

## **PROBLEM:**

### **Circuit Protection and Trip Replacement Needs**

PARKPLUS arranged 16 circuit protection devices on power distribution blocks inside each AGV. With space at a minimum, they wanted a small form circuit protection device. PARKPLUS also sought a circuit protection device that would give them some flexibility with adjustable current ranges and trip curves, along with avoiding downtime.

## **SOLUTION:**

### **LUTZE LOCC-Box Control Circuit Protection**

PARKPLUS chose the LOCC-Box circuit protection device from LUTZE to conduct R&D and testing for their latest 5th generation AGV design. The LOCC-Box surpassed expectations and is now the standard on all PARKPLUS AGVs.

LOCC-Box provides an adjustable current range (1 to 10 Amps), which is an important feature for PARKPLUS. Thanks to this benefit, PARKPLUS does not have to carry inventory for various types of circuit breakers to cover the range of potential current needs. LOCC-Box reduced the part inventory required by 80%. PARKPLUS has incorporated an additional LOCC-Box accessory into their AGV application. The LOCC-Box power distribution input terminal set, combined with a copper bus bar, allows them to power a set of sixteen LOCC-Boxes with a single wire termination. This solution has both simplified and decreased AGV manufacturing time. Each LOCC-Box includes a trip output that is connected to a PARKPLUS PLC. The PLC inside the AGV receives the trip signal and sends a notification over Wi-Fi to the PARKPLUS Maestro control software. This software then notifies the technicians of the tripped control circuit. The technician can simply reset the device remotely via the PLC. Another benefit PARKPLUS realized with the LOCC-Box device is its lack of temperature dependency, thanks to solid state technology. Traditional mechanical circuit breakers are prone to nuisance tripping when operating under certain temperatures. The performance of the LOCC-Box is independent of ambient temperature, unlike circuit breakers.

