Think green
use solar !

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SolteQ

Anti theft alarm system
for PV-Modules
and inverters

SolteQ-DSS110

... for a maximum of safety !

Anti theft sensor DSS110

Function

Safe your precious solar modules and inverters !

Do not allow that your modules will be go away over night !

You lock your car, interlock the doors of your home three times and leave your modules easilie on the roof ?

With the new **Solarmodule-Antitheft-System SolteQ-DSS110** every unauthorisied move of the modules will be detected safe and quick.

### Double safety!   *The new PV-Sensor DSS110*

On each module a sensor will be fixed. In cyclical periods the **ID-Code** of each Sensor will be proved by the central station. This way every sensor will be checked permanently of his presence. Even if one ore more sensors do not answer with theire spezial ID-Code, a alarm status will be registrated.
In addition there is a movement and angle sensor in each sensor. Even if the sensors will be moved or there is a change in his physical angle, in the same time a alarm will be given out. Also the data cable system is **absolutely unmanipulable**.

So there can be given out a loud alarm by a sirene, wich will scare away the thiefes quick and safe.
Or a quite alarm can be activated, by dialing a telephone number or sending a SMS, and the thieves will be catched while doing theire „work". This way not one module will be lost.

1m

56x31x12 mm

1m
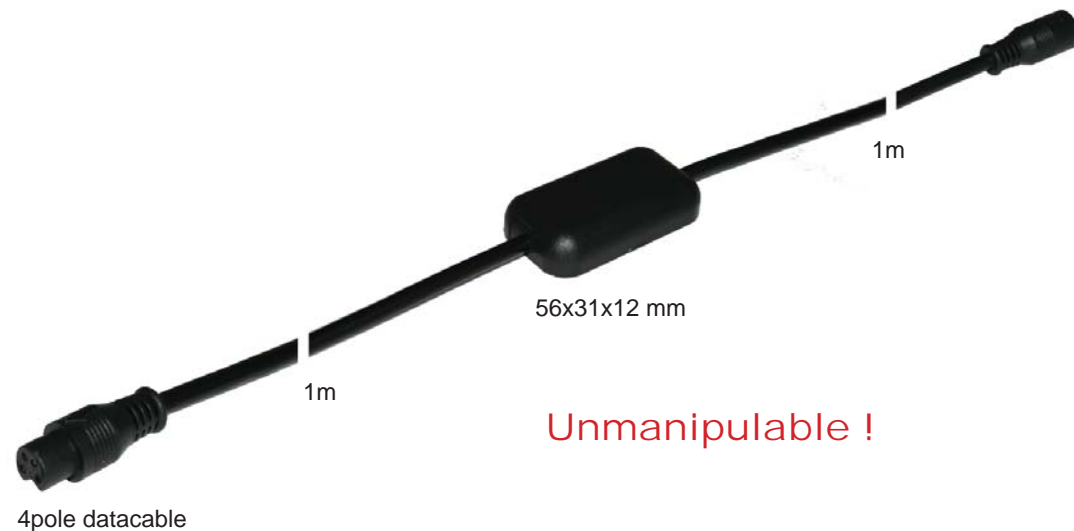
The count of modules after which an alarm should given out can be choosen. This way will guarantee to give not an alarm if one sensor will have a malfunction. In this case a warning will be given out on the central station.

Unmanipulable !

4pole datacable

Suitable for ground and roof mounted modules. For new systems and for retrofit.

A MUST for each PV-System !

For maximum safety !

Minimum Investment - Maximum Safety !

Video monitoring was yesterday - SolteQ -DSS is the future !

The PV-Safetysystem has many advantages in comparision with convetional video systems:

- unmanipulable
- unbribable
- no more false alarms by rabbits, deeres or else
- ne personel needed
- 24 hours 365 days 100% sharp
- unsusceptible against dust and dirt
- absolutely maintenance-free
- autarkic system
- Monitoring of modules and inverters
- even total monitoring while building process
- connection of a camera for recording in case of alarm
- protection of fences and gates also possible

PV-Security

Patent pending

Unmanipulable !

