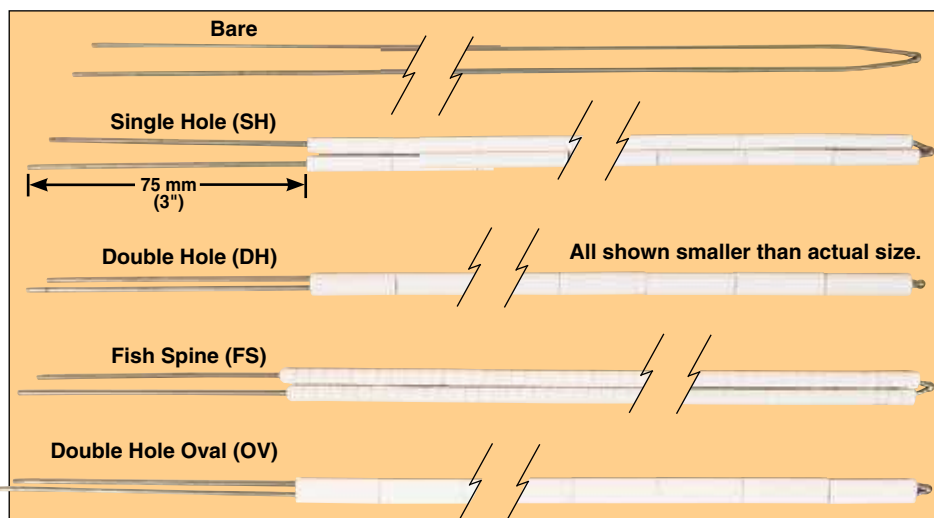


Thermocouple Elements

MEETS OR EXCEEDS
SPECIAL LIMITS
OF ERROR (SLE)
AND EN 60584-2:
Tolerance Class 1



NEWPORT® thermocouples are precise temperature measuring elements and are made of the highest grade materials available. They are carefully assembled according to the highest standards set by the industry. OMEGA's thermocouples are checked against standard temperature-millivolt curves to assure calibration accuracy and are made from material that meets or exceeds both ANSI Special Limits of Error and EN 60584-2: Tolerance Class 1.



Iron-Constantan (J), CHROMEQA®-ALOMEGA® (K), CHROMEQA®-Constantan (E) Thermocouple Wire, Copper-Constantan (T), OMEGALLOY®-NICROSIL-NISIL (N)

To Order Visit newportUS.com/TCELMNTS for Pricing and Details

Base Metal Thermocouples 300 mm (12") Long plus 76.2 (3") Leads Standard

Type of Element	AWG Wire Size	Insulator Used	Type J Iron-Constantan	Type K CHROMEQA®-ALOMEGA®	Type T Copper-Constantan	Type E CHROMEQA®-Constantan
Bare Wires (No Insulators)	8	None	Bare-8-J-12	Bare-8-K-12	Bare-8-T-12	Bare-8-E-12
	14		Bare-14-J-12	Bare-14-K-12	Bare-14-T-12	Bare-14-E-12
	20		Bare-20-J-12	Bare-20-K-12	Bare-20-T-12	Bare-20-E-12
	24		Bare-24-J-12	Bare-24-K-12	Bare-24-T-12	Bare-24-E-12
With Single Hole Round Insulators	8	SH-1-8	SH-1-8-J-12	SH-1-8-K-12	SH-1-8-T-12	SH-1-8-E-12
	14	SH-1-14	SH-1-14-J-12	SH-1-14-K-12	SH-1-14-T-12	SH-1-14-E-12
	20	SH-1-20	SH-1-20-J-12	SH-1-20-K-12	SH-1-20-T-12	SH-1-20-E-12
	24	SH-1-24	SH-1-24-J-12	SH-1-24-K-12	SH-1-24-T-12	SH-1-24-E-12
With Double Hole Round Insulators	8	DH-1-8	DH-1-8-J-12	DH-1-8-K-12	DH-1-8-T-12	DH-1-8-E-12
	14	DH-1-14	DH-1-14-J-12	DH-1-14-K-12	DH-1-14-T-12	DH-1-14-E-12
	20	DH-1-20	DH-1-20-J-12	DH-1-20-K-12	DH-1-20-T-12	DH-1-20-E-12
	24	DH-1-24	DH-1-24-J-12	DH-1-24-K-12	DH-1-24-T-12	DH-1-24-E-12
With Single Hole Fish-Spine Insulators	8	FS-260-8	FS-260-8-J-12	FS-260-8-K-12	FS-260-8-T-12	FS-260-8-E-12
	14	FS-200-14	FS-200-14-J-12	FS-200-14-K-12	FS-200-14-T-12	FS-200-14-E-12
	20	FS-110-20	FS-110-20-J-12	FS-110-20-K-12	FS-110-20-T-12	FS-110-20-E-12
With Double Hole Oval	8	OV-1-8	OV-1-8-J-12	OV-1-8-K-12	OV-1-8-T-12	OV-1-8-E-12
	14	OV-1-14	OV-1-14-J-12	OV-1-14-K-12	OV-1-14-T-12	OV-14-E-12
	20	OV-1-20	OV-1-20-J-12	OV-1-20-K-12	V-1-20-T-12	OV-1-20-E-12

† Optional lengths available. When ordering, change the last digits (-12) to show actual length desired in inches and fractions or millimeters. Over 5', consult Sales Department for pricing.

†† For R, S and B thermocouples, with RAT, SAT, BAT series, visit newportUS.com/rat_sat_bat.

Insulator Dimensional Chart

Dimensions: mm (inch)

AWG Wire Size	Single Hole (SH)		Double Hole (DH)		Fish Spine (FS)		Double Hole Oval (OV)	
	SH OD (Indv'l)	Well ID*	DH OD	Well ID*	FS OD (Indv'l)	Well ID*	DH OD	Well ID*
8	6.35 (0.250)	13.33 (0.525)	11.91 (0.469)	12.42 (0.489)	6.60 (0.260)	13.84 (0.545)	11.91 (0.469)	12.42 (0.489)
14	4.77 (0.188)	10.16 (0.400)	7.14 (0.281)	7.67 (0.302)	5.08 (0.200)	10.79 (0.425)	7.29 (0.312)	8.43 (0.332)
20	3.17 (0.125)	6.98 (0.275)	3.96 (0.156)	4.47 (0.176)	2.80 (0.110)	6.22 (0.245)	4.37 (0.172)	4.87 (0.192)
24	1.60 (0.063)	3.81 (0.150)	3.17 (0.125)	3.68 (0.145)	-	-	-	-

Insulation	Temperature Ratings**
XC	1200°C (2200°F)
SH	1600°C (2900°F)
DH	1600°C (2900°F)
FS	1200°C (2200°F)
OV	1600°C (2900°F)

** Insulation only. Check operating limits of wire.

† XE Nextel braided ceramic sleeving.

* Recommended minimum well, tube or hole ID

Note: For all bead dimensions, visit newportUS.com/sh_dh_fs_ov.

Ordering Example: DH-1-14-K-12, 14 AWG Type K thermocouple, 300 mm (12") long with double hole (DH) type ceramic bead insulators.