output filter peripheral recommended circuit



Note:

1. C2 and C3 use high frequency and low resistance electrolytic capacitors, and the total capacity should not exceed the maximum capacitive load marked in the manual, otherwise the module will not start normally.
2. For capacitive load, a minimum load of 3% must be guaranteed, otherwise it will cause abnormal output of the module.

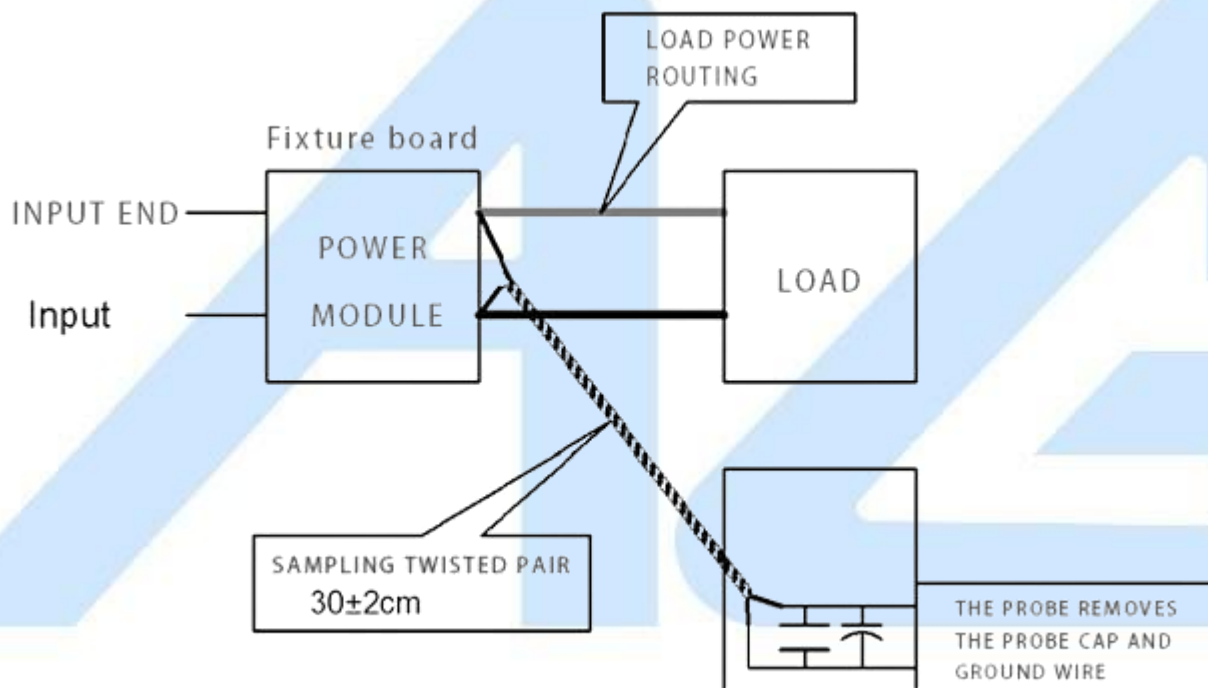
Recommended parameters:

LDM3/LDM4 inductance: $1\mu\text{H}$

C2, C3 electrolytic capacitor: $220\mu\text{F}$

C4 ceramic capacitor: $1\mu\text{F}/50\text{V}$

Ripple & noise test: twisted pair method 20MHz bandwidth

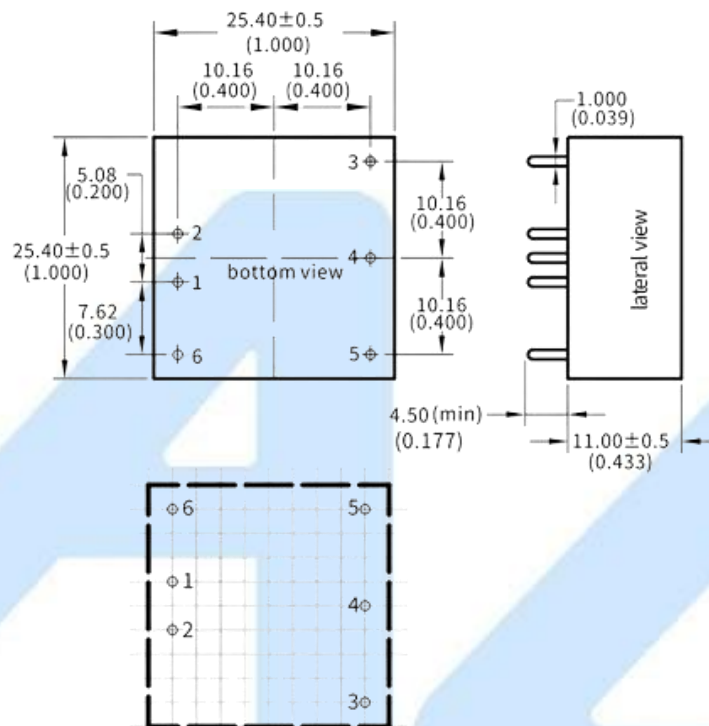


testing method:

1. Ripple noise is connected using 12# twisted pair, the oscilloscope bandwidth is set to 20MHz, 100M bandwidth probe, and $0.1\mu\text{F}$ polypropylene capacitor and $47\mu\text{F}$ high frequency low resistance electrolytic capacitor are connected in parallel to the probe end, and the oscilloscope sampling uses Sample sampling mode .
2. Connect the power input terminal to the input power supply, and the power output is connected to the electronic load through the fixture board. For testing, use a $30\text{cm}\pm 2\text{cm}$ sampling line to sample directly from the power output port. The power line selects the corresponding wire diameter wire with insulation according to the output current. (As shown in FIG)

Dimensions and weight

DIMENSIONS & WEIGHT



Unit: mm
 Printed board vertical view
 Lattice spacing: 2.54mm
 Unmarked dimensional tolerances ± 0.25 mm
 Stitching diameter tolerance is not indicated ± 0.1 mm

Pin description:

1: -Vin input negative; 2: +Vin input positive; 3: +Vo output positive; 4: NC; 5: -Vo output negative; 6: NC

*Note: If the definition of each pin of the power module does not match the selection manual, the label on the physical label shall prevail.

		AG Electrónica S.A.P.I. de C.V. República del Salvador N° 20 Segundo Piso Teléfono: 55 5130 - 7210	
ACOTACIÓN: N/A	http://www.agelectronica.com	ESCALA: N/A	REALIZO: OGJ REV: JFRR
TOLERANCIA: N/A	CONVERTIDOR DC-DC ENTRADA (9V-18V) SALIDA 15V 83mA 5W		
TOLERANCIA: N/A	Fecha: 19/05/2022	No. Parte: HLK-5D1215	