

Т1441X, Т1804-F, Т1804-5, Т1804-7, Т1804-10, Т1804-15, Т1804X-F, Т1804X-5, Т1804X-7, Т1804X-15, Т1855-F, Т1855-5, Т1855-7T, 1855-10, Т1844-F, Т1844-7, Т1844-15, Т1792, Т1792-8, Т1792-10 и др.

# Датчики термосопротивления для мониторинга обогрева серии RTDs. Технические характеристики.



### По вопросам продаж и поддержки обращайтесь:

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### **OVERVIEW**

Applied Sensor Technologies manufactures a broad range of temperature sensor assemblies, including:

- Thermocouples
- RTDs (both wire wound and thin film)
- Thermistors
- Integrated Circuit (IC)

All of our products are known for their consistent high reliability and durability. We are continually examining and improving our engineering, production and service operations to meet constantly evolving customer requirements. Our ISO 9001 certification is objective proof of our company-wide commitment to quality.

# **Heat Tracing Expertise**

United Electric Controls has been a recognized leader in the area of heat tracing control for several decades. Our electro-mechanical thermostats, both NEMA 4X and explosion-proof, can be found in virtually every process industry today.

Over the years, we have also built our expertise in electronic heat trace control. Our Heat Tracing RTDs are the results of more than 10 years' experience in providing sensors for these challenging applications.

Our unique, "replaceable" design has been field-proven to be accurate and reliable, and is available in a variety of configurations.

# **FEATURES**

Simplify installation and address maintenance issues with Applied Sensor Technologies' Heat Trace RTDs. Designed for use in any pipe or surface temperature measuring application, these sensors are especially appropriate for use with electronic heat trace control products.

Some of our advantages are:

- Heat transfer pad conforms to pipe radius for fastest temperature response
- Rugged stainless steel sheath for excellent mechanical protection
- Replaceable RTD elements
- Many types of terminal heads
- Designs can be adapted for other types of sensors



# **TECHNOLOGY**

# **RTDs (Resistance Temperature Detectors)**

An RTD capitalizes on the fact that the electrical resistance of a material changes as its temperature changes. For RTDs, the resistance of the platinum sensor will rise nearly linearly with temperature; the signal is more accurate than a thermocouple.

RTDs are typically used to measure temperatures from -196  $^{\circ}$ C to 500  $^{\circ}$ C (-320  $^{\circ}$ F to 932  $^{\circ}$ F), although we currently have special designs which are capable of 700  $^{\circ}$ C continuous.

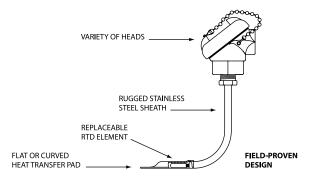
# Why use "Replaceable" Designs?

Replaceable element design simplifies and reduces the time and cost of sensor maintenance. Applied Sensor Technologies' Heat Trace RTDs make the job of replacing a faulty element easy. With traditional Heat Trace RTDs, several time-consuming and expensive steps need to be executed to replace a faulty element. The process routinely involves 3 trades to make a change – insulation handlers, welders and instrument technicians. This can result in significant cost and downtime.

Not only that, but our experience has shown that one of the major causes for heat tracing failure and pipe freezing is the improper re-installation of insulation and cladding after a repair. If a seal is not tight around the repair, reliability is compromised and so are the results.

With our "replaceable" design, however, these maintenance problems are eliminated - the insulation and cladding are never disturbed. Also, the repair is simpler, faster and more cost-effective.

To replace a faulty element, you simply remove the head cover, disconnect the leads and remove the element. You then insert the new element and reconnect the leads. Your process is up and running in minutes.





# **SPECIFICATIONS**

# **NEMA 4 CAST ALUMINUM HEAD WITH REPLACEABLE ELEMENT**

T1804

Element type: 3 wire construction, DIN 0.00385

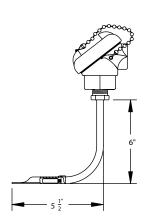
Resistance: 100 ohms @  $0^{\circ}$  C Tolerance: Class B, +/- 0.12%

Enclosure: Cast aluminum head; conforms to NEMA 4 requirements

Sheath: 0.375" O.D. stainless steel
Operating Range: 0° to 482° C (32° to 900° F)

# Uses replacement element T1805

Product Number	Nominal Pipe Size	O.D.
T1804-F	Flat	0
T1804-5	0.50"	0.84"
T1804-7	0.75"	1.05"
T1804-10	1.00"	1.32"
T1804-15	1.50"	1.90"
T1804-20	2.00"	2.38"
T1804-30	3.00"	3.50"
T1804-40	4.00"	4.50"
T1804-60	6.00"	6.63"
T1804-80	8.00"	8.63"



For dual element, use part #T1804D-\_\_\_.

