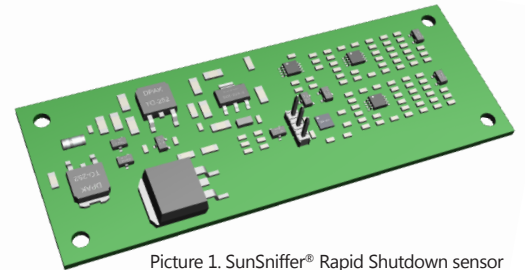




# SunSniffer®

## SunSniffer® Retrofit RSD

The heart of the SunSniffer® technology for highly accurate detection of module data and rapid power shutdown function - easily retrofitted to already installed plants.



Picture 1. SunSniffer® Rapid Shutdown sensor

This solution can **retrofit conventional modules**. It **shuts down each module**, fully meeting the requirements of NEC 2017.

An **enabled inverter or our special RSD-String Reader** continually sends the signal „permission-to-operate“. In absence of this signal, the **sensor automatically shuts the module off**.

To avoid deadlock, the system still has **1 volt standby power**.

The data is transmitted over the existing cabling via **Powerline Communication (PLC)**, in total accordance with the specifications of SunSpec Alliance.

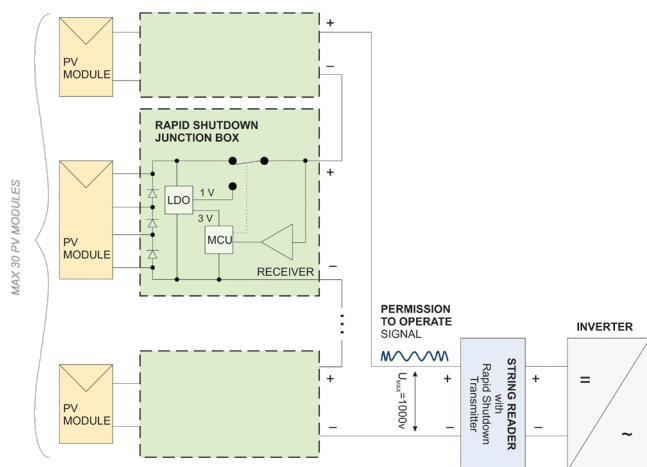
Besides the RSD function, the sensor provides full SunSniffer® functionality: **precise measurements of the module**, and **sophisticated analysis by artificial intelligence** in the Webportal.



Picture 2. SunSniffer® Retrofit box; cable length: 2x5cm, 2x90cm

### Permission to operate mode:

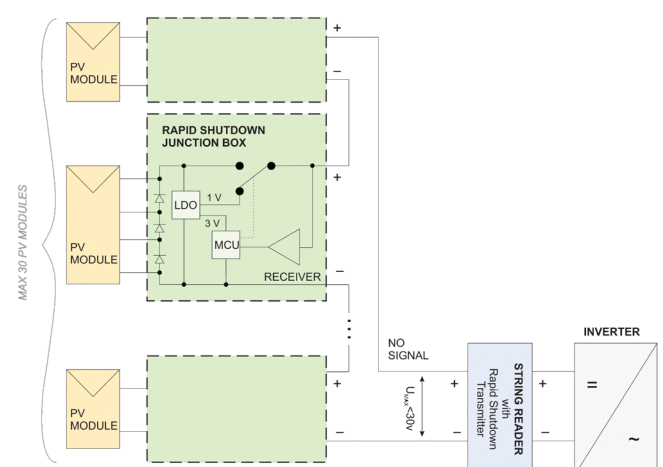
power generation without any constraints, „permission-to-operate“ signal is sent continuously.



