

Plastics Industry

Rigid T/C, Fixed or Adjustable

Rigid Tube Thermocouples Fixed or Adjustable Depth Immersion

Introduction

Thermocouple wire is duplex insulated, temperature rated to 900°F except Type T which is limited to 700°F. These temperatures do not apply to cold end termination. Standard junction style is closed and grounded. Type K has a welded tip; others are silver soldered tipped probes for faster response.

Features

- Thermocouple at Tip of Probe for Maximum Heat Transfer
- Maximum 900°F Over Probe and Tube, except Type T is 700°F

Ordering Information

The drawing shows two views of a thermocouple probe. The top view is a side view showing a probe with a threaded section at the top. Dimension 'X' is the total length from the top of the probe to the tip of the thermocouple element. Dimension 'Z' is the length of the probe tube from the tip to the top of the threaded section. A dimension of 1-5/8" is shown for the length of the thermocouple element inside the tube. A 3/4" minimum dimension is also indicated. The bottom view is a cross-section of the probe tip, showing the thermocouple element and the tube. Dimension 'X (±1/8")' is the total length from the center of the tube to the tip. Dimension '1/2" Nominal' is the diameter of the tube. Dimension '1-5/8"' is the length of the thermocouple element. Dimension 'Z (±1/8")' is the length of the tube from the tip to the top of the threaded section. A note states: '5/16" radius if X minus Z is greater than 2-1/2"; otherwise, 5/8" radius'. The company name 'BARBER-COLMAN CO. LOVES PARK, ILL. U.S.A.' is visible on the probe body.

Model No. P - - 0 0 0 - -

Field No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Schedule: S2

Field 1. BASE MODEL

P - Plastics industry \$12.60

Fields 2, 3. THERMOCOUPLE TYPE

☛ Determine length by completing Fields 8, 9

Type	Description	Each 6"
01 - J	20 gauge, solid	\$0.30
02 - J	24 gauge, solid	\$0.25
12 - J	20 gauge, strand	\$0.40
60 - J	20 gauge, solid, special limits	\$0.35
05 - K	20 gauge, solid	\$0.35
62 - K	20 gauge, solid, special limits	\$0.40

Several other wire codes are available. See Table 1 on page 2-10 for a complete listing. Compatibility of wire and junction styles is listed in Table 2 on page 2-11

Field 4. NUMBER OF ELEMENTS, PROBE CONFIGURATION

Complete Fields 5, 6

1 - Single element, straight	\$0
2 - Single element, 90°	\$1.30
3 - Single element, 45°	\$1.30
4 - Dual element, straight. Return to Fields 2, 3, double that price	
5 - Dual element, 90°. Return to Fields 2, 3, double that price and add	\$1.30
6 - Dual element, 45°. Return to Fields 2, 3, double that price and add	\$1.30

Note: Dual element applicable to 24 gauge only.

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Barber-Colman Company, Loves Park, IL.

1110-PD-001-0-00

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Fields 5, 6. JUNCTION STYLE, PROBE O.D., LEAD PROTECTION

Check compatibility Table 2 at beginning of this section

21 - Closed end, grounded	1/8"	no flexible tube	.....	\$0
30 - Open end, grounded	3/16"	no flexible tube	.....	\$0.75
31 - Closed end, grounded	3/16"	no flexible tube	.....	\$0.75
34 - Closed end, ungrounded	3/16"	no flexible tube	.....	\$3.75

Note: Dual element has common junction.

Field 7. COLD END TERMINATION

	Single Element	Dual Element
3 - Solid pin quick disconnect plug(s)	\$8.80	\$17.60
4 - Solid pin quick disconnect plug(s) with mating jack(s)	\$14.30	\$28.60
7 - Quick disconnect jack(s)	\$6.80	\$13.60
8 - Miniature plastic weatherproof head	\$17.75	\$19.75
A - 3" lead with 1/4" stripped ends, no spring or ferrule; or, specify lead length on order.*		
B - 2-1/2" lead with lugs, no spring or ferrule; or, specify lead length on order.*		
C - Hollow pin quick disconnect plug(s), Type J only	\$6.80	\$13.60
D - Hollow pin quick disc. plug(s) with jack(s), Type J only	\$12.30	\$24.60

*Get price from Table 1 at beginning of this section.
Double that price for dual element.

Fields 8, 9. RIGID LENGTH (DIMENSION "X")

	1 to 6"	Ea. Add'l 6"
XX - Enter "X" length in whole inches.	\$0	\$1.70

Fields 10, 11, 12. RESERVED

Field 13. ATTACHING DEVICE

0 - None	.....	\$0
2 - 1/8" NPT compression fitting, nickel plated brass	.....	\$2.00
3 - 1/8" NPT compression fitting, stainless steel	.....	\$9.00
4 - Fixed bayonet fitting on 3/16" tube, or adjustable bayonet on 1/8" tube ("X" must be at least 3")	.....	\$8.50

Note: maximum pressure 100 psi for compression fittings

Fields 14, 15. LOCK DEPTH (DIMENSION "Z")

00 - None. Compression fitting or adjustable bayonet	.....	\$0
ZZ - Fixed bayonet styles, see table below. First 6"	.....	\$0
Each 6" after first 6"	.....	\$1.60

01 1-1/2"	04 3"	31 4-3/8"	10 6"
14 1-5/8"	23 3-1/8"	07 4-1/2"	41 6-1/8"
15 1-3/4"	24 3-1/4"	32 4-5/8"	42 6-1/4"
16 1-7/8"	05 3-1/2"	33 4-3/4"	43 6-3/8"
02 2"	25 3-3/8"	34 4-7/8"	11 6-1/2"
17 2-1/8"	05 3-1/2"	08 5"	44 6-5/8"
18 2-1/4"	26 3-5/8"	35 5-1/8"	45 6-3/4"
19 2-3/8"	27 3-3/4"	36 5-1/4"	46 6-7/8"
03 2-1/2"	28 3-7/8"	37 5-3/8"	12 7"
20 2-5/8"	06 4"	09 5-1/2"	47 7-1/8"
21 2-3/4"	29 4-1/8"	38 5-5/8"	48 7-1/4"
22 2-7/8"	30 4-1/4"	39 5-3/4"	49 7-3/8"
99 - Not listed; specify on order		40 5-7/8"	13 7-1/2"