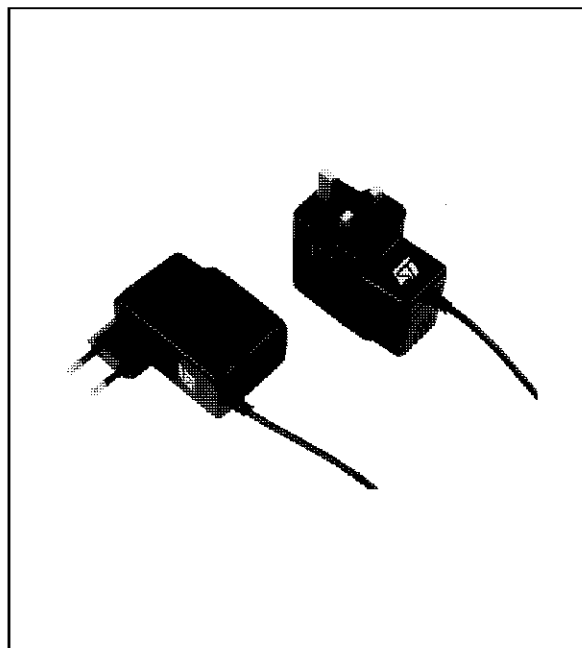


BATTERY CHARGER

Type	V _{in}	V _{out}	I _{out}
GSAC-8.507BC	230 V _{RMS}	8.5 V	700 mA

FEATURES

- Charge of NiCd or NiMH batteries
- Switch mode constant current generation
- Three level charging current (fast, trickle, zero charging current)
- Overcharge detection by $-\Delta V$ and $\Delta T/\Delta t$ under internal microprocessor control
- No discharge of the battery when charger is turned off
- Initial trickle charge for deeply discharged batteries
- Maximum battery voltage protection
- Maximum battery temperature protection
- Timer back up protection
- Output short circuit protection
- Detection of fault battery
- Charge status displayed by LED
- European or UK plug

**DESCRIPTION**

The GSAC-8.507BC is a high efficiency battery charger for connection to the mains and to be used with 5 cells NiCd and NiMH batteries.

Two versions of the INPUT PLUG ADAPTOR are available:

EUROPEAN VERSION : GSAC-8.507BC-1 (ORDERING NUMBER)

UK VERSION : GSAC-8.507BC-2 (ORDERING NUMBER)

(See pag. 3 for mechanical data)

GSAC-8.507BC

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V_{in}	AC Input Voltage	$I_{ch} = 0$ to 0.7A	187	230	264	Vrms
I_{chf}	Fast Charge Current	$V_{in} = 187$ to 264 Vrms $V_{battery} = 5$ to 8.2V	0.65	0.70	0.75	A
I_{cht}	Trickle Charge Current	$V_{in} = 187$ to 264 Vrms $V_{battery} = 1$ to 5V or $0^{\circ}\text{C} < T_{batt} < 10^{\circ}\text{C}$ or charge completed	20	30	40	mA
C	Returned Charge	$V_{in} = 187$ to 264 Vrms		95		%
V_{batt}	Maximum Battery Voltage Protection	$V_{in} = 187$ to 264 Vrms $I_{ch} = 0.7\text{A}$	8.2	8.5	8.7	V
T_{co}	Battery Temperature Cut Off	$V_{in} = 187$ to 264 Vrms $I_{ch} = 0.0\text{A}$		50		$^{\circ}\text{C}$
t_{out}	Time Out Protection Duration	$V_{in} = 187$ to 264 Vrms $I_{ch} = 0.7\text{A}$		2		hours
f_s	Switching Frequency	$V_{in} = 187$ to 264 Vrms $I_{ch} = 0.03$ to 0.7A		100		kHz
T_{op}	Operating Ambient Temperature Range		-20		+60	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range		-25		+85	$^{\circ}\text{C}$

Status	Condition
Red ON	- Fast charge ($I_{ch} = 0.7\text{A}$)
Green ON	- Charge Completed ($I_{ch} = 0.03\text{A}$) - Timer elapsed
Red Flashing	Anomalous battery conditions ($I_{ch} = 0.0\text{A}$) - Initial $T_{battery} < 0^{\circ}\text{C}$ - Initial $T_{battery} > 40^{\circ}\text{C}$ - $T_{battery} > 50^{\circ}\text{C}$ - Faulty battery
Green Flashing	($I_{ch} = 0.03\text{A}$) - Initial charge of deeply discharged batteries - $0^{\circ}\text{C} < T_{batt} < 10^{\circ}\text{C}$
OFF	Battery not connected

