



MODEL 41342VC/VF
PLATINUM TEMPERATURE PROBE 0-1V Output

INSTRUCTION SHEET 41342V-90
REV 09-97

INTRODUCTION

The Model 41342VC/VF Platinum Temperature Probe is an accurate 1000 ohm Platinum RTD temperature sensor and low power voltage interface circuit mounted in a weatherproof junction box. The probe is available in Celsius or Fahrenheit calibration. Output signal is 0-1 VDC full scale. The probe is designed for easy installation in YOUNG Multi-plate and Aspirated Radiation Shields.

INSTALLATION

For accurate measurements, the temperature probe should be installed in a protective radiation shield. Use of the probe without a radiation shield may result in large errors due to solar heating. For best performance, the probe and shield should be placed in a location with good air circulation clear of large masses (buildings, pavement, solar panels...), exhaust vents, electrical machinery, motors, water fountains and sprinklers.

MAINTENANCE

The temperature probe is designed to offer years of service with minimal maintenance. Temperature calibration should be accurate for the life of the probe. If necessary, the probe may be periodically checked or recalibrated using normal bath calibration methods. NIST traceable calibration is available from YOUNG at nominal cost.

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.

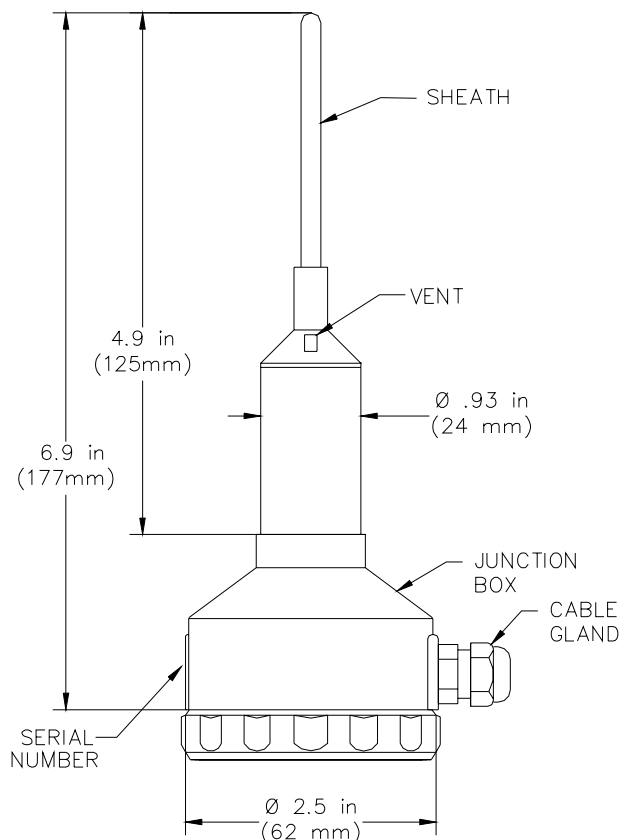
CE COMPLIANCE

This product has been tested and shown to comply with European CE requirements for the EMC Directive. Please note that shielded cable must be used.

SPECIFICATIONS

Power Required: 8 - 24 VDC, 5 mA
 Calibrated measuring range: -50 to +50°C
 -50 to +150°F
 Accuracy at 0°C: ±0.3°C (differential measurement)
 Time Constant: 42 seconds in 43408 shield.
 Sensor type: 1000 Ω Platinum RTD
 Output signal: 0-1 VDC
 Recommended Cable: 2 pair shielded, 22 AWG (#18723)

Recommended Radiation Shields:
 Model 43408P Gill Aspirated Radiation Shield
 Model 41002P Gill Multi-Plate Radiation Shield



Declaration of Conformity

Application of Council Directives:
 89/336/EEC

Standards to which Conformity is Declared:
 EN 50082-1 (IEC 801-2, 3, 4)

Manufacturer's Name and Address:
 R. M. Young Company
 Traverse City, MI, 49686, USA

Importer's Name and Address:
 See Shipper or Invoice

Type of Equipment:
 Meteorological Instruments

Model Number / Year of Manufacture:
 41342 (V, L)/1996

I, the undersigned, hereby declare that the equipment specified conforms to the above Directives and Standards.

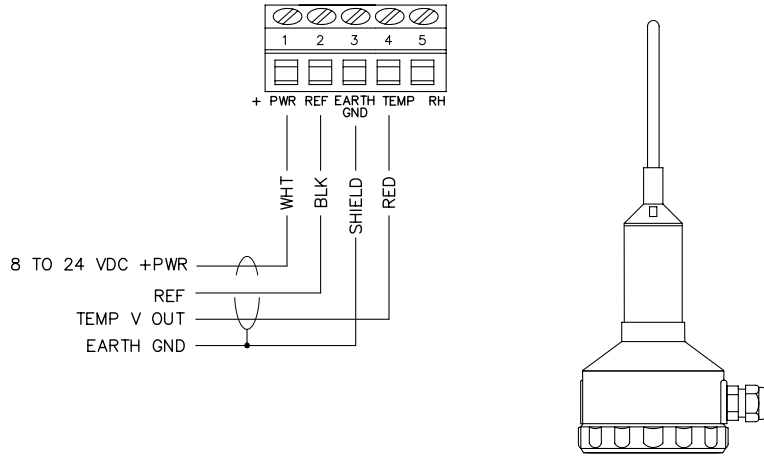
Date / Place: Traverse City, Michigan, USA February 19, 1996