An alarm will be given out if

a) the sensor of a module do not answer
b) the module will be moved of changed by his angle
c) there is a trial to remove a sensor whithout a autorisation
d) the datacable will be cut of
e) the datacable will be short cutted

... no more chance for thieves !

No false alarm possible !

If the system gives an alarm, there is really something wrong !

Tip:
Protect your inverters !
fixed on the outside of the inverter and every unauthorised movement of sensor or inverter will be registrated !

The perfect anti-theft protection for your PV-System

...easy and safe !

Further possible applications

Fence + Gate protection

Protect modules - inverters - fences - gates

... simply everthing, what should not move normally.

Glue the sensor with silicone at the module or inverter or fix it with cable strips on the fence or gate and every movement or change of the angle will release an alarm.
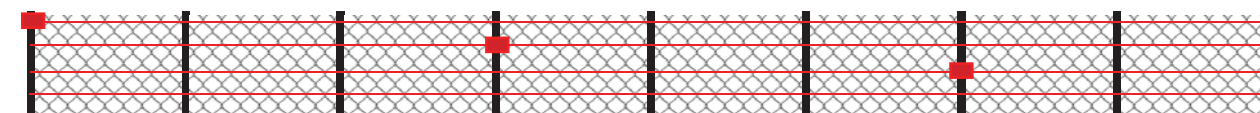
DSS-Sensors will be fixed with cable strips at the fence poles. This formes a alarm circuit. We suggest one sensor pe each 3-4 fence elements. We suggest to install 2-4 such circuits per fence.

The release of an alarm takes place if

• the fence pole will be layed down
or
• the data cable will be break

By laying down the pole or a fence element or breaking though the fence will cut the data cable or plug off the sensors.
At the moment the central station can not communicate with even one sensor of the system will automatically release an alarm.

Central unit

SolteQ-DSS

• detects every movement on object

• switches lights on

• activates cameras to record the situation detailed

• Free of fail alarms

and much more ....

... simply good and unmanipulable !

SolteQ - DSS watches over each module !

DSSZ10 Central Station Basicline

The central station for wall mounting for small and middle systems.
The central station proves permanently the sensors for existance, by requesting the ID-Code and parameters of each sensor in a crypted way. In case of a sensor is not responding the alarm situation will be detected and an alarm will be released. This can be done by releasing a loudly sirene and / or telephone dialer or even a SMS can be sended out by a connected SMS-Modem to your mobile phone.
Over the several potential free contacts further connected devices can be released.

Function: double safety !

The central station manages all connected sensors and requests the parameter cyclic of each sensor, ca. every 30 seconds
This way will be proved, if the sensors has got the parameters, like they should be, and even its existance.
In the start up process of the system all sensors will be initialized and the parameters of each sensor will be stored in the central station, for example ID-Code, angle and more.
In case of one sensor will not response anymore or gives different parameters to the central station, an alarm will be released.
The Alarm can also be done by a quite alarm by sending out a SMS to the owners mobile phone or directly to the securitiy persons or even to the police station.
This way the thiefes can be suprized at his „work" and not one module will be gone.

a) Prove of existance
Every ca. 30-60 sec. the central station proves the existance of each sensor by recall its IP-Code.
In case of no response will be registrated as alarm situation.
The count of non responding sensors can be defined. So an alarm can be given out at the first sensor or for example after the second sensor wich do not response. This way makes sure, that a malfunction or defect or one single sensor will result an fail alarm. Even a manipulation of the datacable will be registrated save and quick this way.

b) Angle and motion sensor
Every movement or change of the angle of the sensor will be safely registrated ! In this case the sensor will give an alarm protocol to the central station.
The sensibility of the system can be defined, so that not every halistorm will produce a fail alarm.

... simply perfect !

