SAMLEX EUROPE® B.V.

IDC360iM 1224 V 2.0

Switch Mode Converter
Galvanic Isolated
360
intelligent
MotionDetect

Owners Manual

IDC360iM 1224 V2.0 - 20211103 EN

Features

IDC360iM 1224 V 2.0

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

Purpose

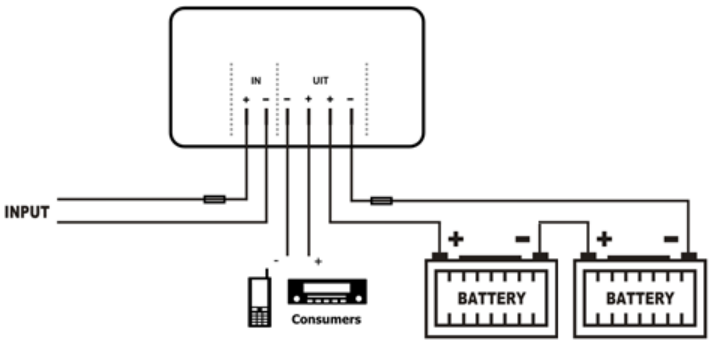
The IDC360iM 1224 V 2.0 is an intelligent galvanically isolated inverter that is intended for the correct charging of a secondary battery system. The IDC360iM 1224 V 2.0 is equipped with voltage detection and a sensor that can detect vibrations. Based on the measured voltage and /or vibrations, the IDC360iM 1224 V 2.0 can detect whether a vehicle is 'on'.

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 IDC has three different modes: **Charge, Standby** and **Off**.

After connecting, the converter will be in "Off mode" if the voltage is lower than 12.6V. There is no voltage on the output and the primary/yellow LED flashes at a frequency of 1Hz. The secondary/green LED is off.

The converter will enter "Charge Mode" if at least one of the following two conditions is met:

- Vibration is detected AND the input voltage is (5sec) above 11.8V.
- There is no vibration AND the input voltage is (5sec) above 12.6V.

The converter delivers 28.8 V at the output in the "Charge mode" and both the primary/yellow and the secondary/green LED are on.

When a voltage of 28.4 V is measured on the output, a timer will start and runs for an hour. After this hour, the IDC will be set to the "Standby mode". The IDC output will be 27.4 V in the "Standby mode" and both the primary/yellow and the secondary/green LED are on.
The IDC will return to the "Charge mode" if:

- The voltage on the output falls below 26.4 V (for 5 s).
- The IDC has been in the "Standby mode" for 24 continuous hours.

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

- There is vibration AND the input voltage is (5min) below 11.8V.
- There is vibration AND then the input voltage is (10sec) below 11.6V.
- There is no vibration AND then the input voltage is (10min) below 12.4V.
- There is no vibration AND then the input voltage is (3sec) below 12.0V.

Configuring

The IDC360iM 1224 can be set on two fronts:

1. The sensitivity.
2. The time the IDC remains switched on after detecting the last vibration.

When the programming button of the IDC 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 short 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 short, configuration #2 is 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.)

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	12V DC
Input voltage range	9,0V … 18,0V DC
Start-up voltage with vibration Start-up voltage without vibration	> 11,8V DC (5 sec) > 12,6V DC (5sec)
Undervoltage limit with vibration	fast (10 sec) <11,6V DC slow (5 min) <11,8V DC
Limite de sous-tension sans vibration	fast (3 sec) <12,0V DC slow (10 min) <12,4V DC

General

Connections	6 x 6,3mm faston
Cabel advice**	2,5 mm2 ~ 6 mm2
h x w x d	80 x 132 x 191mm
Weight	1317g
Operational temperature	-10°C … +40°C

Output

Voltage	Charge	28,8V DC
	Rest	27,4V DC
Charge transition voltage		<26,4V DC
Charge forcring		every 24 hours
Stability		±1%

Current/fuse

Current output	±10A
Standby current output	±5 mA
Current limit input	±20A
Standby current input	±20 mA
External fuse output	32V/15A
External fuse input	32V/30A

** depending on cable length, always use fuses