

AC-DC CONVERTER

UNIVERSAL INPUT, 5 WATT

SINGLE OUTPUT, EXTRA SMALL 1" X 1" PACKAGE
UIS5 SERIES



FEATURES

- Extra Small 1" x 1" Package
- Universal Input 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- 3 Years Warranty
- ROHS Compliant
- Safety Approvals UL60950-1, IEC60950-1

SELECTION GUIDE All specifications are typical at 230Vac input, full load and 25°C, unless otherwise noted.

Output Voltage Vdc	Output Current mA	Ripple & Noise mV (Max.) ¹	Efficiency %	Max. Capacitive Load μ F	Model Number
3.3	1515	60	74	2200	UIS5-33S
5	1000	60	80	1000	UIS5-5S
9	555	90	82	300	UIS5-9S
12	416	120	82	160	UIS5-12S
15	333	150	83	100	UIS5-15S
24	208	240	83	43	UIS5-24S
48	104	480	85	10	UIS5-48S

Input Specifications			Output Specifications		
Voltage range	90Vac Min., 264Vac Max.	Vo, Io nom, AC input	Output voltage accuracy, %	± 3 Max.	Vi nom, Io nom, 3.3-5V models
	120Vdc Min., 370Vdc Max.	Vo, Io nom, DC input		± 2 Max.	Vi nom, Io nom, 9-48V models
Rated input voltage, Vac	100 - 240 Typ.	Vo, Io nom	Minimum load, %	0 Min.	Vi nom
Line frequency, Hz	47 Min., 50/60 Typ., 63 Max.	Vi nom, Io nom	Line regulation, %	± 1.0 Max.	Io nom, Vi min...Vi max
			Load regulation, %	± 1.0 Max.	
Inrush current, A	10 Max.	Io nom, Vi: 115Vac	Transient response setting time, μ S	1,000 Typ.	Vi nom, Io nom = \longleftrightarrow 0.5 Io nom
	20 Max.	Io nom, Vi: 230Vac	Overload protection	Above 110% rated output power Recovers automatically after fault condition is removed	
Input fuse	VDE/UL/CCC, Fuse 2.5A/250V (Slow blow)		Short circuit protection	Recovers automatically after fault condition is removed	
			Over voltage protection	120%-150% rated output voltage Zener diode clamp	

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General Specifications

Isolation voltage, Vac		Input to Output	3KVac/ 5mA/ 5Secs
Isolation resistance, MΩ	500Vdc	Input to Output	100 Min.
Switching frequency, Khz	Vi nom, lo nom		65 Typ.

Environmental Specifications

Operating temperature, °C	Refer to Temperature Derating Graph	-25 Min.	70 Max.
Storage temperature range, °C	Non-operational	-40 Min.	85 Max.
Relative humidity, % RH	Vi nom, lo nom		95 Max.
Cooling	Free air convection		

Physical Specifications

Design meet safety standard	UL60950-1, IEC60950-1
Dimensions, inches (mm)	1.0 × 1.0 × 0.6 (25.4 × 25.4 × 16.1)

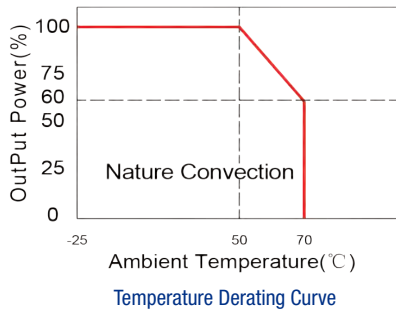
EMC Specifications

Specifications	Conditions	Level
EMI conduction and radiation	Compliance to EN55022	Class B
EMS immunity	Compliance to EN61000	

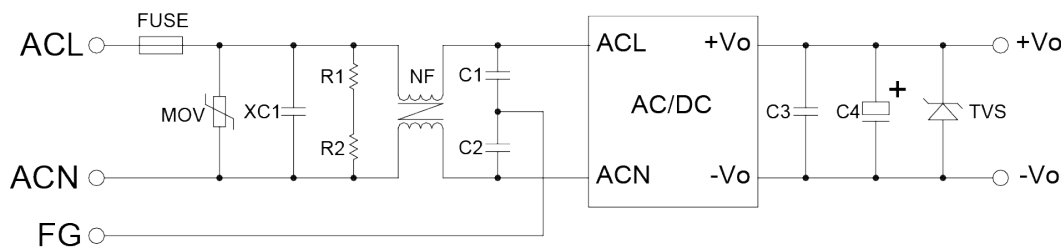
Note:

- Ripple & noise is measured by using 20 MHz bandwidth, measured with a 10μF paralleled with a high-frequency 0.47μF capacitor across each output by full load.

Characteristic Curve



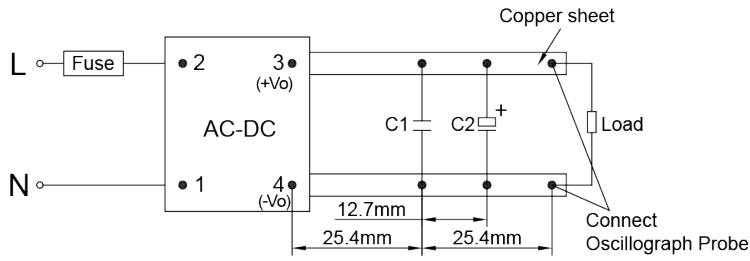
Recommended Application Circuit



FUSE:2.5A/250V(Slow blow)
 MOV:14D-561K
 XC1:0.47uF/275V,X2
 R1\R2:750K,1206
 NF:UU9.8,20mH
 C1\C2:2200pF/250V,Y2

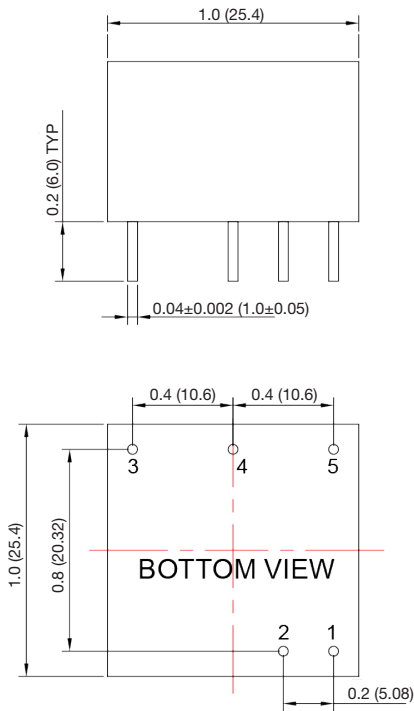
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Recommended Application Circuit



C1: Ceramic capacitor, 1uF; C2: Electrolytic capacitor, 10uF

Mechanical Drawing



PIN CONNECTION

PIN	SINGLE
1	ACN
2	ACL
3	NC
4	-Vo
5	+Vo

1. All dimensions in inches (mm)
2. All tolerances are ± 0.50