

# Emergency Lighting Central Power Systems



## Introduction

Bardic by Honeywell central emergency power systems are designed to comply with BS EN 50171: 2001.

This European Standard specifies the general requirements for central power supply systems for an independent energy supply to essential safety equipment. This standard covers systems permanently connected to a AC supply, that use batteries as the alternative power source.

The central power supplies are intended to energise emergency escape lighting in the case of failure of the normal supply, and may be suitable for energising other essential safety equipment.

Bardic by Honeywell offers both AC/DC and AC/AC emergency lighting Central Power Supplies.



## Battery Choices

The main points to consider when selecting a battery type are the required life of the installation and the pattern of investment required i.e. is a lower initial cost more important than the total cost over the life of the system, inclusive of maintenance. These considerations determine which battery may be most suitable. For both AC/DC and AC/AC central power systems the following choices are available:

### Gas Recombination Lead Acid

- Compact design
- Up to 10 year design life at 20°C
- Low initial cost
- Low maintenance costs – no special battery room needed

### Vented Lead Acid Planté

- Designed for 20 years life
- Relatively high cost
- Requires regular maintenance
- Ventilated battery room required

### Vented Nickel Cadmium Alkaline

- Long design life – 20 years
- Resistance to abuse and temperature variations
- Requires regular maintenance
- Ventilated battery room needed

## AC/DC Emergency Lighting Central Power Supplies

The following options are available in 24 volt, 50 volt and 110 volt as standard. Standby periods available as standard are one, two and three hours with loads of up to 100amps. The following modes of operation are available:

### Q Circuit

This is a system that is used in applications where remote hold-off or changeover devices will be used. Common applications include hospital theatre lighting and fire alarm power units.

### Non-Maintained

A non-maintained central emergency power system will supply a DC source to the luminaires only in the event of an AC supply failure. Factory-fitted or remotely-mounted sub-circuit fire alarm or phase monitoring relays can also achieve control of the emergency lighting.

### Maintained

In maintained systems a supply is provided at the output at all times. The output is AC via an isolating transformer whilst the mains input AC supply is present, and automatically changes over to DC during mains input AC supply failure.

## Range available

<b>Voltage</b>	24, 50 and 110		
<b>Battery Type</b>	Sealed Lead	Vented Lead	Nickel Cadmium
<b>Standby Period</b>	1 hour	2 hour	3 hour
<b>Mode Of Operation</b>	Q Circuit	Non Maintained	Maintained
<b>Max Load (watts/voltage)</b>	2400 / 24	5000 / 50	11000 / 110

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by Honeywell

## AC/AC Emergency Lighting Central Power Supplies

AC Emergency Lighting Systems are designed to provide emergency lighting of up to 3hrs in the range, 600VA to 20KVA single phase in single phase out and 10KVA to 50kVA three phase in, three phase out as standard. If requirement is outside this range please consult with our technical sales office.

The principal advantage of AC systems is that the wide range of light fittings available for use with normal mains can be used with the inverter. This results in higher light levels being achieved when using AC systems than achieved using the traditional low voltage emergency luminaires. When selecting the inverter required it is essential that the total VA and total running wattage be calculated.

During mains healthy conditions, AC systems supply the maintained load via a bypass circuit within the inverter systems. When the mains fails the battery voltage is converted to AC by the inverter and a good quality sine wave at 230 volt AC is supplied to the load.

## Single Phase In / Single Phase Out

Model	Unit kVA	Unit kW	Unit cabs h x w x d	Battery cabs h x w x d
ACE/V/600VA/500/3	0.6	0.5	1 x 1425 x 600 x 400	N/A
ACE/V/1K/900/3	1	0.9	1 x 1425 x 600 x 400	N/A
ACE/V/1K5/1300/3	1.5	1.3	1 x 800 x 600 x 400	1 x 1350 x 600 x 400
ACE/V/2K/1700/3	2	1.7	1 x 800 x 600 x 400	1 x 1350 x 800 x 400
ACE/V/2.5K/2100/3	2.5	2.1	1 x 800 x 600 x 400	1 x 1350 x 800 x 400
ACE/V/3K/2600/3	3	2.6	1 x 1350 x 600 x 400	1 x 1550 x 800 x 400
ACE/V/4K/3400/3	4	3.4	1 x 1350 x 600 x 400	1 x 1750 x 700 x 700
ACE/V/5K/4300/3	5	4.3	1 x 1350 x 600 x 400	1 x 1750 x 700 x 700
ACE/V/6K/5100/3	6	5.1	1 x 1350 x 800 x 400	2 x 1750 x 700 x 700
ACE/V/7K/6000/3	7	6.0	1 x 1350 x 800 x 400	2 x 1750 x 700 x 700
ACE/V/8K5/7200/3	8.5	7.2	1 x 1350 x 800 x 400	2 x 1750 x 700 x 700
ACE/V/10K5/8900/3	10.5	8.9	1 x 1550 x 800 x 400	2 x 1750 x 700 x 700
ACE/V/12K5/10600/3	12.5	10.6	1 x 1550 x 800 x 500	2 x 1750 x 700 x 700
ACE/V/15K/12800/3	15	12.8	1 x 1750 x 800 x 500	3 x 1750 x 700 x 700
ACE/V/20K/17000/3	20	17.0	1 x 1750 x 800 x 500	4 x 1750 x 700 x 700

## 3Ph in / 3Ph out (3 Phase In / 3 Phase Out)

Model	Unit kVA	Unit kW	Unit cabs h x w x d	Battery cabs h x w x d
ACE/V/10K/8500/3	10	8.5	1 x 1750 x 800 x 500	2 x 1750 x 700 x 700
ACE/V/15K/12750/3	15	12.8	1 x 1750 x 800 x 500	3 x 1750 x 700 x 700
ACE/V/20K/17000/3	20	17.0	2 x 1550 x 800 x 500	4 x 1750 x 700 x 700
ACE/V/25K/21250/3	25	21.3	2 x 1550 x 800 x 500	4 x 1750 x 700 x 700
ACE/V/30K/25500/3	30	25.5	2 x 1750 x 800 x 500	5 x 1750 x 700 x 700
ACE/V/35K/29750/3	35	29.8	2 x 1750 x 800 x 500	5 x 1750 x 700 x 700
ACE/V/40K/34000/3	40	34.0	2 x 1950 x 800 x 500	6 x 1750 x 700 x 700
ACE/V/45K/38250/3	45	38.3	2 x 1950 x 800 x 500	7 x 1750 x 700 x 700
ACE/V/50K/42500/3	50	42.5	3 x 1950 x 600 x 500	8 x 1750 x 700 x 700



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