

## KEY FEATURES

- Universal Input Range 85-305VAC, 47-63 Hz
- No Load Power Consumption < 0.25W
- 5000m Altitude Application
- Efficiency up to 77%
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°
- Short Circuit & Over Current Protections
- Safety Approval to UL / IEC / EN 62368-1
- 3-Year Product Warranty



## ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

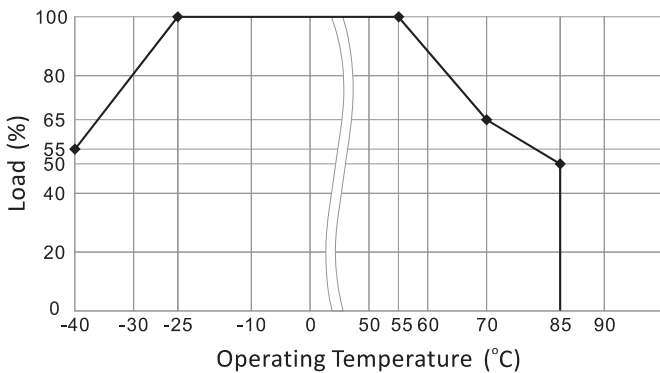
Model No. (Single Output)	BUC05-5S	BUC05-12S	BUC05-15S	BUC05-24S	
Max Output Wattage (W)	5W				
Input	Voltage	85-305 VAC or 120-430 VDC			
	Frequency (Hz)	47-63Hz			
	Current (Full load)	0.12 A max. (115 VAC) / 0.08 A max. (220 VAC)			
	Inrush Current	60 A max. (115 VAC) / 130 A max. (230 VAC)			
	No Load Power Consumption	< 0.25W (115/220 VAC)			
	External Fuse (Mandatory)	2A / 300VAC Time-delay fuse			
	Leakage Current (typ.)	0.5mA (230 VAC / 50 Hz)			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy (max.)	±3%			
	Current (mA) (max.)	1000	416	333	208
	Maximum Capacitive Load (at 220VAC)	2000uF	800uF	800uF	300uF
	Minimum Load	0%			
	Line Regulation (LL-HL) (max.)	±0.5%			
	Load Regulation (20-100%) (max.)	±1%			
	Ripple & Noise (5-100%) (max.)	100mV (Vp-p)	120mV (Vp-p)	120mV (Vp-p)	150mV (Vp-p)
	Efficiency (at 220VAC) (typ.)	72%	75%	76%	77%
Hold-up Time (min.)	50 ms (at 115VAC) / 100 ms (at 220VAC)				
Protection	Over Current Protection	Hiccup technique, auto-recovery			
	Short Circuit Protection	Hiccup mode (automatic recovery)			
Isolation	Input-Output (V.AC)	4000V			
Environment	Operating Temperature (Note 4)	-40°C...85°C (with derating)			
	Storage Temperature	-40°C...105°C			
	Temperature Coefficient	±0.03%/°C			
	Humidity	10~90% RH			
	MTBF (min.)	2799K h @ 25°C (MIL-HDBK-217F)			
Physical	Dimensions (L x W x H)	1.0 x 1.0 x 0.693 Inches ( 25.4 x 25.4 x 17.6 mm ) Tolerance ±0.5 mm			
	Case Material	Plastic resin (flammability to UL 94V-0)			
	Weight	18 g			
	Cooling Method	Free air convection			
Safety	Approval	UL / IEC / EN 62368-1			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B			
	EMS (Noise Immunity)	EN 55035			

**NOTE**

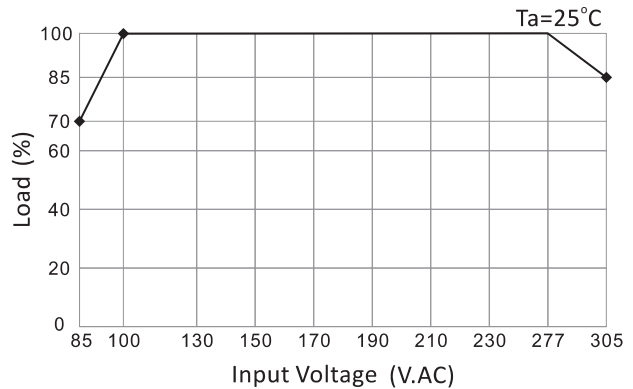
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. The full load efficiency should be in  $\pm 2\%$  of the typical value in this table. The efficiency is calculated by the way that the full output power is divided by the input power.
3. The output power should be derated based on the input voltage derating graph.
4. Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.
5. This product should operate under the condition of natural air, please contact us if it could be used at a closed space.
6. The ambient temperature derating of  $3.5^{\circ}\text{C} / 1000\text{m}$  for operating altitude higher than 2000m.
7. A fuse should be connected at input.

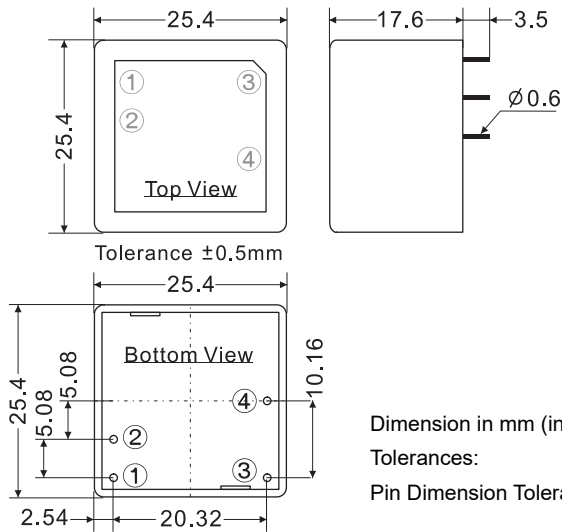
**DERATING**

Derating Output Load versus Operating Temperature

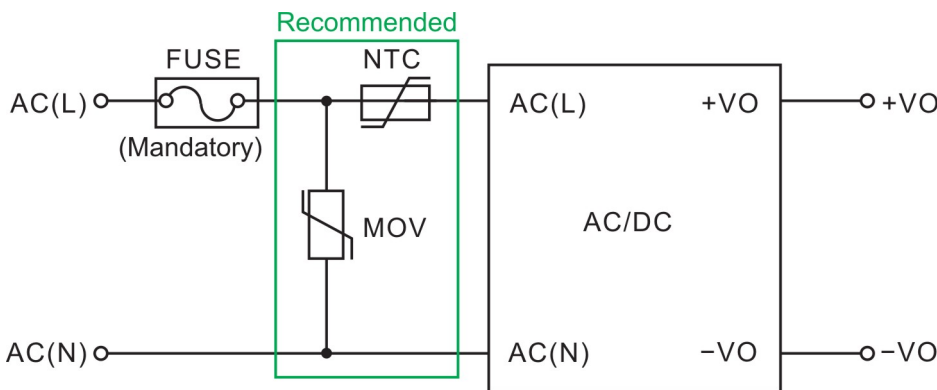


Derating Load versus Input Voltage



**BUC05**
**5 Watts**
**MECHANICAL DIMENSIONS**


PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

**TYPICAL CIRCUITS FOR APPLICATION**


FUSE	2A/300 VAC Time-delay fuse (Required)
MOV	14S561K
NTC	10R