

# EDL Specialty Sensors

## RTD Decorative Button Sensor



- These sensors can be configured for all environmental control systems
- Available in Brass for use in Softer designs utilizing wood panels or railings
- A stainless version is available for modern architecture or where frequent wash downs are expected
- Decorative and Discrete

### Specifications

Sensing Tip..... 1/4" Dia.  
 Lead ..... 2 wire w/ 12" pigtails  
 Range.....-50°C to 100°C  
 RTD ..... 100 ohms  
 Accuracy.....Available in class A or B  
 Termination..... Supplied unterminated



Model	Resistance	Curve	Diameter	Lead	Price
<b>RTDBB-</b> Brass Button	<b>1</b> =100 ohms <b>10</b> =1000 ohms	<b>8</b> =0.00385 <b>9</b> =0.00392	0.406"	<b>2W</b> =2 Wire <b>3W</b> =3 Wire <b>4W</b> =4 Wire	\$45.00
<b>RT-INSRT</b> Plastic Installation Tool		Free with Order of 10 or more Sensors			\$15.50

## RTD Environmental Air Sensor



- Uniquely designed for fast response to enhance environmental control
- Sealed and ideally suited for wash down environments such as food preparation or hatcheries
- sensor may be interfaced with all types of I/O cards and control units
- Easily mounts to walls or ceilings
- standard with long leads to reduce number of splices during installation
- Environmental air sensors are available in RTD or thermocouple configuration

### Specifications

Sensing Element ..... 1-1/2"- 3" Dia.  
 Lead ..... Teflon/Teflon  
 Range.....-50°C to 200°C  
 RTD ..... 100 ohms  
 Accuracy.....Available in class A or B  
 Termination..... Supplied unterminated

Model	Resistance	Curve	Lead	Lead Length	Price
<b>RTAES-</b> Air Sensor	<b>1</b> =100 ohms <b>10</b> =1000 ohms	<b>8</b> =0.00385 <b>9</b> =0.00392	<b>2W</b> =2 Wire <b>3W</b> =3 Wire <b>4W</b> =4 Wire	<b>30'</b> <b>50'</b> <b>100'</b>	\$84.00 \$104.00 \$154.00

## RTD Center Sharp Needle



- Hard conical tip ideal for insertion into solid or semi-solid materials
- Ideal for spot testing of nearly all food products
- stainless steel construction can be easily cleaned and sanitized
- High accuracy and stability due to aged platinum RTD elements
- High accuracy Class A RTD element
- Available in 3 or 4 wire 100 ohm

### Specifications

Sensing Tip..... 0.093" dia. 1.25" long  
 Handle ..... 2" stainless steel covered w/ polyolefin  
 Lead ..... 3 wire w/ 10' long  
 Range.....-80°C to 200°C  
 RTD ..... 100 ohms  
 Accuracy.....Available in class A or B  
 Termination..... Supplied unterminated

Model	Resistance	Range	Diameter	Curve	Length	Lead	Price
<b>RTNCS-</b> RTD Needle	<b>1</b> =100 ohms	<b>06</b> =600°F (320°C)	<b>Q</b> =0.093" <b>D</b> =0.125" <b>V</b> =0.187" <b>A</b> =0.250"	<b>8</b> =0.00385 <b>9</b> =0.00392	1<	<b>2W</b> =2 Wire <b>3W</b> =3 Wire <b>4W</b> =4 Wire	\$93.90

# Specialty Sensors

## PFA Teflon Insertion

### Needle



- PFA (Teflon) coating resists most acids and alkali solutions
- Ideal for etching, plating, and chemical cleaning tanks
- Sensors clean easily and most materials will not stick to the PFA Coating
- Precision limit material in Type K, J, or E thermocouples
- Available as standard thermocouple sensor or RTD upon request

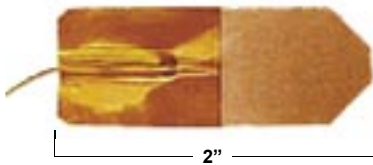
### Specifications

Handle ..... 2.5" L 0.625" Dia.  
 Lead ..... 32" long thermocouple grade stranded #20 wire. Teflon insulated and twisted with woven stainless steel overbraid  
 Range ..... -80°C to 260°C  
 Accuracy ..... ASTM E-230 standard limits (pg. 15)