### **EXPLOSION PROOF CAST ALUMINUM HEAD WITH REPLACEABLE ELEMENT**

T1804X

Element type: 3 wire construction, DIN 0.00385

Resistance: 100 ohms @ 0°C Tolerance: Class B, +/- 0.12%

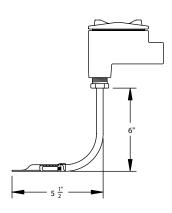
Enclosure: Cast aluminum head; approved for Class I,

Division I, Groups C, D; Class II, Groups E,F,G

Sheath: 0.375" O.D. stainless steel
Operating Range: 0° to 482°C (32° to 900°F)

Uses replacement element T1805

Product Number	Nominal Pipe Size	O.D.
T1804X-F	Flat	0
T1804X-5	0.50"	0.84"
T1804X-7	0.75"	1.05"
T1804X-10	1.00"	1.32"
T1804X-15	1.50"	1.90"
T1804X-20	2.00"	2.38"
T1804X-30	3.00"	3.50"
T1804X-40	4.00"	4.50"
T1804X-60	6.00"	6.63"
T1804X-80	8.00"	8.63"



# NEMA 4X CAST IRON, EPOXY COATED HEAD WITH REPLACEABLE ELEMENT

T1855

Element type: **Dual element**, 3 wire construction, DIN 0.00385

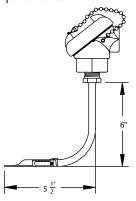
Resistance: 100 ohms @ 0°C Tolerance: Class B, +/- 0.12%

Enclosure: Cast iron head with epoxy coating; conforms to NEMA 4X requirements

Sheath: 0.375" O.D. stainless steel
Operating Range: 0° to 482°C (32° to 900°F)

*Uses replacement element T1805D* 

Product Number	Nominal Pipe Size	O.D.
T1855-F	Flat	0
T1855-5	0.50"	0.84"
T1855-7	0.75"	1.05"
T1855-10	1.00"	1.32"
T1855-15	1.50"	1.90"
T1855-20	2.00"	2.38"
T1855-30	3.00"	3.50"
T1855-40	4.00"	4.50"
T1855-60	6.00"	6.63"
T1855-80	8.00"	8.63"





# **NEMA 4X POLYCARBONATE BOX WITH REPLACEABLE ELEMENT**

T1844

Element type: 3 wire construction, DIN 0.00385

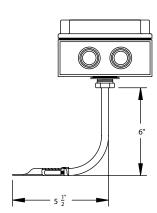
Resistance: 100 ohms @ 0°C Tolerance: Class B, +/- 0.12%

Enclosure: Polycarbonate head; conforms to NEMA 4X requirements, 6 knock-outs

Sheath: 0.375 O.D. stainless steel
Operating Range: 0° to 482°C (32° to 900°F)

Uses replacement element T1805

Product Number	Nominal Pipe Size	O.D.
T1844-F	Flat	0
T1844-5	0.50"	0.84"
T1844-7	0.75"	1.05"
T1844-10	1.00"	1.32"
T1844-15	1.50"	1.90"
T1844-20	2.00"	2.38"
T1844-30	3.00"	3.50"
T1844-40	4.00"	4.50"
T1844-60	6.00"	6.63"
T1844-80	8.00"	8.63"



# **NEMA 4 CAST ALUMINUM HEAD/FIXED ELEMENT**

Element type: 3 wire construction, DIN 0.00385

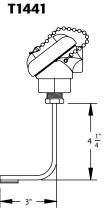
Resistance: 100 ohms @ 0°C
Tolerance: Class B, +/- 0.12%

Enclosure: Cast aluminum head; conforms to NEMA 4 requirements

Sheath: 0.250" O.D. stainless steel Operating Range:  $-18^{\circ}\text{C}$  to  $371^{\circ}\text{C}$  (0° to  $700^{\circ}\text{F}$ )

Product Number

T1441



# **CAST ALUMINUM EXPLOSION-PROOF HEAD/FIXED ELEMENT**

Element type: 3 wire construction, DIN 0.00385

Resistance: 100 ohms @ 0°C Tolerance: Class B, +/- 0.12%

Enclosure: Cast aluminum head; approved for Class I,

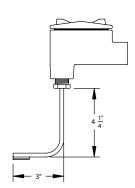
Division I, Groups C, D; Class II, Groups E,F,G

Sheath: 0.250" O.D. stainless steel
Operating Range: -18°C to 371°C (0°F to 700°F)

Product Number

T1441X

### T1441X



# 100 OHM RTD ASSEMBLY WITH FLEXIBLE MI CABLE CONSTRUCTION

Element type: 3 wire construction, DIN 0.00385

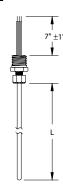
Resistance: 100 ohms @ 0°C Tolerance: Class B, +/- 0.12%

Sheath: 0.250" O.D. stainless steel

Operating Range: -18° to 780°C (0° to 1400°F) maximum

Product Number	_	Length (in inches) L	Instrument Connection
T1792		120	1/2" NPT
T1792-8		8	1/2" NPT
T1792-10		10	1/2" NPT
T1792-12		12	1/2" NPT

### T1792



# SINGLE AND DUAL "BULLET" RTD REPLACEMENT ELEMENT

(For T1804, T1804X, T1855, T1844)

Element type: 3 wire construction, DIN 0.00385

Resistance: 100 ohms @  $0^{\circ}$ C Tolerance: Class B, +/- 0.12%

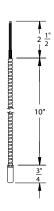
Sheath: 0.250" O.D. stainless steel

Lead: 22 AWG, fiberglass insulation, st/st armor

Operating Range: 0° to 482°C (32° to 900°F)

**Product Number** 

T1805 Single element T1805D Dual element



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