Technical data

Central Station DSSZ10 Basicline

Dimensions:	200 x 210 x 48 mm (bxhxl)
Protection class:	IP20
Power supply:	230VAC with external Power supply
Power consumption:	< 3 VA
Max. count of sensors:	- no limit -
	Datalogger
	SD-Card slot
Inputs:	Sensor databus
	Mover / Tracker (potentialfree contact needed)
	External activation (potentialfree contact needed)
Outputs:	Alarm (potentialfree contact)
	Warning (potentialfree contact)
Environmental Temperature:	-20 ... +55°C

DSSZ20 Central Station Profiline

The Central station for bigger systems and PV-Plants.
The Central DSS20 Profiline is desigend for bigger systems, including free area systems. In the practical 19"-Rack-System it can be integrated in a existing rack system.
Additionally the DSS20 Central has got further features such as triggering a camera to record the actual situation or also the integrated backup power supply.

The functions are same like the DSS10 Basic Central Station with following further features:

- 19"-Rack-System
- Long term datalogger
- SD-Card
- Remote monitoring
- Remote power down of the PV-System in combination with the SolteQ-BFA-System
- Connection to a PC
- Grafic LCD with several analysises
- Backup Power Supply integrated
- Activation of cameras and / or lights in case of alarm release

DSSZ20-Profiline

Technical data

Central Station DSSZ20 Profiline

|	
Dimensions:	Rack 19", 2 HE , Maße 88x440x290 mm (bxhxl)
Protection class:	IP20
Power supply:	230VAC with external Power supply
Power consumption:	< 3 VA
Max. count of sensors:	- no limit -
	Datalogger
	SD-Card slot
Inputs:	Sensor databus
	Mover / Tracker (potentialfree contact needed)
	External activation (potentialfree contact needed)
Outputs:	Alarm (potentialfree contact)
	Warning (potentialfree contact)
	Camera
Environmental Temperature:	-20 ... +55°C
Backup Power Supply:	for ca.12 hours with 1.000 sensors

MADE IN GERMANY

proved

Installation

The installation is very simple: fix the sensors with silicone on the module and inverters and plug the connectors together- ready!
By glueing the sensor at the frame of the module every manipulation on the system will be impossible.
Every movement of the sensors, with or without module, will be registrated quick and safe. Each try to remove the sensor will result a litle or strong movement or vobration or change of the angle of the sensor. This is fully enought to registrate an alarm situation.

A) Module protection - One sensor per each module

For retrofit on roof parallel modules:

fix the sensors between the modules with silicone
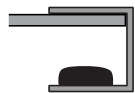
Installation in new systems or for retrofit:

fix the sensor with silicone behind the module in his border aluminium profile

only 12mm height !

Unmanipulable !

Tip:
Safe your inverters in an easy way !
Easy glue the sensor with silicon at the inverter and every unauthorizied movement will give a alarm !

With SolteQ theft is impossible !

B) String protection - One sensor per each string

Alternative one complete string with for example 20 modules can be protected with only four sensors, if the local conditions makes this possible.
For this one DSS-Sensor will be fixed on the first, one on the last module and 2 sensors in the middle every 5 meters in the string. The data cable, that goes to the sensor, must be woven through a 10mm hole in the frame or the free mounting holes in the frame of the other modules.
If the datacable gets a damage or will be cutted, the central station can not build a data connection to the sensor on the last module and releases a alarm.