Model	Temperature	Junction	Alloy	T/C	Nominal Diameter	Length	Termination	Price
<b>NIA-</b> Blunt Teflon Coated Needle	<b>05</b> =500°F (260°C)	<b>U</b>	<b>S4</b>	<b>E, J, K</b> or <b>T</b>	<b>D</b> =0.125" <b>V</b> =0.187" <b>A</b> =0.250"	<b>2" - 12"</b>	<b>M</b> =Miniplug <b>P</b> =Phonoplug(Analog) <b>L</b> =Standard Plug <b>A</b> =Spade Lugs <b>U</b> =Unterminated <b>E</b> =Miniplug(No Lead) <b>R</b> =Must use HDRT holder	\$104.00       \$83.00

•••More diameters and lengths are available - Call for Pricing•••  
 See Insertion Needles page 17

## Self Adhesive Thermocouple



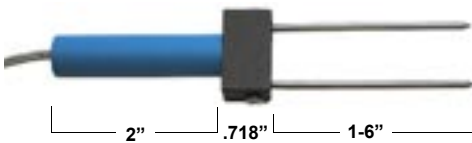
- High temperature silicone adhesive
- Ideal for flat and round surfaces
- Sensor may be trimmed by the user
- Surface disturbances are reduced by the use of #36 gauge fine wire
- Kapton film is used in construction of the sensor

### Specifications

Sensing Tip ..... Kapton  
 Handle ..... none  
 Lead ..... 32" long thermocouple grade teflon zip wire  
 Range ..... -40°C to 200°C  
 Accuracy ..... 1%

Model	Temperature	T/C	Wire Gauge	Terminations	Price
<b>WADK-</b> Kapton Tape	<b>04</b> =400°F (200°C)	<b>E, J, K or T</b>	<b>L</b> =26G <b>N</b> =30G <b>W</b> =36G <b>U</b> =40G	<b>U</b> =Unterminated <b>M</b> =Miniplug	\$62.00 5/PK

## Heavy Duty Prong Sensor



- Ideal for solder pots, bearings, lead and other metallic materials
- Sharp conical tips pierce metallic scales that prevent accurate measurements
- Can only be used on conductive materials
- Center sharp prongs are replaceable and may be resharpened

### Specifications

Sensing Tip ..... stainless steel  
 Handle ..... 2-1/2" powder coated aluminum  
 Lead ..... 32" long thermocouple grade stranded #20 wire. Teflon insulated & twisted  
 Range ..... -40°C to 815°C  
 Accuracy ..... 1%

Model	Temperature	T/C	Length	Terminations	Price
<b>SHP-</b> Heavy Duty Prong	<b>15</b> =1500°F (815°C)	<b>E, J, K</b>	<b>1" - 6"</b>	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>C</b> =Coilcord w/ Miniplug <b>L</b> =Standard Plug <b>U</b> =Unterminated <b>A</b> =Spade Lugs <b>E</b> =Miniplug (No Lead) <b>R</b> =Must use HDRT Holder	\$80.00       \$59.00
<b>RHP-</b> Replacement Prongs		<b>E, J, K</b>	<b>1"</b> <b>3"</b> <b>6"</b>		\$12.00 \$16.00 \$18.00

# Specialty Sensors

## Platen Surface Sensor



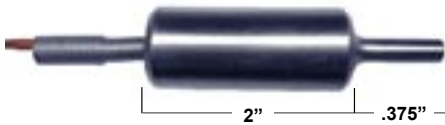
- Platens and press plates can be closed and their surface temperature measured using this sensor
- Spring Loaded Sensing Element
- Will withstand 20,000 psi of clamping pressure
- Platens or press plates can be closed to 3/8 of an inch
- All Stainless steel rugged construction

### Specifications

Sensing Element ..... 1-1/2" - 3" Dia.  
 Lead ..... 32" long thermocouple grade stranded #20 wire. Teflon insulated and twisted with woven stainless steel overbraid  
 Range ..... -40°C to 500°C  
 Accuracy ..... 1%  
 Shank Length ..... .6"

Model	Temperature	T/C	Diameter	Terminations	Price
<b>SPM-</b> Platen Surface Sensor	<b>10</b> =1000°F (500°C)	<b>E, J, K or T</b>	<b>1-1/2"</b> <b>3"</b>	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>C</b> =Coilcord w/ Miniplug <b>L</b> =Standard Plug <b>U</b> =Unterminated <b>A</b> =Spade Lugs <b>E</b> =Miniplug (No Lead) <b>R</b> =Must use HDRT Holder	\$154.00

## Weighted Fluid Sensor



- Sensor will sink in most fluid
- For tanks, drums and other liquid vessels
- Stainless steel and teflon construction is durable and easy to clean
- Sensing tip is tapered to maintain accuracy and response time
- Teflon coating available upon request

