

BATTERY CHARGER

Type	V _i	V _o	I _o
GSCC-8.507BC	10.8 to 16 V	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

**DESCRIPTION**

The GSCC-8.507BC is a high efficiency battery charger for IN CAR application to be used with 5 cell NiCd or NiMH batteries.

Two versions of the INPUT PLUG ADAPTOR are available:

WASHER TIP VERSION: **GSCC-8.507BC-E** (Ordering Number)

SPRING-LOADED TIP VERSION: **GSCC-8.507BC-A** (Ordering Number)

(See pag. 3 for mechanical data)

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

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V_i	Input Voltage	$I_{ch} = 0$ to 0.7A	10.8	14.4	16	V
I_{chf}	Fast Charge Current	$V_i = 10.8$ to 16V $V_{battery} = 5$ to 8.2V	0.65	0.70	0.75	A
I_{cht}	Trickle Charge Current	$V_i = 10.8$ to 16V $V_{battery} = 1$ to 5V or $0^{\circ}\text{C} < T_{batt} < 10^{\circ}\text{C}$ or charge completed	20	30	40	mA
C	Returned Charge	$V_i = 10.8$ to 15V		95		%
V_{batt}	Maximum Battery Voltage Protection	$V_i = 10.8$ to 16V $I_{ch} = 0.7\text{A}$	8.2	8.5	8.7	V
T_{co}	Battery Temperature Cut Off	$V_i = 10.8$ to 16V $I_{ch} = 0.0\text{A}$		50		$^{\circ}\text{C}$
t_{out}	Time Out Protection Duration	$V_i = 10.8$ to 16V $I_{ch} = 0.7\text{A}$		2		hours
f_s	Switching Frequency	$V_i = 10.8$ to 16V $I_{ch} = 0.03$ 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

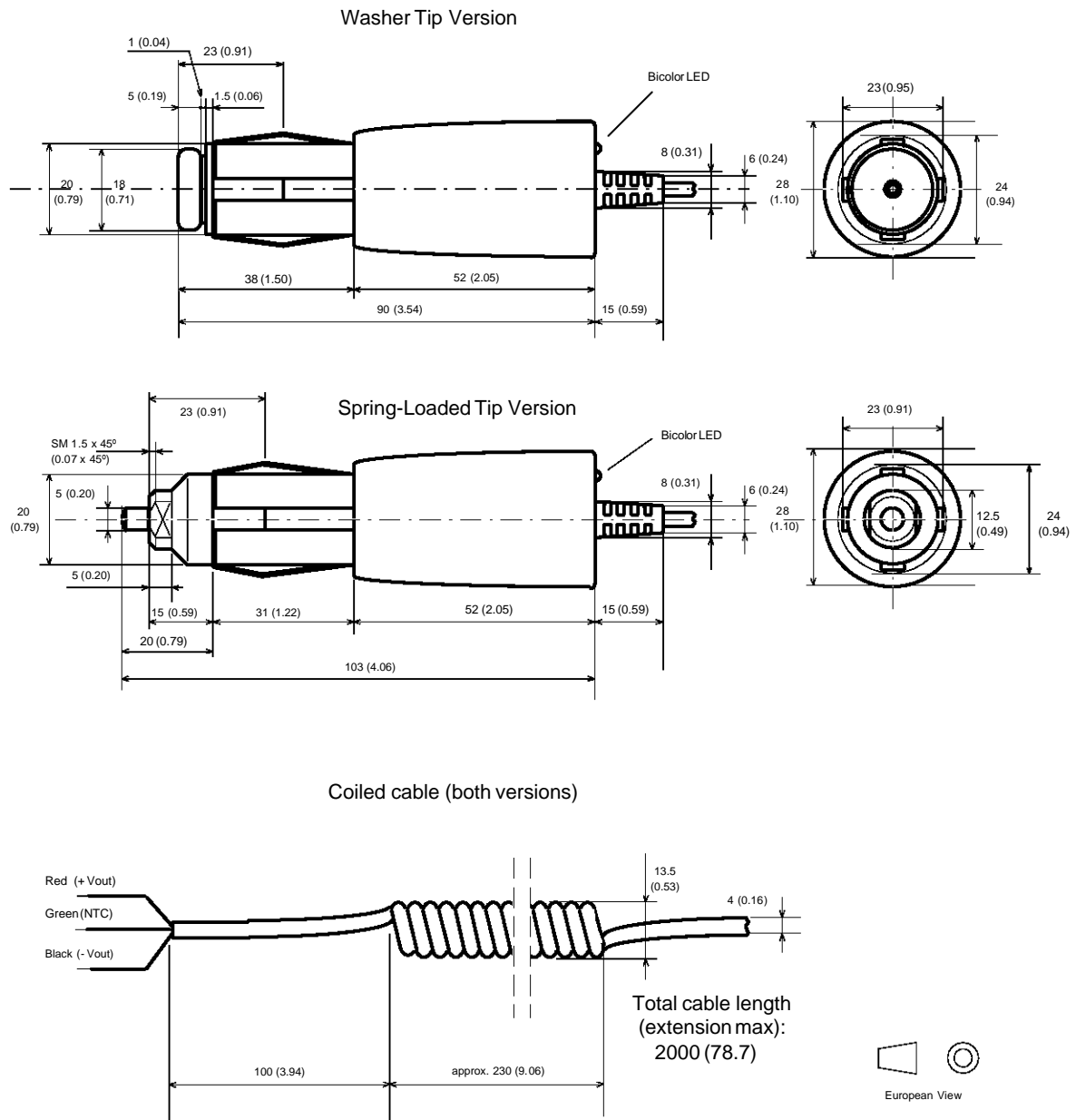
1 - The battery temperature detection is a function of the characteristics of the NTC resistor used inside the battery pack. Please consult factory.

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



Output connector to be defined according to customer specifications
Dimensions in mm (inches).

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