

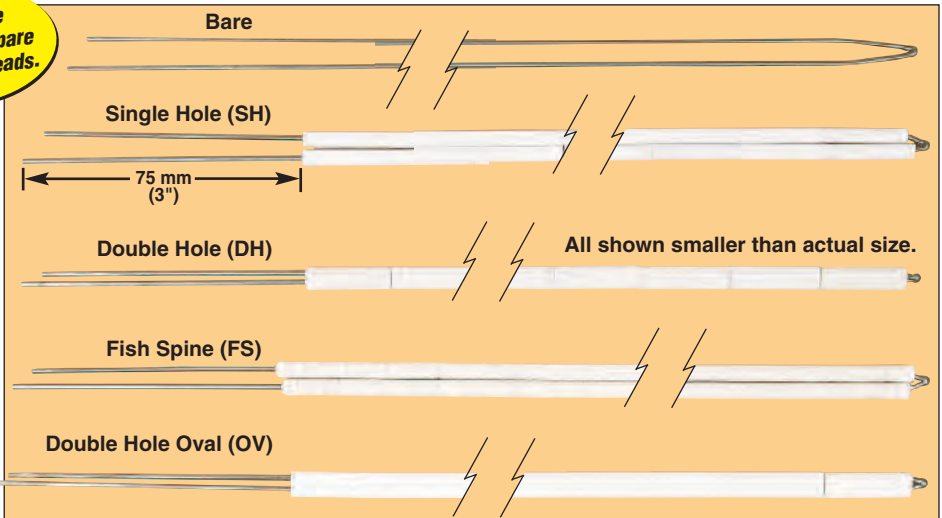
Thermocouple Elements

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



See Page A-144 for Spare Insulator Beads.

OMEGA® 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), CHROMEALOMEGA® (K), CHROMEALOMEGA®-Constantan (E) Thermocouple Wire, Copper-Constantan (T), OMEGALLOY®-NICROSIL-NISIL (N) **MOST POPULAR MODELS HIGHLIGHTED!**

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	Price 300 mm (12" L)	Price Add'l 150 mm (6") or Fraction	Type K CHROMEALOMEGA®-ALOMEGA®	Price 300 mm (12" L)	Price Add'l 150 mm (6") or Fraction	Type T Copper-Constantan	Price 300 mm (12" L)	Price Add'l 150 mm (6") or Fraction	Type E CHROMEALOMEGA®-Constantan	Price 300 mm (12" L)	Price Add'l 150 mm (6") or Fraction
Bare	8		Bare-8-J-12	\$15	\$5	Bare-8-K-12	\$15	\$5	Bare-8-T-12	\$15	\$5	Bare-8-E-12	\$15	\$5
Wires (No Insulators)	14	None	Bare-14-J-12	10	3	Bare-14-K-12	10	3	Bare-14-T-12	10	3	Bare-14-E-12	10	3
	20		Bare-20-J-12	8	3	Bare-20-K-12	8	3	Bare-20-T-12	8	3	Bare-20-E-12	8	3
	24		Bare-24-J-12	8	3	Bare-24-K-12	8	3	Bare-24-T-12	8	3	Bare-24-E-12	8	3
With	8	SH-1-8	SH-1-8-J-12	\$25	\$10	SH-1-8-K-12	\$25	\$10	SH-1-8-T-12	25	\$10	SH-1-8-E-12	\$25	\$10
Single Hole Round	14	SH-1-14	SH-1-14-J-12	20	4	SH-1-14-K-12	20	4	SH-1-14-T-12	20	4	SH-1-14-E-12	20	4
	20	SH-1-20	SH-1-20-J-12	18	4	SH-1-20-K-12	18	4	SH-1-20-T-12	18	4	SH-1-20-E-12	18	4
Insulators	24	SH-1-24	SH-1-24-J-12	18	4	SH-1-24-K-12	18	4	SH-1-24-T-12	18	4	SH-1-24-E-12	18	4
With	8	DH-1-8	DH-1-8-J-12	\$25	\$10	DH-1-8-K-12	\$25	\$10	DH-1-8-T-12	25	\$10	DH-1-8-E-12	\$25	\$10
Double Hole Round	14	DH-1-14	DH-1-14-J-12	20	4	DH-1-14-K-12	20	4	DH-1-14-T-12	20	4	DH-1-14-E-12	20	4
	20	DH-1-20	DH-1-20-J-12	18	4	DH-1-20-K-12	18	4	DH-1-20-T-12	18	4	DH-1-20-E-12	18	4
Insulators	24	DH-1-24	DH-1-24-J-12	18	4	DH-1-24-K-12	18	4	DH-1-24-T-12	18	4	DH-1-24-E-12	18	4
With	8	FS-260-8	FS-260-8-J-12	\$25	\$10	FS-260-8-K-12	\$25	\$10	FS-260-8-T-12	25	\$10	FS-260-8-E-12	\$25	\$10
Single Hole Fish-Spine	14	FS-200-14	FS-200-14-J-12	20	4	FS-200-14-K-12	20	4	FS-200-14-T-12	20	4	FS-200-14-E-12	20	4
Insulators	20	FS-110-20	FS-110-20-J-12	18	4	FS-110-20-K-12	18	4	FS-110-20-T-12	18	4	FS-110-20-E-12	18	4
With	8	OV-1-8	OV-1-8-J-12	\$25	\$10	OV-1-8-K-12	\$25	\$10	OV-1-8-T-12	25	\$10	OV-1-8-E-12	\$25	\$10
Double Hole Oval	14	OV-1-14	OV-1-14-J-12	20	4	OV-1-14-K-12	20	4	OV-1-14-T-12	20	4	OV-1-14-E-12	20	4
Insulators	20	OV-1-20	OV-1-20-J-12	18	4	OV-1-20-K-12	18	4	OV-1-20-T-12	18	4	OV-1-20-E-12	18	4

† 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, see page A-125 or visit omega.com/rat_sat_bat.

Insulator Dimensional Chart

AWG Wire Size	Dimensions: mm (in)							
	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)	-	-	-	-

* Recommended minimum well, tube or hole ID

Note: For all bead dimensions, see page A-144 or visit omega.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, \$20.

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.

New Sizes Available!
See Page A-142



UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters