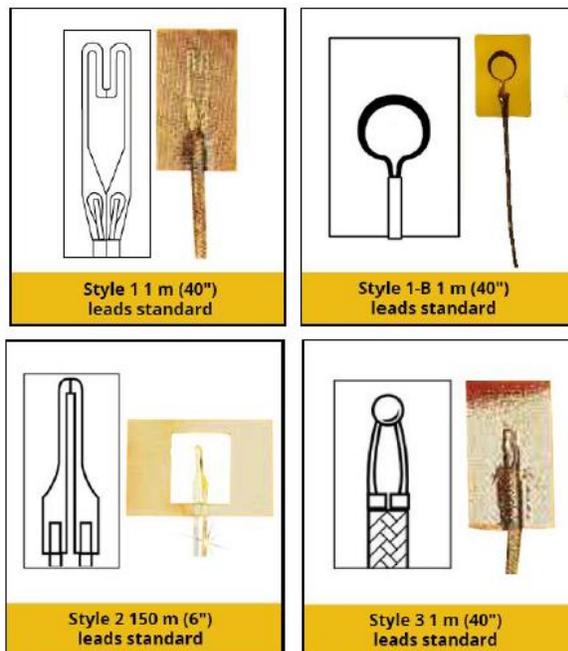


## “Cement-On” Thermocouples

### Fast-Response Thermocouples with “Cement-On” Pads

OMEGA introduces its CO Series Cement-On, fast response thermocouples for fast surface temperature measurement applications in four convenient styles. Styles 1 and 2 are made from 0.13 mm (0.0005”) thermocouple alloy and Style 1-B is made from 0.18 mm (0.008”) thick thermocouple alloy by a special process where the butt-welded thermocouple junction is very thin and flat. Styles 1, 1-B and 2 are flat, extremely low inertia construction and are an ideal means of measuring the temperature of both flat and curved metals, plastic and ceramic surfaces where very fast response is desired.

These thermocouples are made from ANSI “Special Limits of Error” grade thermocouple materials in K, E and T calibrations. Style 1, 1-B and 2 have the fastest response. Style 3 is an economy version constructed from 0.25 mm (0.010”) diameter beaded wired which conforms to Standard Limits of Error. It should be used where extremely fast response is not essential.



### Features

- Response time in milliseconds
- Made from thin profile thermocouple wire
- Very low thermal inertia
- Four calibrations: J, K, E and T
- Four measurement styles
- Ideal for surface measurement

### Specifications

Model	Style	Thermocouple Type	Length	Maximum Temperature *		
				Continuous	600 hr	10 hr
CO1-K	1	K-Chromega-Alomega	1m (40 in)	260°C (500°F)	315°C (600°F)	370°C (700°F)
CO1-E		E-Chromega-Constantan	1m (40 in)	260°C (500°F)	315°C (600°F)	370°C (700°F)
CO1-T		T-Copper-Constantan	1m (40 in)	150°C (300°F)	205°C (400°F)	260°C (500°F)
CO1-K-B	1-B	K-Chromega-Alomega	1m (40 in)	260°C (500°F)	315°C (600°F)	370°C (700°F)
CO1-E-B		E-Chromega-Constantan	1m (40 in)	260°C (500°F)	315°C (600°F)	370°C (700°F)
CO1-T-B		T-Copper-Constantan	1m (40 in)	150°C (300°F)	205°C (400°F)	260°C (500°F)
CO2-K	2	K-Chromega-Alomega	150mm (6 in)	540°C (1000°F)	540°C (1000°F)	650°C (1200°F)
CO2-E		E-Chromega-Constantan	150mm (6 in)	425°C (800°F)	425°C (800°F)	540°C (1000°F)
CO2-T		T-Copper-Constantan	150mm (6 in)	150°C (300°F)	150°C (300°F)	260°C (500°F)
CO3-J	3	J-Iron-Constantan	1m (40 in)	260°C (500°F)	370°C (700°F)	370°C (700°F)
CO3-K		K-Chromega-Alomega	1m (40 in)	260°C (500°F)	370°C (700°F)	370°C (700°F)
CO3-E		E-Chromega-Constantan	1m (40 in)	260°C (500°F)	370°C (700°F)	370°C (700°F)
CO3-T		T-Copper-Constantan	1m (40 in)	205°C (400°F)	370°C (700°F)	370°C (700°F)

\* The temperature range high limits given are greatly influenced by environmental conditions, installation method, accuracy and lifetime requirements and may vary from the general guidelines listed in the table.

Style 1 & 1-B and 3 cannot be used with CC High Temperature Cement; CC Cement will break down insulation. Response time when “grounded” or “cemented” to surface: **Style 1 & Style 1-B** (150 to 200 milliseconds), **Style 2** (2 to 5 milliseconds), **Style 3** (300 milliseconds).

The response time or “time constant” is the time required to reach 63.2% of an instantaneous temperature change. Additional length wire can be ordered for Styles 1, 1-B and 3. **Ordering Example: CO1-K** is a style 1, Type K thermocouple, with 1m (40 inch) leads. **CO1-T-B-80** is a style 1-B, Type T thermocouple, with 2 m (80 inch) leads.