SMG-1212-360-CM

Datasheet and Owners Manual

Switch Mode DC-DC 20A Charger
Galvanic Isolated
intelligent
(MotionDetect)

Features

- Galvanic isolated input and output
- Easy installation
- Very low power consumption
- Integrated vibration detection

Purpose

The SMG360i(M) – hereinafter the SMG – is a galvanic isolated converter intended for charging batteries.

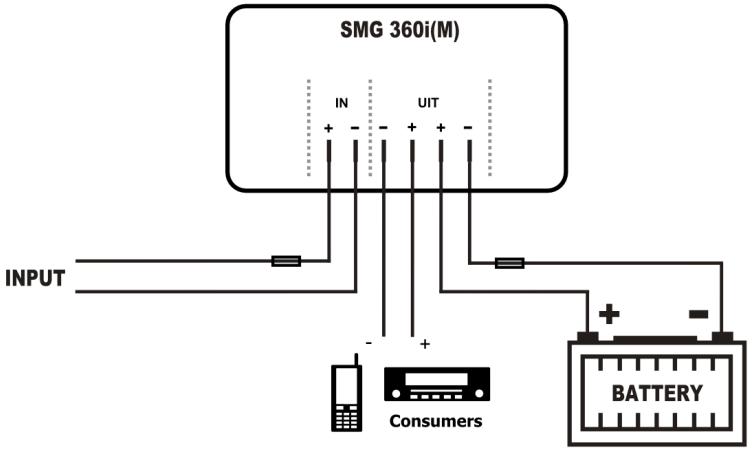
includes vibration detection
(the SMG can detect whether a vehicle is moving or not)

Installation

Warnings:

- The product must only be connected by skilled fitters/mechanics who are aware of the regulations for working with high battery voltages.
- The product may be damaged if you use inferior connection material and/or wiring that is too thin.
- A short circuit between the positive and negative terminals of the battery may cause severe damage to your system.
- Always use fuses of the correct value.

Wiring diagram



Operation

The SMG has three different modes: **Charge Standby** and **Off**

Once connected, the converter will be in the "Off mode". There will be 0 V on the output, the primary/yellow LED will flash with a 1 Hz frequency and the secondary/green LED is set to Off.

The converter will be set to the "Charge mode" if the following conditions are met:

- The primary voltage is above 11.8 V for at least 5 seconds
- Vibrations have been detected (see the Configuration Table for the operation of the vibration detection). (This only applies to the SMG360iM model)

The converter sends out 14.4 V in the "Charge mode" and both the primary/yellow and the secondary/green LED are on.

When a voltage of 14.2 V is measured on the output, a timer will start that will run for an hour. After this hour, the SMG will be set to the "Standby mode". The SMG sends out 13.8 V in the "Standby mode" and both the primary/yellow and the secondary/green LED are on.
The SMG will only again be switched to the "Charge mode" if:

- The voltage on the output falls below 13.2 V (for 5 seconds).
- The SMG has been in the "Standby mode" for 24 consecutive hours.

The converter will again be set to the "Off mode" from both the "Charge mode" and "Standby mode" if:

- The voltage on the primary side falls under 11.6 V for 10 seconds.
- The voltage on the primary side falls under 11.8 V for 5 minutes.
- Vibrations are no longer detected (see the Configuration Table for the operation of the vibration detection). (This only applies to the SMG360iM model)

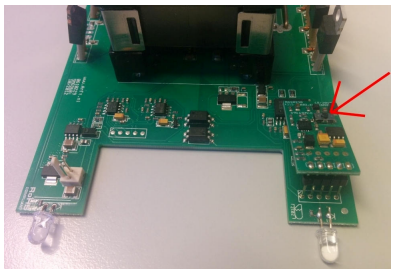
Configuring

The SMG360iM can be set on two fronts:
1. Its sensitivity.
2. The time that the SMG remains switched on after detecting the last vibration.

When the programming button of the SMG has been pressed for 4 seconds, LED 1 will light up briefly. As soon as this happens, the button must be released.

The button must again be pressed shortly to configure the correct configuration number. The LED will light up as feedback. This means that configuration #1 has been selected at that moment. If the user again presses the button briefly, configuration #2 will have been selected, etc.

When the button is not pressed for 4 seconds, the LED will again display the set position. (Example: Configuration #4 has been set by the user, the LED will flash 4 times.)



Location of sensitivity adjustment switch

Configuration table

#	Sensitivity	Time (sec)
1	1 (most sensitive)	1
2		5
3*		30
4	2	1
5		5
6		30
7	3	5
8		30
9		60
10	4	5
11		30
12		60
13	5 (least sensitive)	30
14		60

* factory setting

Technical details

Input

Supply voltage	12 V DC
Input voltage range	9.0 V ... 18.0 V DC
Start-up voltage	>11.8 V DC

General

Connections	6 x 6.3 mm faston
Cable advice	2.5 mm²
h x b x d	80 x 132 x 191 mm
Weight	1317 g
Operational temperature	-10 °C ... +40 °C
Standby current	±23 mA

Output

Voltage	Charge	14.4 V DC
	Rest	13.8 V DC
Under voltage limit	Fast	<12.6 V DC
	Slow	<12.8 V DC
Charge transition voltage		<13.2 V DC
Charge forcing		every 24 hours
Stabilization		±1 %
Current limit		±20 A

Part No: SMG-1212-360-CM

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