Food Tracker®

Humidity Sensor Conditioning Unit

USER GUIDE

IF the humidity sensor of a Datapaq® Tracker system is moved quickly into a hot, moist oven environment, it is possible for condensation to form on the sensor, resulting in the sensor incorrectly recording 100% relative humidity. Datapaq's Humidity Sensor Conditioning Unit solves this problem by heating up the sensor prior to insertion in the oven. This reduces the difference between sensor temperature and oven temperature, thus minimizing condensation.

Humidity sensor conditioning unit, CS3050.

Refer to the Food Tracker User Manual for details of making humidity measurements and the use of a humidity sensor.

Items Supplied

Humidity Sensor Conditioning Unit CS3050
Power-supply unit
Electricity-supply lead
Humidity Sensor Conditioning Unit User Guide

Specification

The Unit will condition a humidity sensor to a temperature in the range 30–150°C/85–300°F and maintain that temperature to within ±3°C/5.4°F. The conditioning temperature must be at least 5°C/9°F higher than the current ambient temperature.

Conditioning Unit input	24 V DC, 90 W max.
Power-supply unit input	100–240 V AC, 50–60 Hz, 2.5 A max.
Dimensions	312 × 186 × 95 mm, 2.4 kg approx. 12.3 × 7.3 × 3.7 in., 5.3 lb approx.
Operational ambient temperature	5–40°C/40–95°F
Humidity	80% max., non-condensing

Installation

WARNING

The Conditioning Unit and power supply unit are suitable for indoor use only.

Do not connect the Conditioning Unit directly to the main electricity supply.

Connect the Conditioning Unit only to the power-supply unit supplied..

Site the Conditioning Unit and its power supply on a dry level surface, far enough from water that they cannot be splashed. Ensure that the Unit's ventilation apertures cannot become covered or blocked. Check the heating chamber is free from any foreign object (e.g. packing material) and that a humidity sensor can be inserted freely into the chamber.

Connect the power supply unit's output lead to the 24 V input socket of the Conditioning Unit, then connect the electricity supply lead to the input socket of the power supply unit and to the electricity supply.

Operation

The Unit's display panel shows the heater's current temperature, factory-set to °C or °F. Press and hold the × button to toggle the display between the temperature units and the heater's target temperature.

To heat the humidity sensor:

1. Switch on the Conditioning Unit. It will perform a self-test, then display the current heater temperature.
2. To set the heater's target temperature, hold down the ✱ button while pressing ▲ or ▼. To allow for cooling prior to the run, set the target temperature about

20°C/36°F above the oven temperature; the exact amount of the excess will depend on the temperatures involved and the delay before the system can be placed in the oven.

3. If the temperature set is higher than the current temperature, the status indicator will flash, indicating that the Conditioning Unit is heating.
4. Insert the humidity sensor into the heating chamber in the Conditioning Unit and wait for the display panel to show the target temperature; the status indicator then stops flashing. The heater takes about 30 minutes to reach the maximum temperature of 150°C/300°F.
5. When the heater reaches target temperature, leave the sensor in the chamber for a further 5 minutes. The sensor is now ready for use, and the run should be started as soon as possible.

Note that the Conditioning Unit remembers the last target temperature set, so it is necessary to re-set it only if a new temperature is needed.

WARNING

The inside of the conditioner's heating chamber can get very hot; do not touch it.

The Conditioning Unit should only be used for heating humidity sensors.

Do not touch the Conditioning Unit or power-supply unit with wet hands.

Do not use if the Conditioning Unit, power supply unit or connecting cables become damaged.

Disconnect the power supply unit from the electricity supply when the Conditioning Unit is not in use.

Storage and Cleaning

When not in use, store the Conditioning Unit in a dry place at 0–50°C/32–122°F.

To clean the Conditioning Unit, ensure it is cold and disconnect it from the electricity supply. It may be cleaned with a damp lint-free cloth, using only water and – for stubborn stains and grease – a small quantity of general-purpose detergent. Do not over-wet, and allow to dry thoroughly before re-use. While cleaning, do not allow the heating chamber to become blocked or become contaminated.

Troubleshooting

If the Unit fails to heat, check the two fuses, FS1 and FS2, as follows.

1. Switch off the Conditioning Unit at the front panel and disconnect the power supply unit from the electricity supply.

2. On the rear panel, unscrew each fuse-holder cap and carefully withdraw the fuse.

If the fuse has failed, replace with same type and rating:

FS1 – F 5 A, 250 V, IEC127 glass (20 × 5 mm, quick-blow type)
FS2 – F 250 mA, 250 V, IEC127 glass (20 × 5 mm, quick-blow type)

There are no user-replaceable parts within the Conditioning Unit. Please refer servicing and repair to Datapaq Ltd or its agents.

The following product types
Humidity Sensor Conditioning Unit CS3050
manufactured by Datapaq Ltd.
Lothbury House, Cambridge CB5 8PB, UK
comply with the requirements of European Union directives as follows.

European Union Directives

Directive 2004/108/EC Electromagnetic Compatibility (EMC)
Standards Applied
EN61326-1: 2006 – Group 1, Class B equipment (emissions section only), and Industrial Location Immunity (immunity section only).
CFR47: 2007 Class A – Code of Federal Regulations: Part 15 Subpart B, Radio Frequency Devices, Unintentional Radiators.
Low Voltage Directive (73/23/EEC)
Standard applied: relevant parts of EN61010-1: 2001.

RoHS Compliance Datapaq temperature monitoring equipment is exempt from EU Directive 2002/95/EC (restriction of the use of certain hazardous substances in electrical and electronic equipment) under category 9 Monitoring and Control Instruments. This Datapaq product nevertheless uses RoHS-compliant components and manufacturing processes.

User manuals are available in other languages. Contact Datapaq for details.

Europe & Asia
Datapaq Ltd
Lothbury House,
Cambridge CB5 8PB, UK
Tel: +44-(0)1223-652400
Fax: +44-(0)1223-652401
sales@datapaq.co.uk

North & South America
Datapaq, Inc.,
3 Corporate Park Dr., Unit 1,
Derry, NH 03038, USA
Tel: +1-603-537-2680
Fax:+1-603-537-2685
sales@datapaq.com

www.datapaq.com