

# PRODUCT INFO SHEET

Nanmac Corporation

Quality • Performance • Solutions

## Flow-Thru Thermocouples & RTDs for Tri-Clover® Pipelines D4B Series

Flow-thru thermocouples use the Nanmac Right-Angle Ribbon Thermocouple. The Right-Angle sensor features a thermal element of thin ribbons welded together at the sensing tip. In the food processing drug manufacturing industries, the temperature of the material flowing through the pipelines during various stages of the process is often necessary. The temperature sensor must measure this temperature without disturbing the flow. Also, the temperature sensor must not penetrate through the wall of the pipeline as this could be difficult to clean and could trap small amounts of materials. This could contaminate subsequent process runs. Our line of Flow-Thru thermocouples have been modified to meet these stringent requirements. These modifications consist of machining a flat surface on the exterior of the pipe such that a thin diaphragm of 0.015" thickness remains in the wall of the pipe.

### NOTES:

- Fast response times with no conduction errors
- Measure temperature of flowing material without protruding into the stream or obstructing the flow.
- Sustain strict sanitary standards
- Reduce processing costs
- Improve product quality
- Available in thermocouple calibration types E, J, K & T
- All wetted parts are made from SS 316
- Other sizes are available upon request

### Applications:

- Milk and food manufacturing processes
- Beverages, juices, and pharmaceutical
- Brewing industry
- Liquids, chemicals, and slurries flowing in pipelines



| Specifications |               |               |               |               |               |
|----------------|---------------|---------------|---------------|---------------|---------------|
| Part No.       | A<br>Diameter | B<br>Diameter | C<br>Diameter | D<br>Diameter | E<br>Diameter |
| D4B-1          | 1.984         | 1.718         | 1.000         | 0.870         | 5-1/4         |
| D4B-2          | 1.984         | 1.718         | 1.500         | 1.370         | 5-1/2         |
| D4B-3          | 2.516         | 2.218         | 2.000         | 1.870         | 7             |
| D4B-4          | 3.047         | 2.781         | 2.500         | 2.370         | 7             |
| D4B-5          | 3.578         | 3.281         | 3.000         | 2.870         | 7-1/2         |
| D4B-6          | 4.684         | 4.344         | 4.000         | 3.834         | 9             |

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