

## Case Study: Enhancing Safety with Tigo's PV-Off™ for the Best Asset Management

After a devastating fire from a faulty parallel string PV switchboard, Tigo optimizers are recommended by installers.

Location: Piberplast S.p.A. – Voghera, Italy  
System size: 563.4kW  
Modules: 225W/327W Sunpower  
Inverter: Santerno TG145-800V

### Summary

Ecotechno – an Italian company offering the most efficient and advanced solutions in energy saving and renewables – designed and install a PV system on Piberplast S.p.A. factory. Piberplast's modern plant covers an area of 110,000sqm, whose 26,000sqm occupied by warehouses and machinery systems. On a roofing portion of this plant, a 560kW PV system has been installed.

After a devastating fire that originated from a parallel string switchboard severely damaged the factory and destroyed a portion of the 220kW system, Ecotechno proposed to his customer to adopt Tigo's TS4 platform.

Each Tigo optimizer utilizes PV-Off, an advanced safety function which automatically reduces the voltage of each module. Once PV-Off is activated, Tigo's system disconnects the PV module from the string, bringing the output power to zero. This function can be used for ordinary maintenance operations, as well as in emergency situations, intensifying the safety of the system.

### About PV-Off™

Tigo's PV-Off provides enhanced safety through on-site manual or automatic module-level disconnect. In PV-Off mode, every module output drops to 0W and 0V. This revolutionary disconnect provides installers, firefighters, and maintenance techs absolute certainty that no high voltage is present.

Tigo's TS4 optimizers are constantly measuring module-level current, voltage, and temperature. If a safety hazard is detected, the optimizers will immediately switch off and continue to communicate the potential hazard to Tigo's Cloud Connect Advanced.



### Customer Experience

"We recommended that our customers use Tigo's TS4 platform, mainly for the fire safety function and for monitoring any eventual anomaly of each module, having the chance to cut string currents.

Fires have occurred because it was not possible to cut short-circuit current upstream the parallel string switchboard.

Tigo optimizers has been used as load break switch each module, at the service of every other installed fire safety systems. Specifically, temperature-sensors have been installed on parallel string switchboard; heat-sensitive cables have been placed all along the conduits; and an IR cameras system has been installed to supervise the whole area. All these systems can easily detect any fire risk and allow Tigo optimizers to safeguard all 2,222 installed PV modules."

- Ing. Pietro Picozzi, Ecotechno Srl