Amperex Technology is a market leader in the design, manufacture, sales and marketing of rechargeable lithium ion/polymer battery cells and related battery packs and systems.

In their new battery warehouse they have the capacity to store some 7000 batteries and packs. To mitigate the risk of overheating or of a fire, which could have devastating consequences, Amperex selected four AP Sensing Linear Heat Series 1km devices, each with 4 channels, to protect the warehouse. The 4 DTS units are installed in a rack in a remote control room.

The passive sensor cable has many advantages, because it is immune to dirt, dust, humidity, corrosive materials and electromagnetic interference (EMI).
The battery warehouse has **7 layers of shelves**, with each layer separated by a fireproof panel. The fiber **can be installed around the perimeters of these fireproof panels**, as shown below.

Each loop of the DTS can be divided into **256 alarm zones**, and each zone can be defined with one of 5 alarm criteria. Because 2 storage shelf locations could be protected by one alarm zone, there are **more than 3500 alarm zones** in this installation. A heat gun was used to position and test the alarm zones. In general, 2 storage shelves constituted an alarm zone.

Each DTS device is equipped with a **Modbus TCP** slave module and the alarm configurations for each zone. The average temperatures and the maximum temperatures for each zone are **relayed to the SCADA system** via the Modbus TCP protocol.

The system **passed the final acceptance test with no issues** and has been working without any issues since it was installed. A valuable infrastructure remains protected.