

## For Axle Counter and General Applications



- The DD820 is a highly versatile integrated power system which can be configured for a wide range of uses.
- The Axle Counter Power Supply unit is built around the proven DD763 rectifier module. Offering N+1 redundancy, together with monitoring functions and automatic battery capacity testing.
- The system contains hot-swappable battery trays and rectifiers allowing for easy maintenance and/or replacement.

- Network Rail PADS approved
- 60VDC and 48VDC output options available
- Up to 1320W N+1 of power continuous
- 110/230VAC and 230/400VAC input options
- Modular design for easy upgrade or swap out
- Hot-swappable DD763 power modules
- Convection cooled
- Internal removable battery trays or external battery options
- Rugged wall-mountable or free-standing cabinet

### INPUT

AC Voltage : 110VAC ± 10%, 230VAC ± 15% or 400VAC ± 15% (see variants)  
 Current : 5.0A@110VDC, 2.5A@230VAC or 1.5A@400VAC per power module  
 Frequency : 50-60Hz

### OUTPUT

Current/Power : 60VDC 440W to 1320W N+1 or 48VDC 440W to 1320W N+1  
 Voltage Range : 48-60VDC or 60-72VDC  
 Current Share : <10% variation between DD763 modules  
 Noise : <7mV rms  
 Psopho Noise : <2mV rms  
 Efficiency : >90% at Full Load  
 Battery : Dual 5Ah internal tray option or external batteries can be used

### VARIANT OPTIONS

Output	Battery	Input	NR Cat No.
60VDC 440W N+1	Internal 2 x 5Ah	110 or 230VAC	086/001950
60VDC 880W N+1	Internal 2 x 5Ah	110 or 230VAC	086/001951
60VDC 1320W N+1	Internal 2 x 5Ah	110 or 230VAC	086/001952
60VDC 440W N+1	External *	110 or 230VAC	086/001953
60VDC 880W N+1	External *	110 or 230VAC	086/001954
60VDC 1320W N+1	External *	110 or 230VAC	086/001955
60VDC 440W N+1	Internal 2 x 5Ah	230 or 440VAC	086/001930
60VDC 880W N+1	Internal 2 x 5Ah	230 or 440VAC	086/001931
60VDC 1320W N+1	Internal 2 x 5Ah	230 or 440VAC	086/001932
60VDC 440W N+1	External *	230 or 440VAC	086/001933
60VDC 880W N+1	External *	230 or 440VAC	086/001934
60VDC 1320W N+1	External *	230 or 440VAC	086/001935
48VDC 440W N+1	Internal 2 x 5Ah	110 or 230VAC	086/00156
48VDC 880W N+1	Internal 2 x 5Ah	110 or 230VAC	086/001957
48VDC 1320W N+1	Internal 2 x 5Ah	110 or 230VAC	086/001958
48VDC 440W N+1	External *	110 or 230VAC	086/001959
48VDC 880W N+1	External *	110 or 230VAC	086/001960
48VDC 1320W N+1	External *	110 or 230VAC	086/001961

\* Batteries not included, but can be supplied if requested

**PROTECTION**

DD820 System	Input	1x 16A 2-pole MCB
	Output	2 x 32A 1-pole MCBs
	Battery	2 x 32A 1-pole MCBs
DD763	Input	Internal 4A HRC fast fuse
	Output	External 16A A/S fuse

**SAFETY**

Insulation	Input-Earth	>1.5kV rms
	Input-Output	>2.2KV rms
	Output-Earth	>500VDC
Earth Leakage		<0.9mA per DD763 module

**MECHANICAL/ENVIRONMENTAL/RELIABILITY**

Dimensions	500mm High x 360mm Deep x 560mm Wide (630mm wide with mounting brackets)
Weight	<58kg (with internal 5Ah batteries) <45kg (without internal batteries)
IP Rating	IP31 to EN50125 part 3
Cooling	Natural convection
Temperature	
Operation	-10°C to +50°C (up to +60 °C with reduced load)
Storage	-25°C to +60°C
Compensation	0°C to 35°C
Relative Humidity	85% to 35°C, 75% >35°C
MTBF	>386,000 hours (calculated)

**ALARMS**

DD820 System	AC on, Load 1, Load 2, Battery 1 and Battery 2 (LEDs)
DD763 Modules	Rectifier Fail and Power On (LEDs)
DD761U Monitor	High Volts, Low Volts, Batteries Charged, Test in Progress and Batteries Failed Test (LEDs)
	Output Volts, Battery Current, Load Current and Battery Ah Setting (LCD Display)
Alarm Relays	Mains Fail, Rectifier Fail, Volts and Low Volts

**COMPLIANCES/STANDARDS**

EMC Transmitted	Surges	BS EN61000-4-5
And Railroad	Flicker	BS EN61000-3-3
	Harmonics	BS EN61000-3-2
	Emissions	BS EN61000-6-3
	Immunity	BS EN61000-6-4
	Rail	BS EN50121-4:2006
Voltage		EN60950 low voltage directive (LVD)

**ALSO SEE COMPACT OPTIONS**

086/001989 DD835-1 60V 1.5A Axle-Counter power supply  
 086/001990 DD835-2 60V 2.0A Axle-Counter power supply