No.I-1
April 2002

INSTRUCTIONS FOR THE USE OF THE MIE MODEL DR-TCH INLET HEATER

GENERAL ASPECTS:

The DR-TCH should always be attached directly to the inlet of the DR-2000 or DR-4000, with the power cord projecting downward. Do not use additional tubing between the DR-TCH and the monitor inlet as such separation could result in recondensation of water vapor. The DR-TCH is designed to raise the temperature exiting it by about 10 to 15°C or about 18 to 27°F above ambient for a flow rate of 2 liters/minute. This suffices to evaporate fog droplets and to reduce the relative humidity to below about 50% in the vast majority of situations.

To connect the flying leads of the 12-VDC version of the DR-TCH to a power source (e.g., storage battery), the two external (outside) wires should be used (no specific polarity). The central (green-insulated) wire is for grounding purposes and it should be connected to ground for safety reasons.

To operate DR-TCH, first start sampling (air should be flowing through DR-TCH) before applying power to the heater. Conversely, before shutting off monitor sampling flow, remove power from DR-TCH.

CAUTION: Do not touch the body of the DR-TCH heater during its operation; its high surface temperature may cause burns. Always allow cooling off after removing power before attempting to touch the DR-TCH heater.

SPECIFICATIONS:

- Power consumption: 10 Watts
- Available voltage options (must be specified when ordering):
  - Ø 12 V (AC/DC) @ 0.83A
  - Ø 115 V (AC/DC) @ 0.087A
  - Ø 220 V (AC/DC) @ 0.046A
- Temperature rise of air (@ 2 lpm): 30 to 40 oF (17 to 22 oC), approx.
- Dimensions (including flow connectors):
  - Ø Length: 11 5/8 in. (295 mm)
  - Ø Outer diameter: 7/8 in. (22 mm)
  - Ø Inner diameter: 0.34 in. (8.6 mm)
- Weight: 0.66 lb. (0.3 kg)
- Material: Stainless steel
- End flow connectors: 1/4 in. NPT Swagelok Quick Connect

About Thermo

A world leader in high-tech instruments, Thermo Electron Corporation helps life science, laboratory, and industrial customers advance scientific knowledge, enable drug discovery, improve manufacturing processes, and protect people and the environment with instruments, scientific equipment and integrated software solutions.

Based in Waltham, Massachusetts, Thermo Electron has revenues of more than $2 billion, and employs approximately 11,000 people in 30 countries worldwide. For more information, visit www.thermo.com

www.thermo.com

Thermo
ELECTRON CORPORATION

Environmental Instruments
First Responder / Industrial Hygiene
27 Forge Parkway
Franklin, MA 02038