NOTES

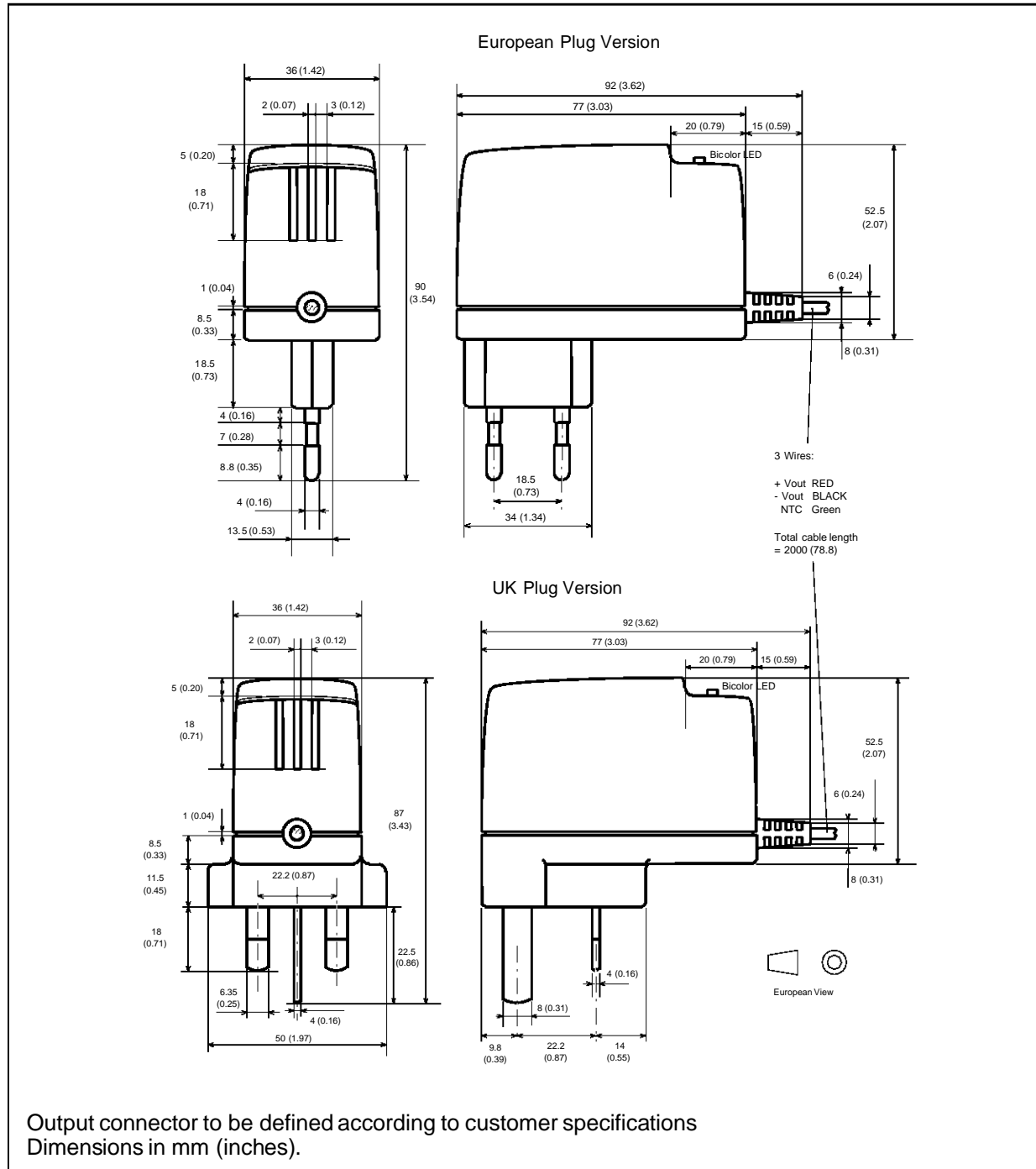
1 - The battery temperature detection is a function of the characteristics of the NTC resistor used inside the battery pack. Please consult factory.

2 - Different fast charge and trickle charge currents,

and different time out are available on request (Maximum charge current cannot exceed 1A).

3 - For connector to the battery pack please consult factory.

CONNECTION DIAGRAM AND MECHANICAL DATA



Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics – All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.