3-4 sensors per string

Technical data

Accessory
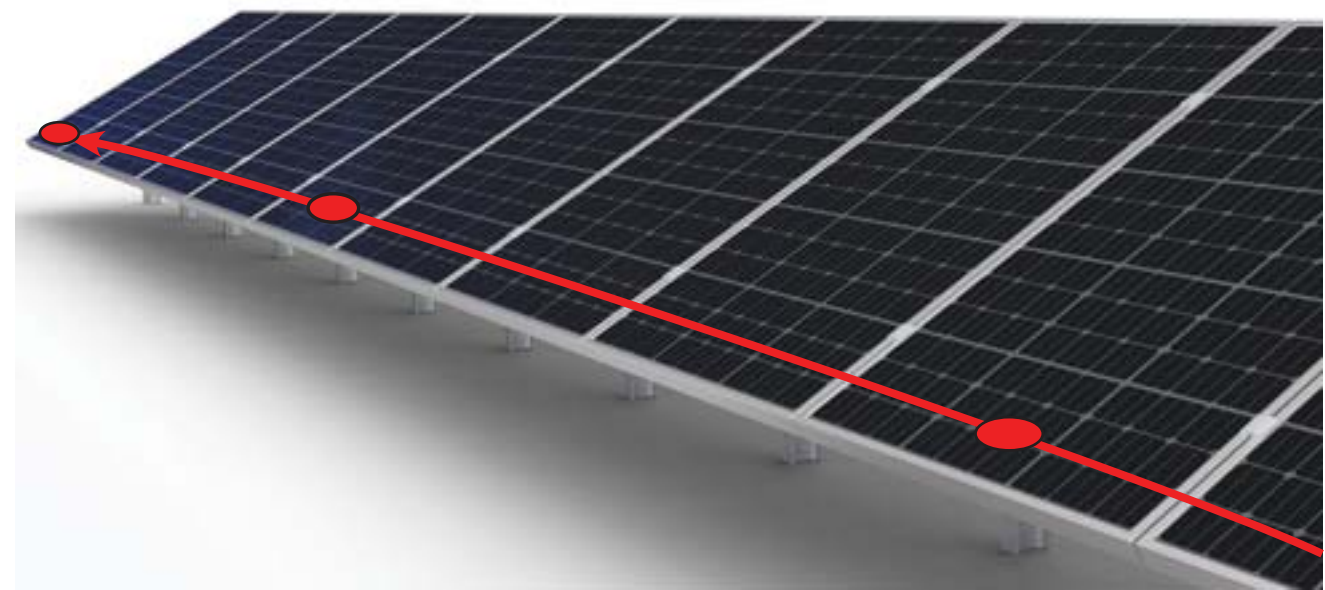
DSS110A - Active-Sensor

Sensor with integrated Angle and accelerationsensor and active data communication with the central station.
The sensor is a small, full resin moulded sensor and works safe and trustworthy. The sensitivity can be adjusted in the central station menu in 4 steps. So a hailstorm will not bring an alarm. The System is very unsusceptible against wrong alarms.

DSS110P - Passive-Sensor

Dummy-Sensor without active charachteristic. To place into the line between active sensors. If the sensors behind will not communicate, because this sensor is out of the line, an alarm will be registrated by the central station.
This sensor minimize the cost of the complete system, by installing alternately active and passive sensors. Optical there is no difference between active and passive sensors.

GSM/SMS-Module

By using a SMS module in case of fire a message can be send to one or more telephone numbers.

Telephone dialer

In case of Alarm a alarm message will be send to a telephone number.

Sirene

This professional Alarm sirene is developed especially to protect private and commercial objects. It has a ultra flat aluminium enclosure with loud sirene and flashlight. The high safety for manipulations makes it to a high class wheather proof device for inhouse and outside mounting.

Technical data
Flash frequence 0.8 Hz   Power supply 12 V/DC
Power consumption 300 mA / 350 mA   Ambient temperature -25 - +55 °C
Acoustic pressure 110 dB/1 m   Flash light power consumption, standby/action 350 mA
Protection class IP34   Dimension (B x H x T) 190 x 300 x 115 mm

Flashlights

The xenon flashlights can be mounted everywhere inside and outside, where the fireman can see it well.
The robust plastic casing (IP34) protects from environmental influences.
Operates only with Display.

Available in colours: red, yellow, blue
Power supply: 12V via display

56x31x12 mm

4pole datacable

Technical data sensor

max. count of sensors:	- no limit -
Count of data strings:	- no limit -
Dimensions-Sensor:	56x31x12 mm
Protection class:	IP67
Power supply:	6...30V via systembus
Own consumption:	< ca. 0,014 VA / 1 mA pro Modul
Ambient temperature:	-40 ... +85°C
Cable length:	each ca. 1m or like required (from middle of enclosure)

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5 Jahre Garantie *

*auf die Elektronik

DSS110 - For a maximum of safety !