

## Dual Sensor Input

### ■ Introduction

Yokogawa's YTA320 has the added capability of **dual sensor input**. With this capability the transmitter can use the inputs to provide *Failed Sensor Backup*, *Temperature Averaging*, or *Differential Temperature*.

### ■ Applicable Models

> **YTA series:** YTA320



### ■ Failed Sensor Backup

YTA320 has an automatic failed sensor backup function that transfers seamlessly to the standby sensor when needed. When the primary sensor fails, the transmitter will automatically switch over to the standby, secondary sensor. An error message is displayed on the local indicator and an alarm message is generated for the host system and asset manager.

The failed sensor can then be replaced without losing vital process information. This allows the sensor to be replaced at the next convenient maintenance period, avoiding unnecessary trips to the field and a possible unscheduled plant shutdown. This function is illustrated in Figure 1 below.

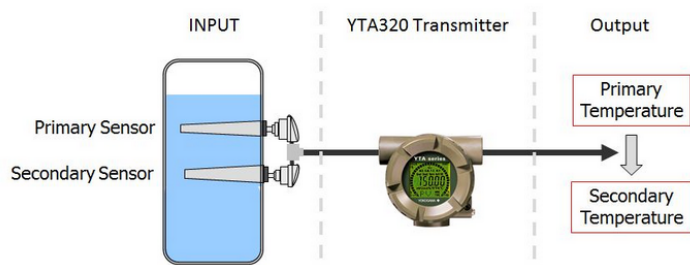


Figure 1. Application of Failed Sensor Backup .

### ■ Temperature Averaging

With the temperature averaging function, a single YTA320 can take temperature measurements from two sensors simultaneously. The transmitter can then calculate the average temperature of the process from the two sensors. This function is illustrated in Figure 2 below.

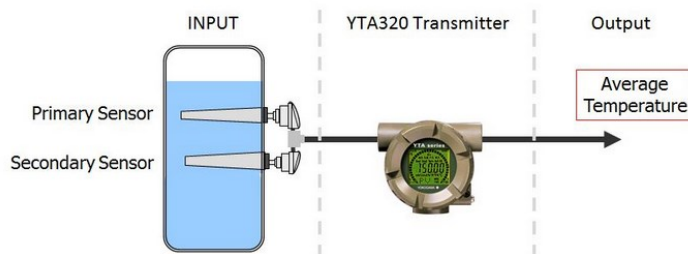


Figure 2. Application of Temperature Averaging.

### ■ Differential Temperature

With the differential temperature function, the transmitter can calculate the difference between two temperature measurements of the process from the two sensors. This function is illustrated in Figure 3 below.

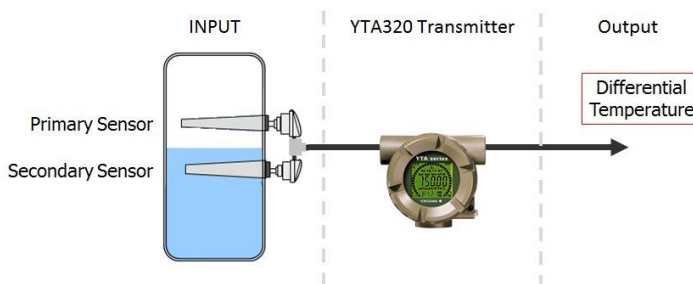


Figure 3. Applications of Differential Temperature.

### ■ Conclusion

Yokogawa has developed a transmitter that sets a new standard for temperature measurement. The enhancement of the transmitter to have 2 inputs available delivers best in class temperature measurement solutions, while not taking the focus away from safety. By monitoring data from two temperature sensors in the plant, the manager will be able to maximize the full potential of the applied process. With these features the Yokogawa YTA320 is able to provide safety and accuracy as standard, instead of an added cost.

**YTA Series**