SIG CON Signal Conditioners

Building and Factory Automation Systems

Acromag THE LEADER IN INDUSTRIAL I/O

# Application Note:

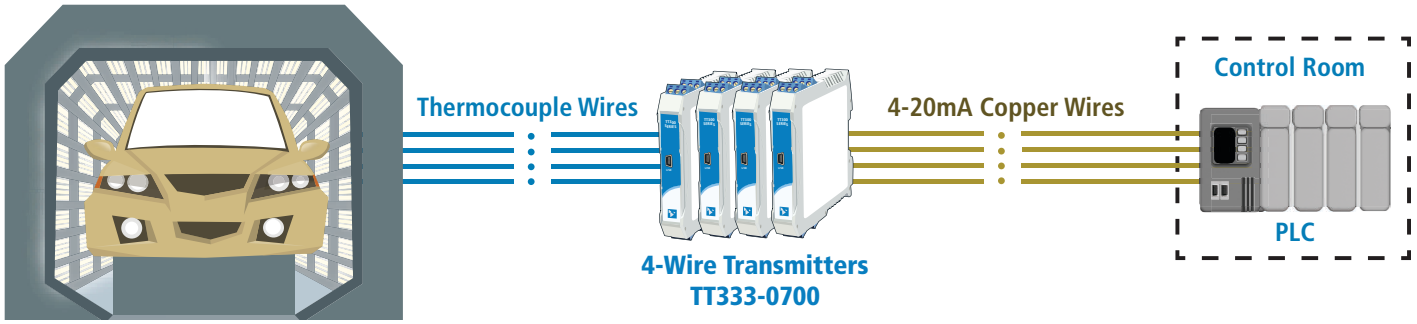
## Thermocouple Transmitters Monitor Temperatures in Paint Systems

### Defining the Problem:

The area around an auto manufacturer's paint curing ovens is at elevated temperatures affecting the performance of locally installed instrumentation. Placing Signal Conditioners rated for high operating temperatures near the ovens allows the PLC controlling the process to be mounted in a lower temperature area. The Signal Conditioner will convert Thermocouples to 4–20mA outputs. Running current loops over long distances instead of Thermocouples reduces costs and minimizes the potential for measurement errors due to electrical noise.

### System Requirements:

Acromag model TT333-0700 is an Isolated Thermocouple to Current Signal Conditioner with a high operating temperature. It is rated for –40 to 80°C. The TT333-0700 output powers the loop to the PLC. Additionally, the plant can standardize its PLCs with less expensive current input cards over temperature input cards. This makes installations and programming throughout the plant more consistent.




### Implementing the Solution:

1. Program the TT333-0700 with software from either a Windows based computer or with the Acromag Agility™ Config App.

   The Agility programming application for Android devices is available at no charge from the Google Play Store.

2. Connect the shorter Thermocouples to the locally installed Acromag Transmitters and run 4-20mA copper wires from the Transmitters to the PLC panel.

### Featured Products:

Loop powered Isolated Thermocouple Transmitters TT333-0700

Programming options:

- TTC-SIP software kit

  (*or*)

- Android based Acromag Agility™ Config App

  The Acromag Agility™ Config App can be downloaded from the Google Play Store at no charge.

GET IT ON Google Play

### Why Acromag:

The installation meets manufacturer's process standards while delivering high performance with simple and fast set-ups.

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