

Power Supplies
Single-phase input voltage
2.5 A

Plastic

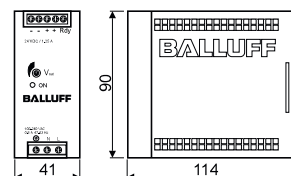


Class 2



Output current	2.5 A										
Output power	60 W										
Output voltage	24 V DC (SELV)										
Input voltage	100...240 V AC										
Ordering code	BAE0005										
Part number	BAE PS-XA-1W-24-025-002										
Input voltage range	85...264 V AC/90...375 V DC										
Inrush current	115 V AC < 30 A/230 V AC < 60 A										
Frequency range	47...63 Hz										
Input fuse	T2 A/250 V AC internal										
Voltage adjustment range	22,5...28,5 V DC										
Temperature coefficient max.	±0.03%/°C										
Ripple and noise	50 mV										
Holdup time	115 V AC > 20 ms/230 V AC > 30 ms										
Status indicator DC ON	Green LED										
Status indicator DC LOW											
Efficiency	89 %										
Response	Forward characteristic										
Switching frequency	> 55 kHz										
Input/output isolation voltage	3000 V AC										
Insulation resistance	100 MΩ										
Switch-on delay	< 1 s										
Ambient temperature	-40...+70 °C										
Derating	-2,5%/°C of +61 °C										
Parallel mode	Yes (with external diodes)										
Degree of protection as per IEC 60529	IP 20										
Ready output	DC OK output										
Cooling	Free convection										
Housing material	Plastic										
Weight	0.36 kg										
Approvals	CE, UL/cUL, TÜV										
Wiring diagram	<table border="1" style="margin-left: 20px;"> <tr> <td>L, N</td> <td>Input terminals</td> </tr> <tr> <td>PE</td> <td>PE connection</td> </tr> <tr> <td>Vo -</td> <td>Output terminal -</td> </tr> <tr> <td>Vo +</td> <td>Output terminal +</td> </tr> <tr> <td>Rdy</td> <td>Ready output</td> </tr> </table>	L, N	Input terminals	PE	PE connection	Vo -	Output terminal -	Vo +	Output terminal +	Rdy	Ready output
L, N	Input terminals										
PE	PE connection										
Vo -	Output terminal -										
Vo +	Output terminal +										
Rdy	Ready output										

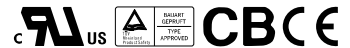
*SELV = Safety Extra Low Voltage





■ Features :

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Isolation class II
- LED indicator for power on
- No load power consumption<0.5W
- 100% full load burn-in test



SPECIFICATION

MODEL	DR-15-5	DR-15-12	DR-15-15	DR-15-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	2.4A	1.25A	1A	0.63A
	CURRENT RANGE	0 ~ 2.4A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A
	RATED POWER	12W	15W	15W	15.2W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	1000ms, 50ms/230VAC 1000ms, 50ms/115VAC at full load			
HOLD UP TIME (Typ.)	70ms/230VAC 16ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	77%	84%	83.5%	85%
	AC CURRENT (Typ.)	0.88A/115VAC 0.48A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 65A/230VAC			
PROTECTION	OVERLOAD Note.5	105 ~ 160% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved, design refer to EN50178			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC			
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH			
	EMC EMISSION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3			
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A			
	MTBF	1172.3K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	25*93*56mm (W*H*D)			
	PACKING	0.1Kg; 140pcs/15Kg/0.92CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>5. Constant current operation region is within 60% ~100% rated output voltage. Protection type for short circuit is hiccup mode and will recover automatically after fault condition is removed.</p>				



MODEL NO. :	HK-AW-240A063-CP	PAGE NO. :	2 OF 15
PART NO. :	HKSC-161215	ISSUED DATE:	2016.12.30
DESCRIPTION :	I.T.E. POWER SUPPLY	REV:	(A1)

1.0 INTRODUCTION

This document specifies a switching power supply with a output of +24V, and electronic process. The switching power supply will provide power for technology equipments including electrical business equipment. The adaptor meets the requirement of lead free and RoHS.

