

# SSX EVO

## Smart String Box

Product Ref.:  
SSX0001.x/2.x

Optional built-in LoRa wireless transceiver and IP67 outdoor antenna with 40 cm SMA connector cable.



String monitoring device that automatically measure the current and voltage generated by photovoltaic panels.

The new system based on Hall Effect, is the third generation of the product, with up to 32 toroids in a compact and efficient way. Webdom SSXEVO incorporates, apart from the traditional Modbus-RTU interface, a wireless communications system based on the new LoRa™ long-range technology.



Communication options:



LORA WIRELESS



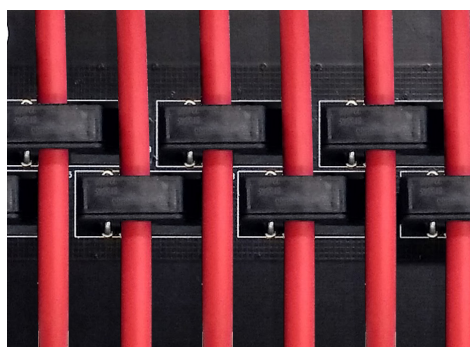
RS-485



OPTICAL FIBER

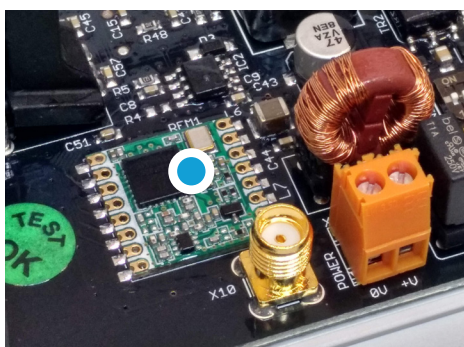


WEBDOM QUALITY  
VERIFIED PRODUCT



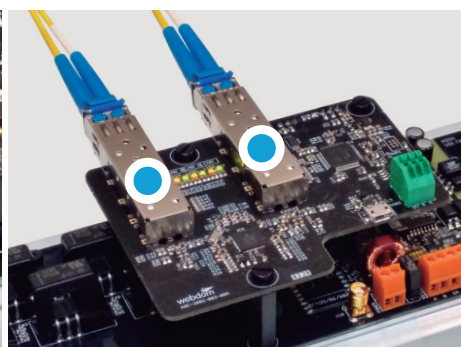
### HALL EFFECT CURRENT MEASUREMENT

We take advantage of the Hall Effect phenomenon (1) to measure the direct current flowing through the cables of the photovoltaic strings. Non-intrusive current meters up to 62.5A, with operating temperature up to 105 °C. 8x8mm opening (cable up to 6mm<sup>2</sup>).



