



Product Features

- Input range: 85-265 VAC / 100-370 VDC / 47-400 Hz
- High reliability, low ripple noise (≤ 16 mV)
- Rated output power 5 W, output accuracy $\pm 2\%$
- Low no-load power; full-load efficiency 67%-78%
- Single isolated output; isolation withstand voltage ≥ 2500 VAC
- High quality and high reliability
- Output over-current and short-circuit protection with auto-recovery
- Operating temperature: -40 C to $+85$ C
- Pin-compatible with the KEP03 3 W series

- The KEP05 series power supply is a compact AC/DC power module. This series is pin-compatible with the KEP03 series, facilitating power expansion. It features an input range of 85–265 VAC and 100–370 VDC, with a rated output power of 5 W, output accuracy of $\pm 2\%$, typical output ripple of 15 mV, light-load power consumption as low as 0.2 W, efficiency ranging from 67% to 78%, single-channel isolated output, isolation withstand voltage of ≥ 2500 VAC, operating temperature range of -40°C to $+85^{\circ}\text{C}$, input undervoltage protection, overcurrent protection, and self-recovering output short-circuit protection.
- This series is widely used in industries such as the Internet of Things, smart cities, instrumentation, power, industrial control, office equipment, and consumer electronics.
- When applications have stringent electromagnetic compatibility (EMC) requirements, please refer to the EMC peripheral application circuits for this series of products.

Selection Table

Model	Power	Input Voltage	Output Voltage	Output Current	Ripple (220V)	Efficiency (220V)	Max. Capacitive Load(μF)	No-load Loss (220V)
KEP 05D05	5W	85V~265V	5V DC	1000mA	14mV	67%	2000	0.2W
KEP 05D09			9V DC	555mA	7mV	75%	1200	0.2W
KEP 05D12			12V DC	416mA	14mV	76%	800	0.2W
KEP 05D15			15V DC	333mA	16mV	78%	680	0.3W
KEP 05D24			24V DC	208mA	14mV	78%	220	0.3W

Input Characteristics

Input voltage range	85V~265V AC
Frequency range	47Hz~400Hz
Recommended fuse	1 A slow-blow fuse
Standby power	≤ 0.3 W

Output Characteristics

Output voltage accuracy	$\leq \pm 2\%$
Line regulation	$\leq 0.5\%$
Load regulation	$\leq 1\%$
Temperature coefficient	$\leq 0.02\%/^{\circ}\text{C}$
Short-circuit protection	Long-term protection, auto-recovery
Over-current protection	$\geq 120\%$

General Characteristics

Isolation voltage	Input/output $\geq$ 2500V AC
Insulation resistance	500V DC, $\geq$ 100M Ω
Switching frequency	65 kHz (typ.)
Operating temperature	-40°C~+85°C
Storage temperature	-40°C~+105°C
Storage humidity	$\leq$ 95RH
Soldering temperature	Hand soldering: 350 C-400 C, $\leq$ 5 s
	Wave soldering: 260 C +/-5 C, 5-10 s
Cooling method	Natural convection
MTBF	200000h
Isolation capacitance	1000pF
Weight	24g

EMC Characteristics

EMI	Conducted emissions	EN55011(CISPR11) / EN55032(CISPR32 , CLASS B (external circuit required)
	Radiated emissions	EN55011(CISPR11) / EN55032(CISPR32 , CLASS B
EMS	Electrostatic discharge	IEC/EN61000-4-2
	Radiated immunity	IEC/EN61000-4-3
	Electrical fast transient/burst	IEC/EN61000-4-4 (external circuit required)
	Surge immunity	IEC/EN61000-4-5 (external circuit required)
	Conducted RF immunity	IEC/EN61000-4-6 (external circuit required)
	Voltage dips, short interruptions	IEC/EN61000-4-11

Typical Application Circuits

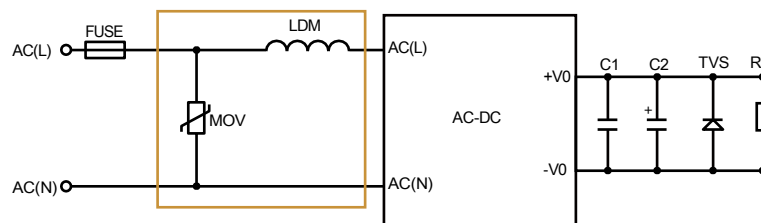


Figure 1 General application circuit (required); the differential-mode inductor may be replaced by a 3 ohm / 1 W resistor

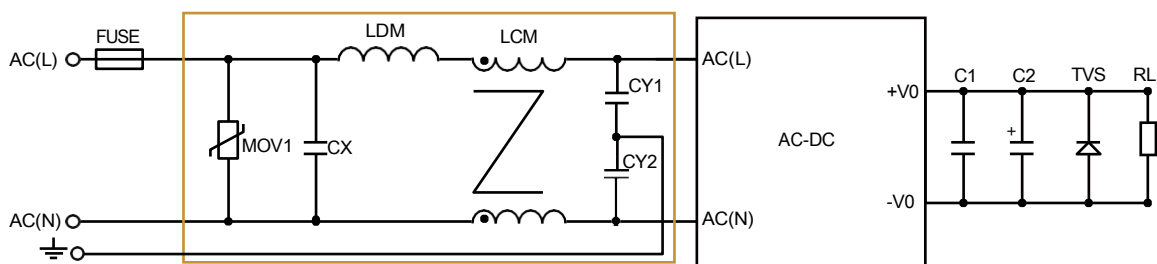


Figure 2 EMC solution (add as required; recommended for complex conditions with frequent high-power switching)

Mechanical Dimensions (unit:mm±0.5)



Pin Definitions