2.0 INPUT REQUIREMENTS

2.1 Input Voltage Range: 100(-10%)VAC to 240(+10%)VAC

2.2 Input Frequency Range: 47 Hz to 63 Hz

2.3 Input In-rush Current: 50A Max

2.4 Input Power Consumption at no-load : 0.1W Max

Test condition will be tested after No load operating for 30min then measure it.

2.5 Input Current: 0.4A Max

3.0 OUTPUT REQUIREMENTS

3.1 Output Voltage: +24V

3.2 Output Regulation: 22.8-25.2V

3.3 Output Load Range: 0-0.63A

3.4 Output Ripple & Noise: 200mV Max @20MHz bandwidth with
10UF/50V capacitance and 104/50V ceramic capacitor.

4.0 EFFICIENCY: $\geq 84.17\%$ @ average of 25/50/75/100% loads 115V&230VAC input

Test condition will be tested after full load operating for 30min then measure it.

5.0 LINE REGULATION: $\pm 2\%$ maximum

6.0 HOLD UP TIME: 10ms Min at 110VAC full load.

7.0 TURN ON TIME: 2S Max at 110VAC full load.



MODEL NO. :	HK-AW-240A063-CP	PAGE NO. :	3 OF 15
PART NO. :	HKSC-161215	ISSUED DATE:	2016.12.30
DESCRIPTION :	I.T.E. POWER SUPPLY	REV:	(A1)

8.0 TEMPERATURE COEFFICIENT: 0.05%/°C

9.0 DIELECTRIC STRENGTH (Hi-Pot) TEST

Primary to Secondary :AC 3000Vrms, 4 mA , 1 minute for type test, 2 second for production test.

10.0 INSULATION RESISTANCE

Primary to secondary: 50M OHM to 500VDC.

11.0 PROTECTION

11.1 Input Protection

The switching power supply has a 2 Amps inner current fuse to protect itself.

11.2 Output Protection

11.2.1 Output Current:

Overload conditions shall decrease the output voltage. Removal of an output overload shall provide automatic recovery for the output voltage.

11.2.2 Short Circuit Protection: Auto Recovery.

MODEL NO. :	HK-AW-240A063-CP	PAGE NO. :	4 OF 15
PART NO. :	HKSC-161215	ISSUED DATE:	2016.12.30
DESCRIPTION :	I.T.E. POWER SUPPLY	REV:	(A1)

12.0 ENVIRONMENTAL CONDITIONS

The switching power supply can withstand the following environmental conditions:

12.1 Storage Temperature:-20°C ~ +70 °C

Relative Humidity: 10% ~ 95%

12.2 Operation Temperature:0°C~40°C

Relative Humidity: 10%~95%

13.0 EMI / EMC

The switching power supply has designed to meet the following safety standards:

FCC PART 15 Class B

CISPR 22:2008(Ed 6.0)AS/NZS CISPR 22:2009+A1:2010; CISPR 24:2010(Ed 2.0)AS/NZS CISPR 24:2013

EN55022:2010/AC:2011 IEC61000-4-3:2006/A1:2007/A2:2010

EN61000-3-2:2014 IEC61000-4-4:2012

EN61000-3-3:2013 IEC61000-4-5:2014

EN55024:2010 IEC61000-4-5:2014

IEC61000-4-2:2008 IEC61000-4-6:2013

IEC61000-4-8:2009

IEC61000-4-11:2004

14.0 RELIABILITY AND QUALITY CONTROL

14.1 Burn-in

The burn-in test will be performed at least 2 hours at 40 centigrade degrees under full load condition.

14.2 MTBF

When the operation is complying with this specification, the switching power supply's MTBF will be 50,000 hours at 25 centigrade degrees.

15.0 SAFETY

The switching power supply has designed to meet the following safety standards:

UL 60950-1, 2nd Edition,2014-10-14 CSA C22.2 NO.60950-1-07, 2nd Edition,2014-10

EN60950-1:2006+A11+A1+A12+A2 BS EN60950-1:2006+A2

AS/NZS 60950.1:2015