

RTD FREEZER

Remote Freezer, Platinum RTD

The ACI RTD Freezer Series features a 3/16" diameter stainless steel probe with a 10 Foot or 30 Foot, 3 Conductor, 24 AWG Plenum rated jacketed Teflon cable. The sensors in this series are manufactured using ACI's proven encapsulation process to eliminate the effects of moisture upon the sensors. The sensor is designed to be used in Pharmaceutical, Liquid Nitrogen, Freezers, Refrigerators and Hydronic applications where a remote sensor is required due to the extreme temperature ranges and presence of ice and moisture. An optional "-GD" galvanized or "-4x" NEMA 4X weather proof enclosure and NIST Certificates are available as referenced in the ordering grid on the product data sheet. The Freezer RTD sensors can be used with any of the Single or Triple Point Glycol Kits for use in applications where a Thermal Buffer (slower)

response time is desired. Please contact ACI for more information regarding this sensor or to discuss your application in further detail. Other options may be available upon request.

Applications: Pharmaceutical, Liquid Nitrogen, Refrigerators, Freezers, Hydronic Heating, Remote Sensor Applications

PRODUCT SPECIFICATIONS

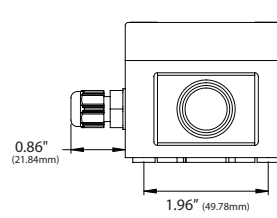
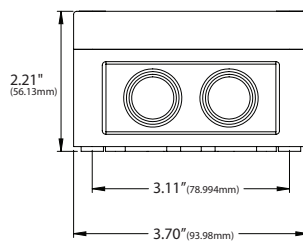
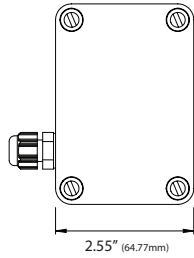
Sensor Type Sensor Curve	Platinum RTD Linear, PTC (Positive Temperature Coefficient)
Number Sensing Points Number Wires:	One Three Conductors (White and Two Red Wires); Polarity Sensitive (Tie Red wires together)
Sensor Output @ 0°C (32°F)	A/100-LTS Series: 100 Ohms nominal A/1K-LTS Series: 1000 Ohms nominal
Sensor Tolerance Class:	Class B Accuracy Formula: $\pm/\text{ }^\circ\text{C} = (\pm/\text{ } 0.30^\circ\text{C} + (0.005 \times t))$ where t is the Absolute Value of temperature in $^\circ\text{C}$ above or below 0°C -200°C (-328°F): $\pm/\text{ } 1.30^\circ\text{C}$ ($\pm/\text{ } 2.34^\circ\text{F}$) 0°C (-32°F): $\pm/\text{ } 0.30^\circ\text{C}$ ($\pm/\text{ } 0.54^\circ\text{F}$)
Temperature Coefficient Din Standard:	3850 ppm / $^\circ\text{C}$ DIN EN 60751 (IEC 751)
Stability:	< 0.04% @ 1000 hours @ 400°C (752°F)
Response Time (63% Step Change):	15 Seconds nominal
Self-Heating Maximum Operating Current:	100 Ohm RTD: 7 mW / $^\circ\text{C}$ (Still Air) 5 mA 1K Ohm RTD: 4 mW / $^\circ\text{C}$ (Still Air) 3 mA
Sensor Operating Temperature Range:	-200 to 200°C (-328 to 392°F)
Enclosure Operating Temperature Range:	"-GD" Enclosure: -40 to 100°C (-40 to 212°F) "-4X" Enclosure: -40 to 70°C (-40 to 158°F)
Storage Temperature Range:	-40 to 80°C (-40 to 176°F)
Operating Humidity Range:	10 to 100% RH
Sensor Pressure Test:	20 PSI (1.38 Bars) maximum
Enclosure Material Flammability Rating:	"-GD" Enclosure: Galvanized Steel "-4X" Enclosure: Polystyrene UL94-V2
Enclosure NEMA/IP Ratings:	"-GD" Enclosure: NEMA 1 (IP10) "-4X" Enclosure: NEMA 4X (IP 66)
Cable Gland (Fitting) Size Hole Size:	PG7 15 mm (0.591")
Cable Gland Material Sleeve Material:	Polyamide 6 Neoprene
Cable Gland Wire Clamping Size IP Rating:	0.098" (2.5 mm) to 0.256" (6.5 mm) IP 68 (NEMA 6P)
Cable Gland Torque Rating:	2.5 Nm (22.127 lb. inch)
Probe Material Length Diameter:	316 Stainless Steel 2" (50.8 mm) 0.1875" (4.76 mm) nominal
Lead Length Cable Diameter:	10' (3.05 m) or 30' (9.15 m) 0.106" nominal (2.69 mm)
Conductor Size Conductor Material:	24 AWG (0.51 mm) Silver Plated Copper
Lead Wire Insulation Jacket Color:	FEP/FEP (Teflon) Jacketed Cable White
Product Weight:	A/xx-LTS-10': 0.16lbs (0.073kg) A/xx-LTS-4X-10': 0.40lbs (0.181kg) A/xx-LTS-GD-10': 0.71lbs (0.322kg) A/xx-LTS-30': 0.36lbs (0.163kg) A/xx-LTS-4X-30': 0.60lbs (0.272kg) A/xx-LTS-GD-30': 0.91lbs (0.413kg)
Agency Approvals:	WEEE, RoHS2



