

Cerite® III thermocouples are provided with a protection tube, integral thermocouple element with 36" of high temperature 704 °C [1300 °F] fiberglass leads, and a 1/2" NPT steel male face bushing for use in mounting. They are constructed by casting a phosphate bonded refractory material containing 85% alumina, 4% silica, and other trace elements around a 1/4" NPT steel pipe, containing an integral stainless steel sheathed magnesium oxide (MgO) insulated thermocouple element. The cast refractory material was developed for use in molten non-ferrous metals, specifically molten aluminum and zinc. It has excellent non-wetting properties, allowing easy slag removal, and the small diameter provides fast thermal response to process temperature changes. These assemblies provide good resistance to thermal shock and mechanical breakage. The refractory material is rated at 1538 °C [2800 °F] however, its use as a Cerite® III thermocouple assembly is generally limited to 815 °C [1500 °F] maximum. **Protection tube pre-heating and slow immersion into the process is recommended.**



ORDER CODES

Example Order Number:

K39G - 15 - 25 - 24 - 36

2

4

1 Cerite® Thermocouple Specifications

CODE	T/C TYPE	"X" DIMENSION IMMERSION LENGTH (inches)	OVERALL LENGTH (inches)	LEAD LENGTH (inches)	APPROX. WGHT. (lbs.)
SINGLE	K	12	15	36	1.75
K39G-15-25-12-36	K	12	15	36	1.75
K39G-15-25-18-36	K	18	21	36	2.50
K39G-15-25-24-36	K	24	27	36	3.25
K39G-15-25-30-36	K	30	33	36	4.00
K39G-15-25-36-36	K	36	39	36	4.75

2 Terminations

CODE	DESCRIPTION
0	No lead termination
2	2" split leads with 1/4" stripped leads
4	Standard plug

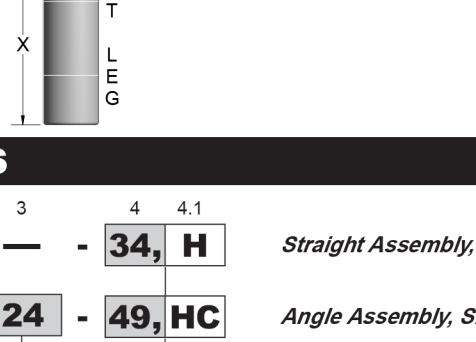
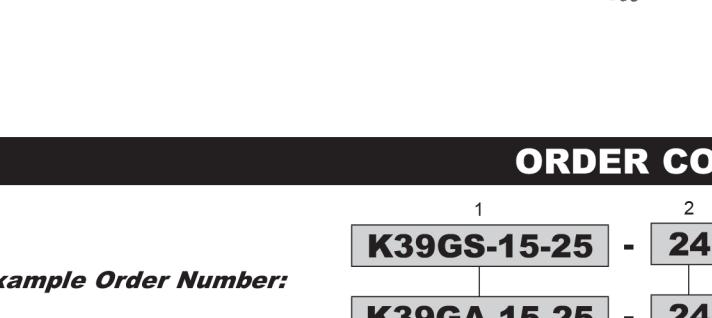
Options

MC	Mating connector
----	------------------

For duplex assemblies use thermocouple letter twice. **Example: KK39U - 15 - 25 - 24 - 36 - 0**
For assemblies with ungrounded junctions, substitute U for G in order code number. **Example: K39U - 15 - 25 - 24 - 36 - 0**
For additional lead length, change the last 2 digits of the order code number to desired length. **Example: K39G - 15 - 25 - 24 - 48 - 0**
For assemblies supplied with optional 316SS pipe insert, change order code number 15 to 158. **Example: K39G - 158 - 25 - 24 - 36 - 0**

Cerite® III Thermocouple Assemblies for Molten Aluminum

Cerite® III thermocouple assemblies are complete thermocouple and protection tube assemblies. These Cerite® III assemblies are constructed by casting a phosphate bonded refractory material containing 85% alumina, 4% silica, and other trace elements around a 1/4" NPT steel pipe containing an integral stainless steel sheathed magnesium oxide (MgO) insulated thermocouple element. The cast refractory material was developed for use in molten non-ferrous metals, specifically molten aluminum and zinc. It has excellent non-wetting properties allowing easy slag removal, and the small diameter provides fast thermal response to process temperature changes. These assemblies also provide good resistance to thermal shock and mechanical breakage. The refractory material is rated at 1538 °C [2800 °F] however its use as a Cerite® III thermocouple assembly is generally limited to 815 °C [1500 °F] maximum. Cold leg as standard is supplied as carbon steel. **Protection tube pre-heating and slow immersion into the process is recommended.**



ORDER CODES

Example Order Number:

K39GS-15-25 - **24** - **—** - **34, H** *Straight Assembly, Single*

K39GA-15-25 - **24** - **24** - **49, HC** *Angle Assembly, Single*

1 Thermocouple Type and Assembly Style

CODE	STYLE	CODE	STYLE
SINGLE ELEMENT		DUPLEX ELEMENT	
K39GS-15-25	Straight	KK39GS-15-25	Straight
K39GA-15-25	Angle	KK39GA-15-25	Angle

For ungrounded hot junctions change above letter code "G" to letter code "U". Example: K39US

For assemblies supplied with optional 316SS pipe insert, change order code number 15 to 158. Example: K39G-158-25-24-36-34

2 Straight or Angle Hot Leg Length

"X" LENGTH (inches)	"X" LENGTH (inches)
12	30
18	36
24	

4 Head Terminations

CODE	DESCRIPTION
31	Aluminum screw-cover head
34	Cast-Iron screw-cover head
49	Flip-top aluminum head

4-1 Assembly Options

CODE	DESCRIPTION
SB	1/2" NPT conduit reducer bushing
GS	Ground screw
H	Adjustable steel mounting flange
HC	Adjustable steel flange (cold leg)
I	Stainless tags

3 Angle Assembly Cold Leg Length

"X" LENGTH (inches)	"X" LENGTH (inches)
12	30
18	36
24	