### LoRa™ RADIO MODULE

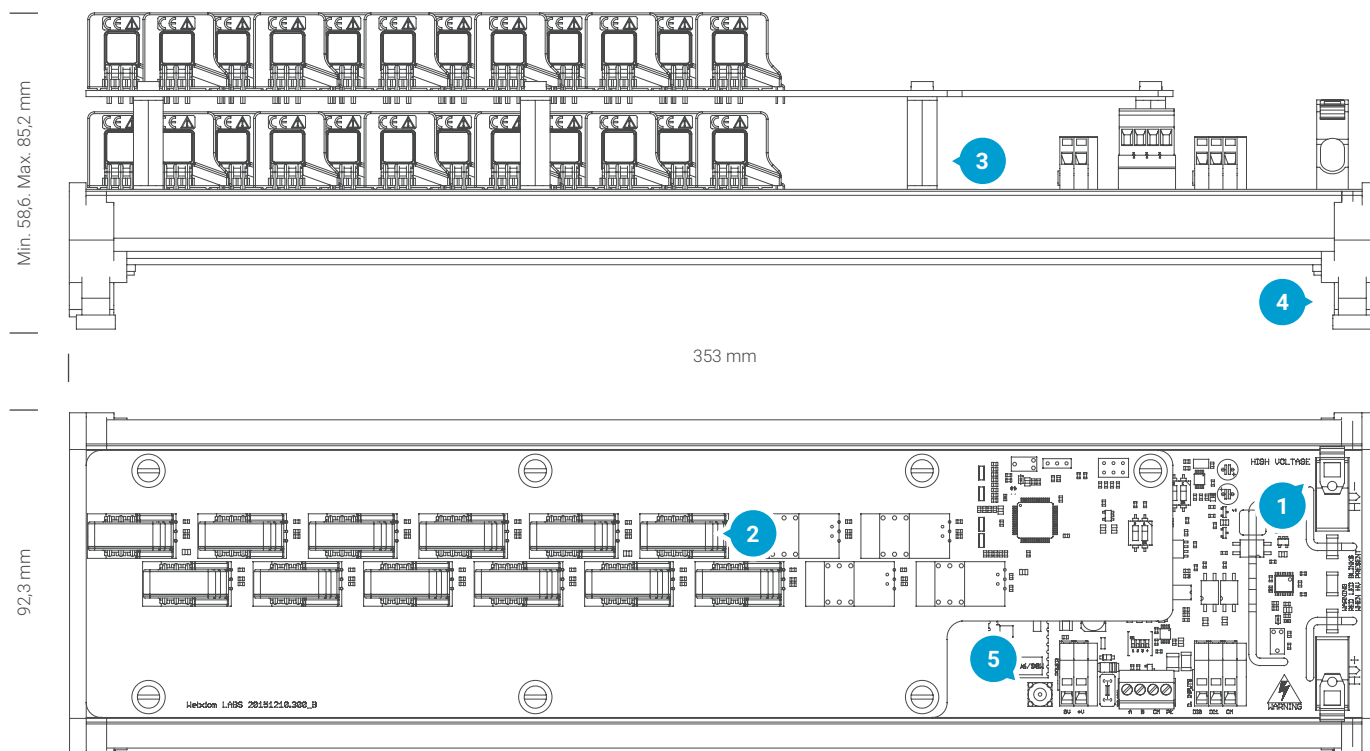
The RFM95W transceivers feature the LoRa™ long range modem that provides ultra-long range spread spectrum communication and high interference immunity whilst minimising current consumption.



### OPTICAL FIBER

Optional integrated switch for fiber optic communication via SFP (up to 20Km, single mode or multimode, 1310nm, 0-70°C).

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## 1.- TERMINAL BLOCK

PCB terminal block, pitch: 7.5 mm, number of positions: 1.



## 3.- PCB SPACERS

Nylon spacers fix the top and bottom electronic board. They also allow fixing a polycarbonate protection cover on the bottom plate.



## 5.- ISM COMM. ANTENNA

433/868/915 MHz. Dimensions 117.4 x 12.5 x 6.5 mm. Adhesive Mount, customizable cable and connector.



## 2.- HALL EFFECT SENSOR

Mounting up to 32 units, 16 units on bottom plate and 16 on top plate. Possible left or right alignment.



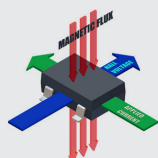
## 4.- DIN RAIL COMPATIBLE

Lateral element with mounting foot for DIN rails for UM-PRO profiles with a PCB.

## TECHNICAL SPECS:

- Product code: SSX0001.x/2.x
- Technology: Hall effect measuring principle (non intrusive)
- Through hole opening: 8mm x 8mm (cable up to 6mm2)
- Insulation: 4300V
- String inputs: Up to 16 strings (single layer)  
Up to 32 strings (double layer)
- Current measure: Up to 62.5A (depending on model)
- Voltage measure: Up to 1500VDC (terminal for 2.5mm2 – 6mm2)
- Terminals: 1mm2 with ferrule, 1.5mm2 without
- Power supply: 10-30VDC, 140mA (depends on the n° of inputs)

- Digital inputs: 2x Isolated DI
- Communications: Isolated RS485 Modbus-RTU, LoRa or Optical Fiber.
- Working temperature: -40°C ... +70°C
- Environment protection: Tropicalized
- Fastening: DIN Rail panel mounting base or standoffs
- Dimensions: 353mm x 85mm
- Weight: 300gr
- Certificates: CE (IEC 61000-6-3:2007, IEC61000-6-2:2005, UEC61439-1:2011). UL 1741 (optional)



(1) The Hall effect is named after Edwin Hall, who in 1879 discovered that a voltage potential develops across a current-carrying conductive plate when a magnetic field passes through the plate in a direction perpendicular to the plane of the plate, as illustrated in the lower panel of figure.