Data Sheet *CH020/EU/UK/US*

Intelligent (smart) fast charger for NJ1020 & NI2020 standard form factor smart batteries

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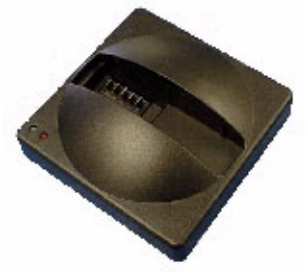

Input Voltage	
Minimum	maximum
19 V DC	25 V DC

Output Voltage	
minimum	maximum
8.0 V	17.8 V

Tolerance
max. + / -
1 %

Input Power	
Current	Power
2100 mA	~ 53 W

Output Power		
Current	Power	Efficiency
4000 mA	~ 50 W	> 90 %

Operating Temperature	
Minimum	maximum
0 ° C	40 ° C

Storage Temperature	
minimum	maximum
- 40 ° C	70 ° C

Relative Humidity
no condensation
95 %

Electrical Safety Specifications				
Short Circuit	Reverse Voltage	Input Current	Housing Isolation	Cables
Continuous	continuous	none	none	n/a

Mechanical Specifications				
MTBF (MIL-HDBK217F)	Housing Material	Thermal	Over Temperature	Cable Mounting
20,000 hours	ABS plastic UL94-V0	EN60950	Dependent upon battery NTC	n/a

Housing Specifications				
Length	Width	Height	Weight (approx.)	Operation Display
100 mm	100 mm	40 mm	180 gm (exc. PSU)	red & green LEDs

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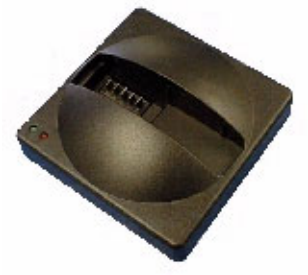

Connector and Cable Specifications				
Input connector	Input cable length	Output connector	Output cable length	Cables
DIN 45323	n/a	AMP 787443-1	n/a	n/a

Electro Magnetic Interference (EMI) Specifications	
Conducted and Radiated Emissions	EN50082
Interference Immunity	EN50081

Charger Specifications				
Description	Parameter	minimum	typical	maximum
Charge Voltage	SMBus controlled	8.0 V		17.8 V
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 NJ1020 (3850 mAh)			1.5 hours	
Charge time NI2020 (6000 mAh)			1.5 hours to 90% 2.5 hours to full	
Charge times will vary according to battery cell chemistry, initial state of charge and battery calibration status. Empirical testing is the best way to more accurately determine charge times.				

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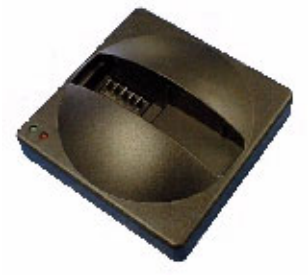

Battery Specifications				
Battery type	Cell chemistry	Nominal voltage	Typical capacity	Internal electronic
NJ1020	NiMH	12.0 V	3850mAh	SMBus & safety components
NI2020	LiIon	10.8 V	6000mAh	SMBus & safety components
please consult individual battery data sheets for more detailed information				

Test Specifications				
Cold	Dry Heat	Damp Heat	Shock	Vibration
IEC68-2-1	IEC68-2-2	IEC68-2-3	IEC68-2-27 & -29 & -32	IEC68-2-6
all values quoted measured at 25 ° C unless otherwise stated				

Worldwide Approvals	
Norms met and certification attained	CE
Other norms adhered to and / or applied	89/336/EEC & 92/31/EEC

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

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