Picture 3. Permission to operate mode

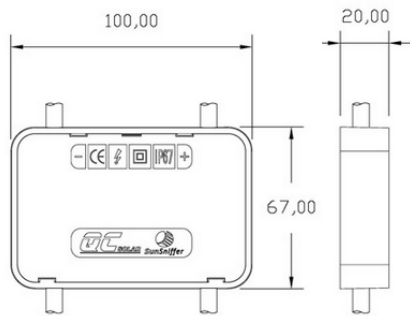
### Shutdown mode:

Absence of „permission-to-operate“ signal for 10 seconds initiates automated shutdown, current is cut off.

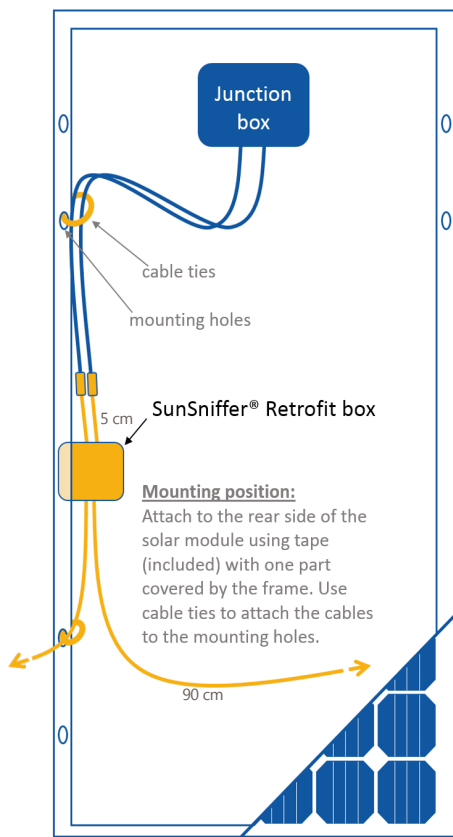


Picture 4. Shutdown mode

# SunSniffer® Retrofit RSD



Picture 5. SunSniffer® Retrofit housing specifications



Picture 6. Easy and fast installation:  
Just plug the Retrofit box between the modules.

## HOUSING TECHNICAL SPECIFICATIONS:

Item	QC0816432
Rated current (J/D)	14.5 A / 30 A
Rated voltage	IEC 1000 V / UL 600 V
Dimensions	100 x 67 x 20 mm
Temperature range	-40°C ~ 85 °C
Cable size	4.0 mm <sup>2</sup> / 12 AWG
Protection degree	IP 67
Flammability class	5VA
Cable length	5 cm / 90 cm

## RSD-SENSOR TECHNICAL SPECIFICATIONS:

Working voltage	5 ~ 45 ± 0.2 V
Temperature	-40 ~ + 85 ± 1 °C
Current consumption	≤ 10 mAmp
Serial Number length (SN)	30 bit
Data transmission interval (T) including:	30 ± 0.4 sec
- temperature transmission interval (T <sup>t°C</sup> )	4 ± 0.4 min
- SP full serial number transmission interval (T <sub>SNfull</sub> )	4 ± 0.4 min
- voltage transmission interval (T <sub>v</sub> )	30 ± 0.4 sec
Communication protocol	Power line with S-FSK modulation
Power control mode	Permission to operate watchdog
Dimensions (LxWxH)	92x34x10mm

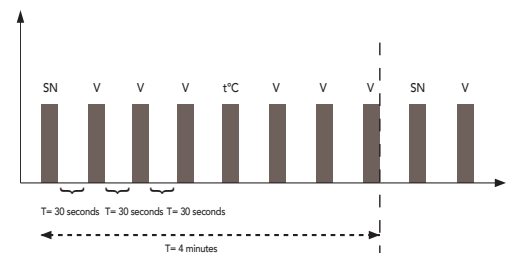
The SunSniffer® sensor transmits data with 30 seconds interval.

There are three types of data sent:

- 1) Module full serial number SN
- 2) Module voltage V
- 3) Module Temperature t°C.

The sequence is repeated every 4 minutes.

Please refer to data packet sequence below.



Picture 7. Sequence of data packets