

PRODUCT INFO SHEET

Nanmac Corporation

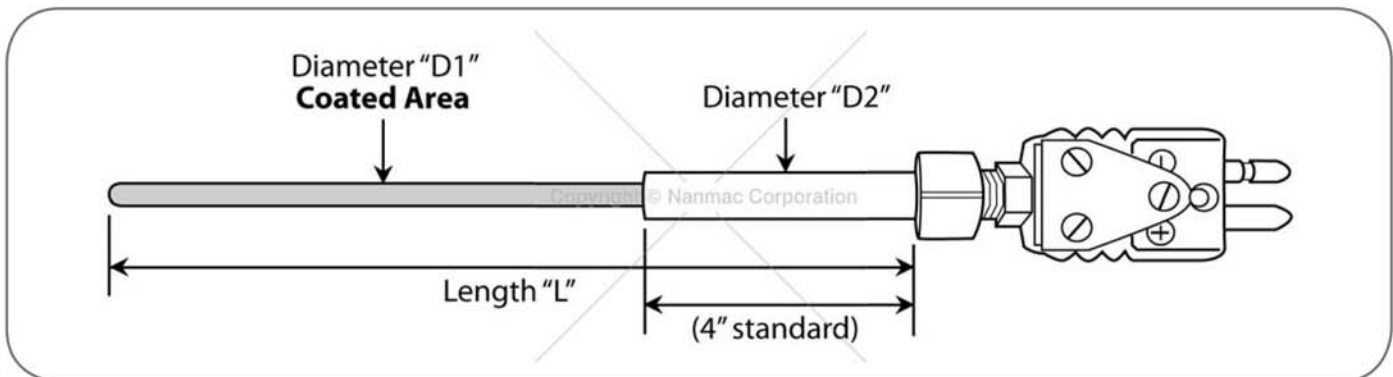
Quality • Performance • Solutions

High Temperature Probe with Tungsten Coatings A12D Series

Oftentimes a molybdenum sheathed thermocouple is used in a furnace with graphite liners or heating elements. At temperatures above 1,600 degrees Celsius, any graphite present emits dust molecules which attack the sheath and rapidly carburizes the sheath. This causes the sheath to become crystallized and porous. The thermal elements lose their protection and they also become crystallized and then break during cycling. Coating the protecting sheath with a thick layer of tungsten minimizes this carburization process and extends the life of the probes significantly. Field tests at 2,000 degrees Celsius using the coated probes produced continuous temperature data up to 2 months (even during cycling) whereas the uncoated probes failed within hours of reaching temperature. Longer lifetimes were also experienced at temperatures below 2,000 degrees Celsius.

NOTES:

- These thermocouples use #24 gage (0.020") size elements molybdenum sheaths.
- Various adjustable compression fittings and mounting bushings are available.
- Duplex and multiple units also available (contact factory)
- When ordering, specify Part No. Length "L" and thermocouple type.
Example: A12D-1-17-C



Specifications			
Part No.	Type	D1 (in.) Approximate	D2 (in.)
A12D-1 A12D-2 A12D-3	C	0.150 0.220 0.284	0.250 0.250 0.375
A12D-4 A12D-5 A12D-6	S	0.150 0.220 0.284	0.250 0.250 0.375
A12D-7 A12D-8 A12D-9	R	0.150 0.220 0.284	0.250 0.250 0.375
A12D-10 A12D-11 A12D-12	B	0.150 0.220 0.284	0.250 0.250 0.375

PO Box 6640
1657 Washington St., Bldg. 3
Holliston MA 01746
www.Nanmac.com
engineering@nanmac.com

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NANMAC

US & Canada: 1.800.786.4669
International: 1.508.872.4811
Fax: 1.508.879.5450
info@nanmac.com