



METEOROLOGICAL INSTRUMENTS

MODEL 41382LC2 TEMPERATURE / RELATIVE HUMIDITY PROBE

INSTRUCTION MANUAL

WARRANTY AND ASSISTANCE

R.M. YOUNG PRODUCTS are warranted by CAMPBELL SCIENTIFIC (CANADA) CORP. ("CSC") to be free from defects in materials and workmanship under normal use and service for **twelve (12) months** from date of shipment unless specified otherwise.

***** **Batteries are not warranted.** ***** CSC's obligation under this warranty is limited to repairing or replacing (at CSC's option) defective products. The customer shall assume all costs of removing, reinstalling, and shipping defective products to CSC. CSC will return such products by surface carrier prepaid. This warranty shall not apply to any CSC products which have been subjected to modification, misuse, neglect, accidents of nature, or shipping damage. This warranty is in lieu of all other warranties, expressed or implied, including warranties of merchantability or fitness for a particular purpose. CSC is not liable for special, indirect, incidental, or consequential damages.

Products may not be returned without prior authorization. To obtain a Return Merchandise Authorization (RMA), contact CAMPBELL SCIENTIFIC (CANADA) CORP., at (780) 454-2505. An RMA number will be issued in order to facilitate Repair Personnel in identifying an instrument upon arrival. Please write this number clearly on the outside of the shipping container. Include description of symptoms and all pertinent details.

CAMPBELL SCIENTIFIC (CANADA) CORP. does not accept collect calls.

Non-warranty products returned for repair should be accompanied by a purchase order to cover repair costs.



CAMPBELL SCIENTIFIC
CANADA CORP.

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MODEL 41382LC2

RELATIVE HUMIDITY / TEMPERATURE PROBE

with CURRENT OUTPUTS

INSTRUCTION SHEET 41382LC2-90
REV A092910



SPECIFICATIONS

RELATIVE HUMIDITY:

Measuring range: 0-100% RH
Accuracy at 23°C: $\pm 1\%$
Stability: Better than $\pm 1\%$ RH per year
Response Time: 10 seconds (Without Filter)
Sensor type: Rotronic Hygromer

TEMPERATURE:

Measuring Range: -50 to +50°C
Accuracy at 23°C: $\pm 0.3^\circ\text{C}$
Response Time: 10 seconds (Without Filter)
Sensor type: Platinum RTD

Output signal: 4-20 mA
Power Required: 5-30 VDC, 46 mA max
Recommended Cable: 2 Pair shielded 22AWG, Young 18723
Recommended Shields:
Young Model 43502 Aspirated Radiation Shield
Young Model 41003P Multi-Plate Radiation Shield

INTRODUCTION

The Model 41382LC2 Relative Humidity/Temperature Probe combines high accuracy humidity and temperature sensors in a single probe. The output signal is 4-20 mA. RH range is 0-100%. Temperature range is -50 to +50°C.

INSTALLATION

Install the probe in a naturally ventilated or fan aspirated radiation shield. Mount probe and shield in a location with good air circulation clear of large thermal masses (buildings, pavement, solar panels, etc.), exhaust vents, electrical machinery and motors, water fountains and sprinklers. Typical wiring diagrams appear on next page.

MAINTENANCE

The probe provides years of service with minimal maintenance. Humidity calibration, which may drift slightly with time, can be checked or restored at the factory.

Periodically clean the humidity sensor filter when used in areas of high dust or contamination (smokestacks, seawater, etc.) Soak in clean water or use a mild soap solution. DO NOT USE SOLVENTS.

CE COMPLIANCE

This product complies with the European CE directive on EMC compatibility. Shielded cable must be used.

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of initial purchase. Liability is limited to repair or replacement of defective item. A copy of the warranty policy may be obtained from R. M. Young Company.

Declaration of Conformity

R. M. Young Company
2801 Aero Park Drive
Traverse City, MI 49686 USA

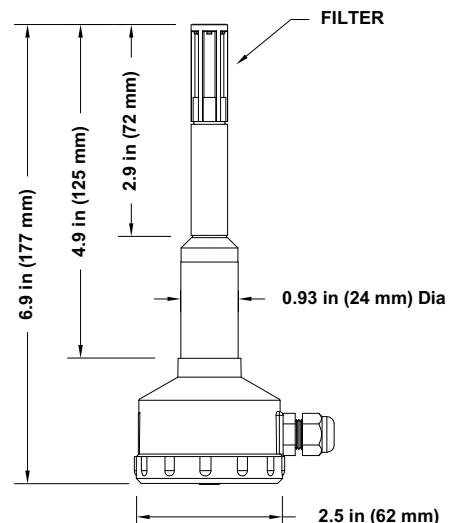
Model 41382LC2 RH/Temp Probe

The undersigned hereby declares on behalf of R. M. Young Company that the above-referenced product, to which this declaration relates, is in conformity with the provisions of:

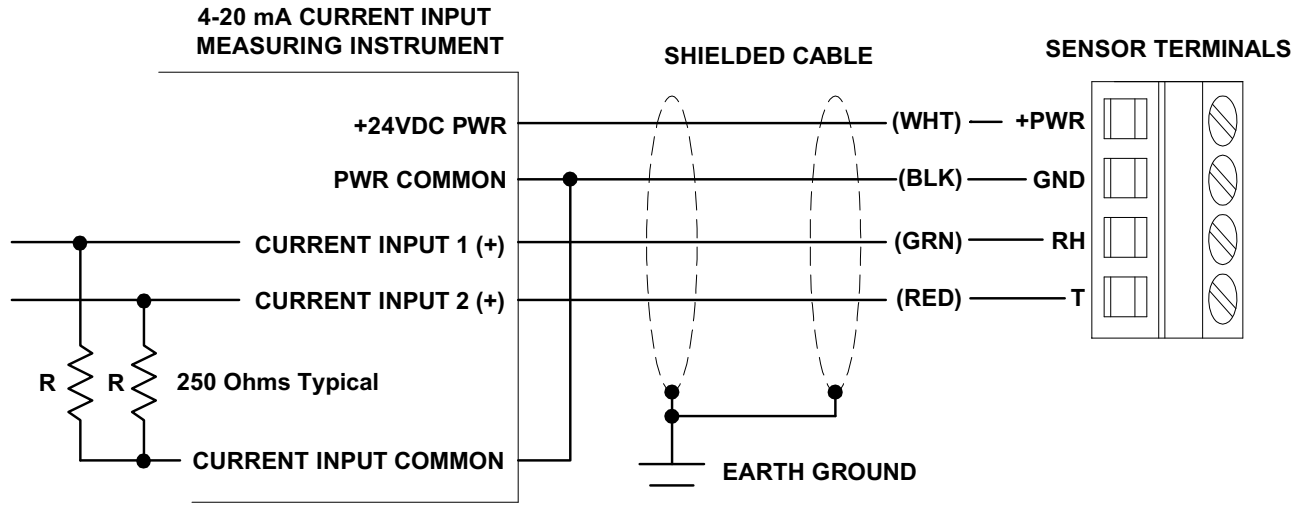
Council Directive 2004/108/EC (December 15, 2004)
on Electromagnetic Compatibility

David Poinsett

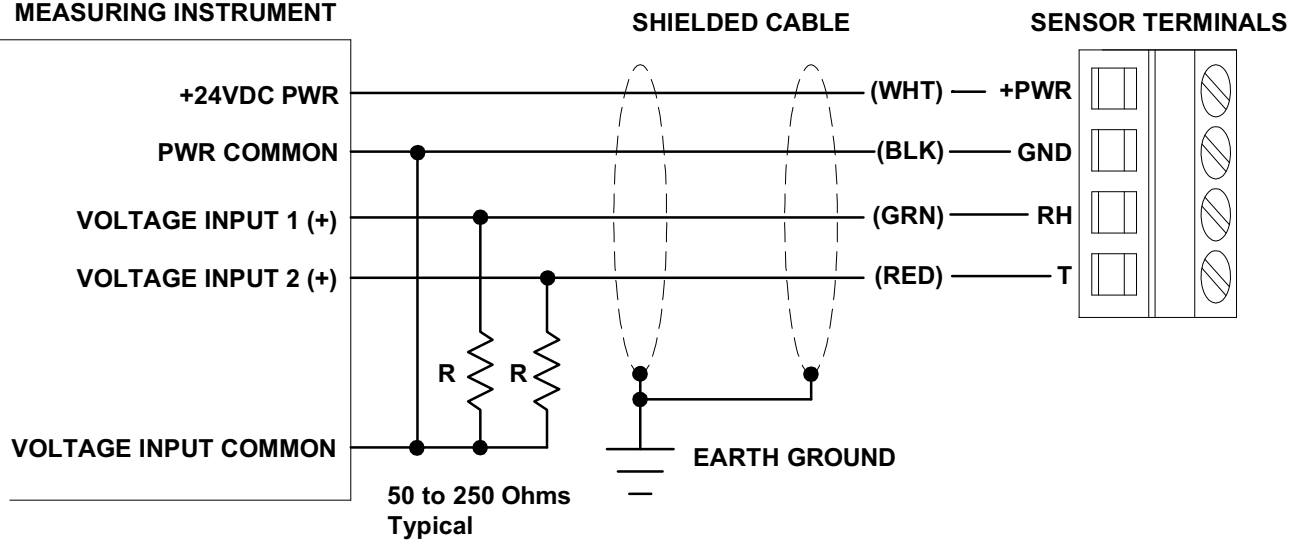
David Poinsett
R&D Manager



TYPICAL WIRING



VOLTAGE INPUT MEASURING INSTRUMENT



30VDC at 46 mA Max Supply
 Total Current Consumption = T mA + RH mA + 6 mA

Min Supply V = 4 + 0.02R
 Max Load R = (Vsupply - 4) / 0.02