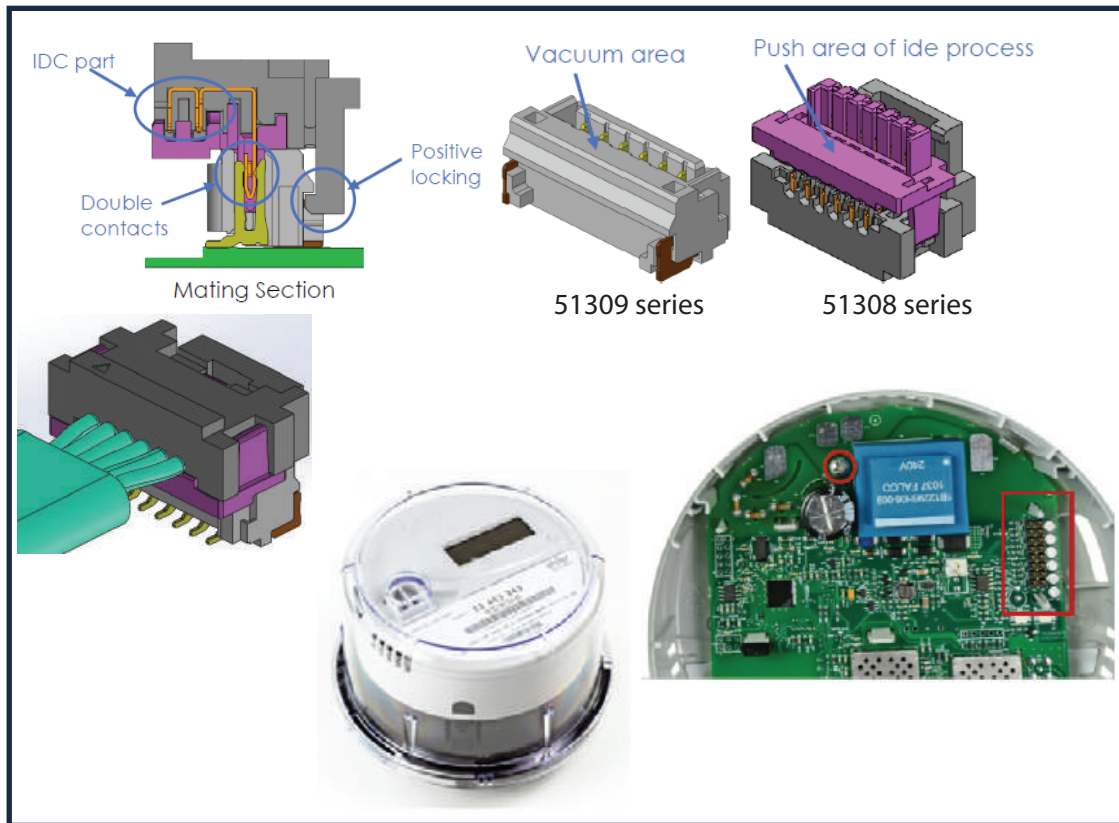


# WIRE-TO-BOARD IDC CONNECTOR FOR SMART METER DEVICE



## OVERVIEW

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.

## 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

## 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