David Poinsett

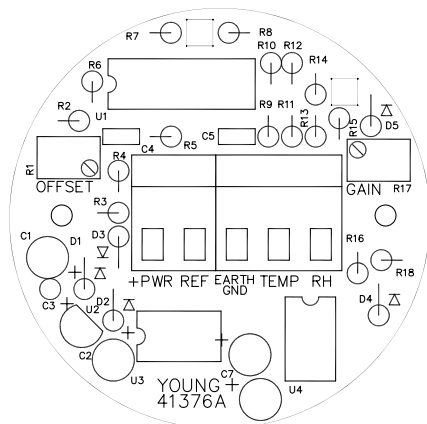
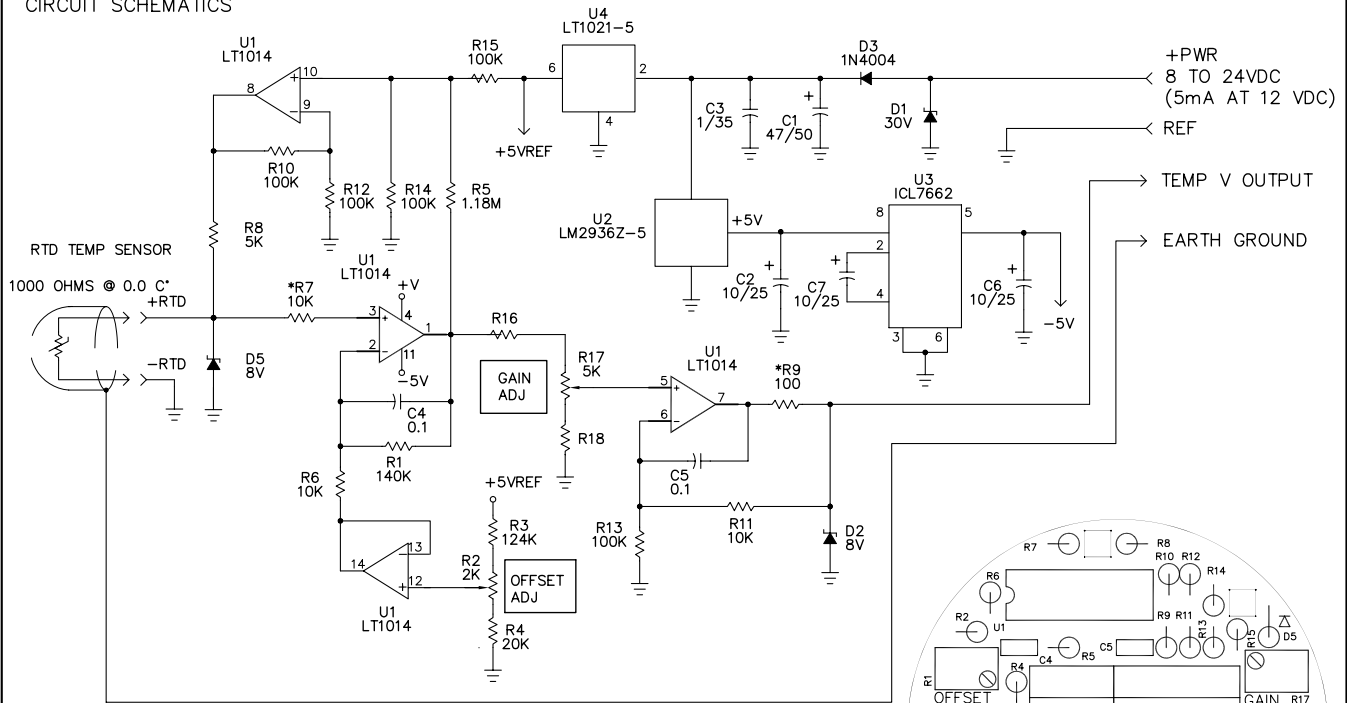
David Poinsett
 R & D Manager, R. M. Young Company



WIRING DIAGRAM



CIRCUIT SCHEMATICS



| RESISTOR VALUES | | |
|-----------------|------------------------|----------------------------|
| MODEL | 41342VC | 41342VF |
| RANGE | CELSIUS (-50° TO +50°) | FAHRENHEIT (-50° TO +150°) |
| OUTPUT | 0 TO 1.000V | 0 TO 1.000V |
| R16 | 95.3K | 100K |
| R18 | 20K | 17.7K |

- NOTES:
1. ALL RESISTORS ARE 5ppm, 0.1% UNLESS OTHERWISE NOTED.
 2. RESISTORS MARKED WITH "*" ARE 100ppm
 3. ALL CAPACITORS ARE IN uF OR uF/WV, UNLESS OTHERWISE NOTED.

| RTD TEMP SENSOR CALIBRATION POINTS: | |
|-------------------------------------|---------------|
| -50° C | 807.873 OHMS |
| 0° C | 1000.000 OHMS |
| +50° C | 1189.005 OHMS |
| -50° F | 825.093 OHMS |
| 0° F | 932.069 OHMS |
| +150° F | 1247.192 OHMS |

| | | | |
|-------|--|--------|------------|
| MODEL | 41342V TEMP SENSOR INTERFACE | DWG B | PRD 12/96 |
| | WITH VOLTAGE OUTPUTS | DWN KL | DWN 09/97 |
| | COMPONENT LAYOUT & CIRCUIT SCHEMATIC | CHK | C41342V(B) |
| | R.M. YOUNG CO. TRAVERSE CITY, MI 49686 U.S.A. 231-946-3980 | | |