



Intelligent (smart) single bay fast charger

- Suitable for use with DR36s & DR202s (or similar) standard form factor smart batteries.
- Desktop Charger

Input Characteristics

Input Voltage / Frequency		Input Current	Power
minimum	maximum	maximum	maximum
19 V DC	25 V DC	2100 mA limited	~ 55 W

Output Characteristics

Output Charge Voltage		Tolerance	Output Current	Power	Tolerance
minimum	maximum	maximum	maximum	maximum	Efficiency
8 V DC	17.5 V DC	± 1 %	4000 mA	~ 50 W	> 90 %
					maximum
					± 5 %

Operating Temperature		Storage Temperature		Relative Humidity
minimum	maximum	minimum	maximum	no Condensation
0 ° C	40 ° C	-40 ° C	70 ° C	95 %

Electrical Safety Specifications

Short Circuit	Reverse Voltage	Input Current	Housing Isolation	Cables
continuous	continuous	none	none	n/a

Housing Specifications

Material	Length	Width	Height	Weight (approx.)	Operation Display
PC plastic UL94-V0	100 mm	100 mm	40 mm	180 g (exc. PSU)	red & green LED
Over Temperature		Dependent upon battery NTC			
Thermal		According to EN60950			

Reliability

Mean Time Before Failure (MTBF)	Component de-rating
MIL-HDBK217F 20 000 hours	Semiconductor junction temperatures shall not exceed the manufacturer's maximum thermal rating.

Charger Specifications

Description	Parameter	minimum	typical	maximum
Charge Voltage	SMBus controlled	8.0 V DC		17.5 V DC
Primary charge termination	SMBus controlled			
Fast charge current	SMBus controlled			4000 mA
Back up charge termination	temperature			
Maintenance charge current			18 mA	
Temperature cutoff (lower)	automatic switch to maintenance charge	-1 ° C	0 ° C	1 ° C
Temperature cutoff (upper)		53 ° C	55 ° C	57 ° C
Charge time DR36s (4500 mAh)			1.5 hours	
Charge time DR202s (7200 mAh)			2.0 hours to 90% 2.5 hours to full	
Charge times will vary according to battery cell chemistry and battery's own SMBus provided charge algorithm. Empirical (in-situe) testing is the best way to more accurately determine charge times.				

Battery Specifications

Battery type	Cell chemistry	Nominal voltage	Typical capacity	Internal electronic
DR36s	NiMH	12.0 V	4500 mAh	SMBus & safety components
DR202s	Lilon	10.8 V	7200 mAh	SMBus & safety components

please consult individual battery manufacturers data sheets for more explicit information

World Wide Approvals and Green Procurement

Europe
CE
RoHS 2002 / 95 EC and WEEE 2002 / 96 / EC

External Power Supply Specifications

Output @ 0 mA	24 V DC	Auto sensing input voltage	Output @ 2.3 A	24 V DC
country	minimum	maximum	frequency	approvals
USA	100 V AC	240 V AC	60 Hz	UL, CSA
Europe	100 V AC	240 V AC	50 Hz	CE, VDE, GS, ÖVE, KEMA, SEV, CEBEC, SETI, UTE, DEMKO, NEMKO, SEMKO
UK	100 V AC	240 V AC	50 Hz	BATB, BSI

International Standards

Conducted and Radiated Emissions	Electro Static Discharge (ESD)	Radiated Electro Magnetic Fields (RS)	Electrical Fast Transient burst (EFT)
FCC part 15 Class B, EN55022 Class B	EN61000-4-2	EN 61000-4-3	EN61000-4-4
Lightning / Surge	Conducted Radio Frequency Disturbances (CS)	Power Frequency Magnetic Field	Voltage Dips/ Short Interruption/ Variations
EN61000-4-5	EN61000-4-6	EN61000-4-8	EN61000-4-11

Ordering Codes

Product	Part Number	Internal Code	Internal Code	Input Cable Code
	DR	36	SMB	TNT
				xxx

Contact Addresses

Germany / Headquarters	France	USA	Hong Kong / China
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