Traditional smart meter vendors use crimp type wire-to-board connectors to translate signal and power. A smart meter customer needed a connector replacement with higher reliability and lower cost than their existing supplier. ACES created a new design with their 51308 51309 series; an Insulation Displacement Contact (IDC) style disconnectable connector which offers subminiature size and reliable contact construction for high density applications. This connector has a positive locking feature when mating to headers including an audible click/tactile feedback when properly mated. This uniquely constructed single row contact is easily inserted into the housing with low insertion force.

OVERVIEW

ACES North America

WIRE-TO-BOARD IDC CONNECTOR FOR SMART METER DEVICE

SERVICES PERFORMED

- ACES used IDC design instead of traditional crimp type wire-to-board and fulfilled customer’s demand for high reliability and low cost
- Offered reliability testing report
- Set up autonomous manufacturing production line

RESULTS

- Autonomous production provides shorter product lead time
- New design provides clear tactile click and easy mating
- Mating is guaranteed with positive locking feature
- Simple IDC process that does not require dedicated tools

CHALLENGES

- Needed a positive locking feature for high reliability in extremely small sizes
- Low cost
- Avoid any potential patent issues
- Needed a simple IDC process that does not require dedicated tools