### Specifications

Sensing Element ..... 1-1/2" - 3" Dia.  
 Lead ..... 32" long thermocouple grade stranded #20 wire. Teflon insulated and twisted with woven stainless steel overbraid  
 Range ..... -100°C to 250°C  
 Accuracy ..... 1%

Model	Temperature	T/C	Diameter	Terminations	Price
<b>NBW-</b> Weighted Fluid Sensor	<b>06</b> =500°F (250°C)	<b>E, J, K or T</b>	<b>T</b> =0.050" <b>K</b> =0.059" <b>F</b> =0.072" <b>M</b> =0.083" <b>Q</b> =0.093"	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>C</b> =Coilcord w/ Miniplug <b>L</b> =Standard Plug <b>U</b> =Unterminated <b>A</b> =Spade Lugs	\$138.50

## Mini Spade Lug



- Small footprint and low mass makes it ideal for tight applications
- Easily installed using a #2 to #6 screw
- Thermocouple junction brazed to lug
- Front of spade lug may be formed for angled or curved installation

### Specifications

Sensing Tip ..... #2 stainless steel lug  
 Lead ..... #24 glass/glass 32" long  
 Range ..... -80°C to 480°C  
 Accuracy ..... 1%

Model	Temperature	T/C	Terminations	Price
<b>SMSL-</b> Mini Spade Lug	<b>09</b> =900°F (480°C)	<b>J or K</b>	<b>M</b> =Miniplug (Digital) <b>U</b> =Unterminated	\$46.00

# Specialty Sensors

## Threaded Bolt Sensors



- Thermocouple is internally mounted
- Threads into 10-24 UNC or 1/4-20 UNC standard machine thread hole size
- Standard 1" long hex head SS.bolt
- Used for monitoring engines, machinery, and many other processes
- Monel, Inconel brass or other materials are available

### Specifications

Sensing Tip..... stainless steel  
 Handle ..... none  
 Lead.....32" long thermocouple grade stranded #20 wire. Teflon insulated & twisted  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... <3 sec. to 95% of reading

Model	Temperature	T/C	Diameter	Thread	Length	Terminations	Lead Type	Price
<b>WBT</b> -Threaded Bolt	<b>06</b> =320°C (600°F)	<b>E, J, K</b> or <b>T</b>	<b>V</b> =3/16" <b>A</b> =1/4" <b>C</b> =5/16" <b>G</b> =3/8"	10 x 24 1/4 x 20 5/6 x 18 3/8 x 16	<b>1"</b>	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>U</b> =Unterminated <b>L</b> =Standard Plug	<b>7</b> =Teflon	\$35.00 " " "

## Welded Washer Sensor



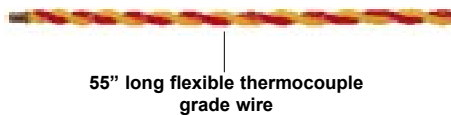
- Thermally conductive washer with a thermocouple wire welded internally
- Ideal for pump and motor housings
- Permits continuous monitoring of temperatures up to 650°C (1200°F)
- Ideal for marine, automotive, or any bolt on applications

### Specifications

Washer ..... 0.375" wide  
 Handle ..... none  
 Lead.....55" long thermocouple grade stranded #20 wire. Teflon insulated & twisted  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... <3 sec. to 95% of reading

Model	Temperature	T/C	Terminations	Lead Type	Price
<b>WW</b> -Washer	<b>06</b> =320°C (600°F)	<b>E, J, K</b> or <b>T</b>	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>A</b> =Spade Lugs (Analog)	<b>7</b> =Teflon	\$31.00
	<b>09</b> =480°C (900°F)	<b>E, K</b> or <b>J</b>	<b>U</b> =Unterminated <b>L</b> =Standard Plug	<b>4</b> =Glass	\$32.00
	<b>12</b> =650°C (1200°F)	<b>E</b> or <b>K</b>		<b>5</b> =Silica	\$35.00

## Welded Wire Sensor



- Accurate, durable and economical.
- Junction is TIG welded for strength
- Ideal for heated enclosures, ovens, vents, ducts, HVAC or wherever simple low cost measurements are practical

### Specifications

Sensing tip..... Welded junction  
 Handle ..... None  
 Lead.....55" long thermocouple grade stranded #20 wire. Teflon insulated & twisted  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... <3 sec. to 95% of reading

