



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 Thermal Buffers for when slower response time is desired.

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

The ACI RTD Freezer Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, workaci.com.

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: $\pm 0.30^\circ\text{C} = (\pm 0.30^\circ\text{C} + (0.005 \times t))$ where t is the Absolute Value of temperature in °C above or below 0°C -200°C (-328°F): $\pm 1.30^\circ\text{C} (\pm 2.34^\circ\text{F})$ 0°C (-32°F): $\pm 0.30^\circ\text{C} (\pm 0.54^\circ\text{F})$
Temperature Coefficient Din Standard:	3850 ppm / °C DIN EN 60751 (IEC 751)
Response Time (63% Step Change):	A/100-LTS Series: In still air: 3:40 (Min:Sec) In water: 19 (Sec) A/1K-LTS Series: In still air: 3:50 (Min:Sec) In water: 22 (Sec)
Sensor Operating Temperature Range:	-198 to 150°C (-324 to 302°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
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, RoHS





DIMENSIONAL DRAWING

<p>NEMA 4X Enclosure [4X]</p>		
<p>Galvanized Enclosure [GD]</p>		
<p>Sensor Probe</p>		
<p>Front View</p>	<p>Side View</p>	<p>Top View</p>

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

ACCESSORIES ORDERING			Model # Example: A/TB-2.0-GLA -OR- 147220
Model #	Item #	Description	
A/TB-2.0-GLA	147220	Thermal Buffer, 2 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Glass Beads, Rated to -100°C	
A/TB-2.0-GLY	147221	Thermal Buffer, 2 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Food Grade Glycol, Rated to -40°C	
A/TB-2.0-XXY	147222	Thermal Buffer, 2 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Empty Bottle, Polyamide Fitting, Rated to -40°C	
A/TB-2.0-XXA	147653	Thermal Buffer, 2 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Empty Bottle, SS Fitting, Rated to -100°C	
A/TB-8.5-1-GLA	147223	Thermal Buffer, 8.5 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Glass Beads, Rated to -100°C	
A/TB-8.5-1-GLY	147225	Thermal Buffer, 8.5 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Food Grade Glycol, Rated to -40°C	
A/TB-8.5-1-XXX	147226	Thermal Buffer, 8.5 oz Nalgene Bottle, 1 Sensing Point, Mounting Bracket, Empty Bottle, Rated to -100°C	
A/TB-8.5-3-GLA	147227	Thermal Buffer, 8.5 oz Nalgene Bottle, 3 Sensing Points, Mounting Bracket, Glass Beads, Rated to -100°C	
A/TB-8.5-3-GLY	147228	Thermal Buffer, 8.5 oz Nalgene Bottle, 3 Sensing Points, Mounting Bracket, Food Grade Glycol, Rated to -40°C	
A/TB-8.5-3-XXX	147229	Thermal Buffer, 8.5 oz Nalgene Bottle, 3 Sensing Points, Mounting Bracket, Empty Bottle, Rated to -100°C	
A/GLYCOL 250ML	144021	Glycol Filled Bottle (250 ML)	
A/GLA 250ML	147328	Glass Bead Filled Bottle (250 ML)	

Note: 2.0 (2oz) models are shipped with the original lid in place along with an additional lid drilled out with the sensor cord grip.

