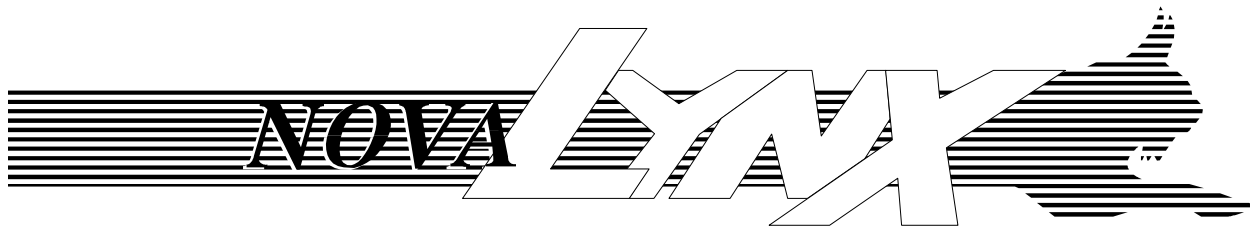


NOVALYNX CORPORATION

MODEL 225-570-A & 225-571-A
SLING PSYCHROMETER

INSTRUCTION MANUAL



REVISION DATE: 08/2007

Receiving and Unpacking

Carefully unpack all components and compare to the packing list. Notify NovaLynx Corporation immediately concerning any discrepancy. Inspect equipment to detect any damage that may have occurred during shipment. In the event of damage, any claim for loss must be filed immediately with the carrier by the consignee. Damages to equipment sent via Parcel Post or UPS require the consignee to contact NovaLynx Corporation for instructions.

Returns

If equipment is to be returned to the factory for any reason, call NovaLynx between 8:00 a.m. and 4:00 p.m. Pacific Time to request a Return Authorization Number (RA#). Include with the returned equipment a description of the problem and the name, address, and daytime phone number of the sender. Carefully pack the equipment to prevent damage or additional damage during the return shipment. Call NovaLynx for packing instructions in the case of delicate or sensitive items. If packing facilities are not available take the equipment to the nearest Post Office, UPS, or other freight service and obtain assistance with the packaging. Please write the RA# on the outside of the box.

Warranty

NovaLynx Corporation warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from the date of shipment from the factory. NovaLynx Corporation's obligations under this warranty are limited to, at NovaLynx's option: (i) replacing; or (ii) repairing; any product determined to be defective. In no case shall NovaLynx Corporation's liability exceed product's original purchase price. This warranty does not apply to any equipment that has been repaired or altered, except by NovaLynx Corporation, or that has been subjected to misuse, negligence, or accident. It is expressly agreed that this warranty will be in lieu of all warranties of fitness and in lieu of the warranty of merchantability.

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NovaLynx Corporation

Model 225-570-A & 225-571-A Sling Psychrometer Instruction Manual

1.0 INTRODUCTION

The Model 225-570-A and 225-571-A Sling Psychrometers are used to measure dew point temperature and relative humidity. A sling psychrometer employs two thermometers, one wet bulb and one dry bulb, to observe the temperature of evaporation; that is, the difference between the temperatures indicated by wet bulb and dry bulb thermometers. Model 225-570-A has thermometers graduated in degrees Fahrenheit while Model 225-571-A has thermometers graduated in degrees Celsius.

2.0 SPECIFICATIONS

Temperature range:

225-570-A	-20 to +120 F
225-571-A	-30 to +50 C

Size: 12" L x 1.5" W (305 mm x 38 mm)

Weight/Shipping: 0.4 lb/1 lb

3.0 THEORY OF OPERATION

A psychrometer is an instrument designed to measure dew point temperature and atmospheric relative humidity through the use of a wet bulb thermometer and a dry bulb thermometer. Typically, both thermometers are physically identical. The instrument consists of a pair of thermometers mounted on a metal frame, with a handle which permits the thermometers to be whirled rapidly; the bulbs being thereby strongly affected by the temperature and moisture in the air. The lower of the two bulbs is covered with a cotton wick, which should be wet at the time an observation is made. Two readings are obtained; a dry air temperature reading and a wet bulb temperature reading. The difference between the wet bulb and the dry bulb reading is called the "depression". By knowing the dry bulb temperature and the depression temperature, dew point temperature and relative humidity can be obtained from psychrometric tables.

4.0 USING THE PSYCHROMETER

To use the psychrometer, the following steps are recommended:

1. Check the wet bulb thermometer to ensure that the cotton wick has been securely tied onto the bulb. Use a cotton thread to tie the wick to the bulb. Do not touch the wick with your fingers or skin. Oils in human skin will affect the operation of the cotton wick. Use a tweezers or rubber gloves to handle the wick.
2. Saturate the muslin on the wet bulb by dipping it into a small cup or wide-mouthed bottle of water. Distilled water is recommended. The entire wick should be saturated.
3. Whirl the psychrometer rapidly for 15 or 20 seconds. Stop and take readings quickly, noting the wet bulb reading first. Immediately whirl the unit again and take a second reading. Repeat this process three or four times until at least two successive readings of the wet bulb are found to agree very closely, thereby showing that it has reached its lowest temperature.
4. Calculate the temperature depression and use that value and the dry bulb reading to obtain the dew point or humidity value from the psychrometric chart.

5.0 MAINTENANCE

Cleanliness is important to the correct operation of any psychrometer. The wick should remain clean at all times. Residue on the wick will result in errors in the temperature readings. Replace the wick before each reading for best results, especially when there is an extended time between readings (days, weeks, or months) or when there are high concentrations of atmospheric contaminants present at the testing location.

Periodically check both red liquid thermometers to ensure that they read the same (within the specified accuracy of the thermometers) when both are used as dry bulb thermometers.

Replacement Parts:

- 225-572-A Thermometer, -20/120 F
- 225-573-A Thermometer, -30/50C
- 225-568 Wick Material, 24" length