Model	Temperature	T/C	Terminations	Lead Type	Price
<b>WU</b> -Welded Wire	<b>06</b> =320°C (600°F)	<b>E, J, K</b> or <b>T</b>	<b>M</b> =Miniplug (Digital) <b>P</b> =Phonoplug (Analog) <b>A</b> =Spade Lug	<b>7</b> =Teflon	\$25.50
	<b>09</b> =480°C (900°F)	<b>E, K</b> or <b>J</b>	<b>U</b> =Unterminated <b>L</b> =Standard Plug	<b>4</b> =Glass	\$31.50
	<b>12</b> =650°C (1200°F)	<b>E</b> or <b>K</b>		<b>5</b> =Silica	\$35.00
	<b>22</b> =1200°C (2200°F)	<b>K</b> only		<b>Q</b> =Ceramic Fiber	\$41.00

# Specialty Sensors

## Shielded Air Sensor



- Fine Wire Thermocouple with protective sleeve offers the fastest and most accurate tracking of still or moving air/ Gas measurement
- Sliding sleeve can be locked in any position allowing protection to wire
- Any lead length available

### Specifications

Sensing Tip..... diameter as ordered  
 Handle .....2" long x 0.5" diameter aluminum  
 Lead.....32" long thermocouple grade stranded #20 wire. Teflon insulated & twisted w/ stainless steel overbraid.  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... < 3 seconds

Model	Temperature	T/C	Wire Gauge	Length	Termination	Price
<b>AM</b> -w/Sheild	<b>15</b> =815°C (1500°F)	<b>E, J, K</b>	<b>L</b> =#26	<b>2"</b>	<b>M</b> =Miniplug	\$96.00
		or <b>T</b>	<b>L</b> =#26	<b>6"</b>	<b>P</b> =Phonoplug (Analog)	"
		Max Temp. for <b>T</b> is	<b>N</b> =#30	<b>2"</b>	<b>U</b> =Unterminated	"
		400°C	<b>N</b> =#30	<b>6"</b>	<b>A</b> =Spade Lugs (Analog)	"

## Air Cage Sensor



- Rugged cage protects sensing element from abuse
- Cage has at least 63% open area for quick response
- High air flow rate enables accurate and rapid air/gas readings in harsh environments
- Any lead length available

### Specifications

Sensing Tip.....Wire size as ordered  
 Handle .....2" long x 0.343" diameter ceramic  
 Lead.....32" long thermocouple grade stranded #20 wire. Teflon insulated & twisted w/ stainless steel overbraid.  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... <3 seconds

Model	Temperature	T/C	Wire gauge	Length	Termination	Price
<b>AC</b> -w/Cage	<b>15</b> =815°C (1500°F)	<b>E, J, K</b> or <b>T</b>	<b>L</b> =#26	<b>6"</b>	<b>M</b> =Miniplug	\$66.00
		Max Temp. for <b>T</b> is	<b>L</b> =#26	<b>12"</b>	<b>P</b> =Phonoplug (Analog)	"
		400°C	<b>N</b> =#30	<b>6"</b>	<b>A</b> =Spade Lugs (Analog)	"
			<b>N</b> =#30	<b>12"</b>	<b>U</b> =Unterminated	"

## Flexible Air Sensor with Bracket



- Stainless Steel covered lead and bracket gives added protection in industrial applications.
- Ideal for permanent mounting.
- Designed for use in ovens, vents, and HVAC.
- Available in 4 internal insulations; Teflon, Glass, Silica, and/or Nextel.

### Specifications

Sensing Tip..... Wire as ordered  
 Handle ..... None  
 Lead.....55" long thermocouple grade stranded #20 wire. Teflon insulated & twisted w/ stainless steel overbraid.  
 Accuracy... ASTM E-230 standard limits (pg. 15)  
 Response time ..... <3.5 sec. to 95% of reading

Model	Temperature	T/C	Termination	Lead Type	Price
<b>AW</b> -Flexible Air w/Bracket	<b>06</b> =320°C (600°F)	<b>E, J, K</b> or <b>T</b>	<b>M</b> =Miniplug	<b>7</b> =Teflon	\$46.00
		Max Temp. for <b>T</b> is	<b>P</b> =Phonoplug		
	<b>09</b> =480°C (900°F)	400°C	<b>A</b> =Spade Lug	<b>4</b> =Glass	\$50.00
			<b>U</b> =Unterminated		
<b>12</b> =650°C (1200°F)	<b>E, or K</b>		<b>5</b> =Silica	\$54.00	
<b>22</b> =1200°C (2200°F)	<b>K</b>		<b>Q</b> =Ceramic Fiber	\$59.00	