

# Case Study: Quickly Identifying System Problems



Kasaoka, Japan

Location: Kasaoka, Japan (岡山県 笠岡市)

System Size: 50 kW

Owner: Nitto Kogyo K.K.  
Mr. Kuniya Kakuda, CEO



## The Challenge

System problems, such as failed diodes, cause significant energy loss. Without module-level monitoring, many system problems go unnoticed for long periods of time. A diode failure causes a module's performance to drop by 1/3 instantly. In two different instances, modules within this array experienced a sudden drop of power.

## The Solution

Tigo Energy's module-level monitoring allows installers, systems owners and support personnel to identify system problems the minute they happen. Tigo Energy provides the data needed to identify and fix defective components.

## The Results—¥140,000 saved

Using precise module-level data, Tigo Energy's support team identified two different drops in power on different dates in two different modules. On January 23, at 12:19 the power production of panel Q9 dropped by 1/3. On March 10 at 9:16 module B5 experienced a similar drop. With Tigo Energy, the problem could be identified and analyzed the minute it occurred. The drop in voltage was diagnosed as a failed diode in each module. Replacing these two diodes alone saves the customer approximately 140,000 yen over 20 years.

## Customer Testimony

"I could not recognize this issue without the Tigo system and support. It makes me very happy, and I am willing to be a facilitator for Tigo Energy."

"タイゴエナジーがなければ、わからない事であり、導入したことに大変満足しております。そして、タイゴエナジーの素晴らしいさを伝えていこうと思っております。"

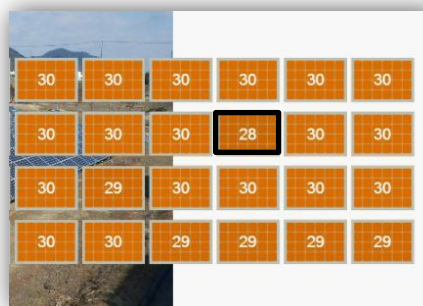
Mr. Kuniya Kakuda, CEO  
Nitto Kogyo K.K.



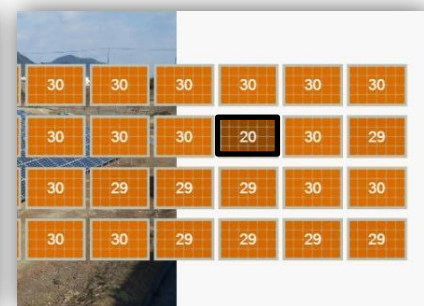
Module Q9 with normal power production at 12:19PM



Module Q9 with bypass diode failure at 12:20PM



Module B5 normal voltage level at 9:17AM



Module B5 with bypass diode failure at 9:18AM (voltage level)