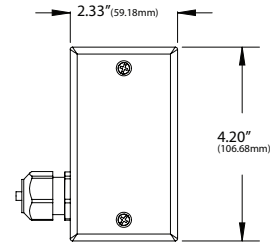
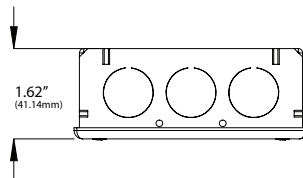
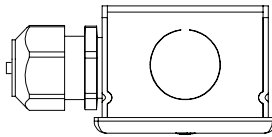


DIMENSIONAL DRAWING

NEMA 4X Enclosure [4X]



Galvanized Enclosure [GD]



Front View

Right View

Top View

STANDARD ORDERING

Model # Example: **A/1K-LTS-GD-30'** -OR- **142516**

Model #	Item #	Description
A/100-LTS-10'	125169	100 Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads
A/100-LTS-GD-10'	142513	100 Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads, Galvanized Enclosure
A/100-LTS-4X-10'	142515	100 Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads; NEMA 4X Enclosure
A/100-LTS-30'	126443	100 Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads
A/100-LTS-GD-30'	142514	100 Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads, Galvanized Enclosure
A/100-LTS-4X-30'	129131	100 Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads; NEMA 4X Enclosure
A/1K-LTS-10'	125213	1K Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads
A/1K-LTS-GD-10'	142139	1K Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads, Galvanized Enclosure
A/1K-LTS-4X-10'	133656	1K Ohm RTD, 2" Probe, Freezer Sensor, 10' Leads; NEMA 4X Enclosure
A/1K-LTS-30'	125214	1K Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads
A/1K-LTS-GD-30'	142516	1K Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads, Galvanized Enclosure
A/1K-LTS-4X-30'	125212	1K Ohm RTD, 2" Probe, Freezer Sensor, 30' Leads, NEMA 4X Enclosure

OPTIONAL SENSOR ORDERING

Model # Example: **A/ 1K LTS 4X 30' NIST**

MODEL #

A. Sensor Series No Selection Required	A/ →	A/
B. Model Series Select One (1)	100 = 100 Ohm RTD 1K = 1K Ohm RTD	
C. Configuration No Selection Required	LTS = Freezer Sensor →	LTS
D. Enclosure Select One (1)	---- = No Enclosure GD = Galvanized Enclosure 4X = NEMA 4X Enclosure	
E. Lead Length Select One (1)	10' = 10 Feet (3.05m) 30' = 30 Feet (9.15m)	
F. NIST Select One (1)	---- = No NIST Certificate NIST = NIST Certificate (Must Specify 1, 3 or 5 Points)	

