

## Rotating Oven Temperature

**Customer:**  
Acadian Ltd UK

Several Systems supplied

### KEY VALUE PROPOSITION

*Slip rings have typically been used to link thermocouples inside rotating ovens to the temperature controller. Replacing these slip rings with a short range wireless link can improve the reliability of the temperatures measured and the control of the oven.*

### MARKET ASSESSMENT

#### Addressed market

- Smart Factory
- Food processing

#### Customer segment

- Oven OEMs
- Food Industry System Integrators

#### Value proposition

- Improves reliability of taking accurate temperature readings
- Improves temperature control of ovens
- Allows multiple in-process product temperatures to be monitored

### TECHNICAL ASSESSMENT

#### Technical requirements for use case

- Short range wireless link with multiple thermocouple signals
- Local ambient can reach 50°C

#### Existing technology building blocks

- IWT-128 with Isoslice inputs transmits thermocouple signals to IWR-PORT receiver with an RS485 output

#### Technical development needed

- None required – standard products

#### Internal and external capabilities

- Internal – Existing Wireless expertise and products
- External – PLC program to read Modbus registers over RS485

### KEY CHALLENGES

1. This was a straightforward application for existing IWT-128 transmitters and the IWR-PORT gateway

### KEY OPPORTUNITIES

1. Can replicate the system for all rotating ovens and other applications for slip rings such as WTW sludge tanks

### NEXT STEPS

1. Determine System Integrators involved in Food Production
2. Approach other Oven OEMs to see if there's interest in offering our solution with new ovens



### Key highlights of the project

- Replaces slip-rings with short range RF link
- Multiple systems supplied to UK oven OEM
- Standard solution can be used in any slip-ring replacement application