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Isola Vicentina – Italy

## Solar technology laboratory installed at the Socomec Group's Italian plant

The **Socomec UPS Italia** plant was recently fitted with a photovoltaic (PV) unit which seems to be a genuine solar technology laboratory. The unit is equipped with cutting edge components: Inverters (SUNSYS range produced in-house) on the solar panels, monitoring trackers (also produced in-house). All systems are embedded in a solar energy platform designed to supply the Italian Socomec production site, which relies on an annual production of photovoltaic inverters and UPS units for over 300 GW in total.

The PV system, with a total production of 189 kW, comprises 2 distinct panel assemblies: The first, fixed to the ceiling and made from 4 types of module (micromorph, heterojunction, monocrystalline, polycrystalline) is fitted with 4 SUNSYS R01/R02 inverters. The second is portable, consists of 2 trackers installed in the ground, controlled telescopically on 2 axes, and fitted with a SUNSYS PRO 24K.

The system will offer three benefits: Reduced energy consumption, reduced ecological impact, and further testing of photovoltaic technologies, integrated with solar inverters from the Socomec Solar SUNSYS range.

**Energy consumption:** The PV unit was designed to produce enough electrical power for personal consumption, and to feed any surplus power back into the supply network. The production of electrical current is estimated at 196,000 kWh per year, amounting to 30% of the plant's entire energy demands.

**Ecological impact:** Producing renewable energy at these levels will allow CO<sub>2</sub> emissions to be cut by 110,000 kg/year. This is a significant result for environmental conservation, considering that it takes 11 hectares of forest to absorb these levels of carbon dioxide.<sup>1</sup>

**Technological testing:** The Socomec PV unit should be considered as a serious development platform for new technologies. By testing new designs of SUNSYS inverters with different module technologies and comparing the yield. The 2 trackers mean devices can be tested under maximum radiation and to simulate intermediary conditions. They will also test innovative MPPT (Maximum Power Point Tracker) algorithms under these conditions, adopted for the first time by SOCOMEC Solar and certified at the Freiburg Fraunhofer Institute in full compliance with standard FprEN 50530.

The overall purpose is to guarantee the maximum yield delivered by different solar panels, under any climatic and seasonal conditions.

A monitor installed in the factory hall will project real-time data on the solar energy being produced and the current savings of CO<sub>2</sub> emissions in kg.

Renato Fratta, owner of the site, says “ *We are one of the only European solar solution manufacturers that can rely on a system with qualities like these, enabling us to test new solutions and offer clients the option of confirming the potential of their own products for themselves, and their compatibility with the best PV panel technology currently available on the market*”

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<sup>1</sup> Source: European Commission, Institute for the Environment and Sustainability in conjunction with the Swiss Federal Research Institute.

### **The SOCOMEC Group - an overview:**

SOCOMEC is an independent industrial group, specialising in the availability, control and safety of low voltage electrical energy for industry and the service sector.

Founded in 1922, the company bases its development on two complementary industrial activities:

- Electrical Switching and Protection Systems:  
*switches, fuse switches, changeover switches, cutout switches, electronic monitoring and protection, enclosures, cabinets, etc.*
- Uninterruptible Power Supply Systems:  
*inverters, load transfer modules, rectifier/chargers, harmonic compensators, 400 Hz converters, etc.*

SOCOMEC is a leader and specialist in its markets.

With 2500 personnel in 21 subsidiaries worldwide, SOCOMEC has complete control over the design, production and marketing of its products.

Nine industrial sites (4 in France, 1 in Italy, 1 in Tunisia, 1 in India, 2 in China) operate using the Group's primary areas of technological expertise, guaranteeing consistent quality of production and adherence to deadlines.

In 2009, the SOCOMEC Group achieved a turnover of 310 million euros;

Read more at [www.socomec.com](http://www.socomec.com)