



**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.

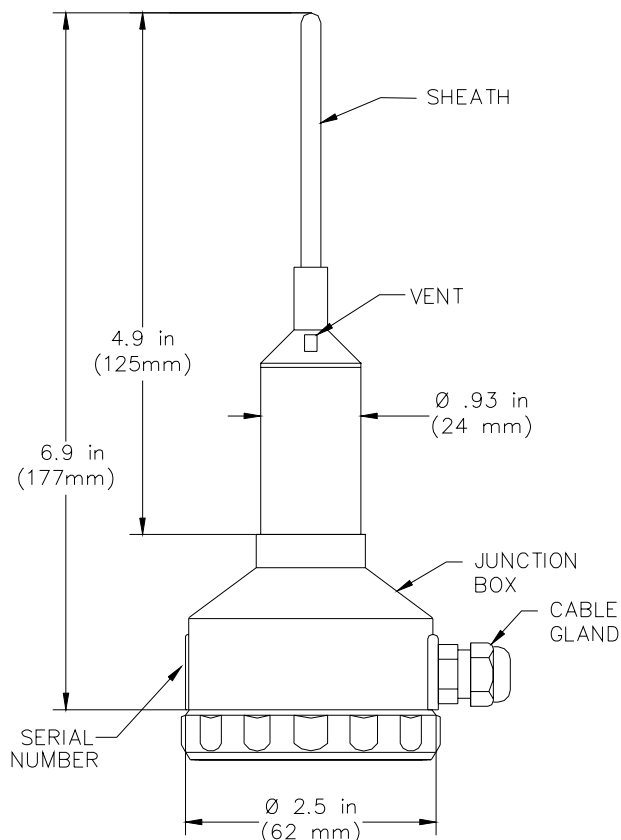
**CE COMPLIANCE**

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.

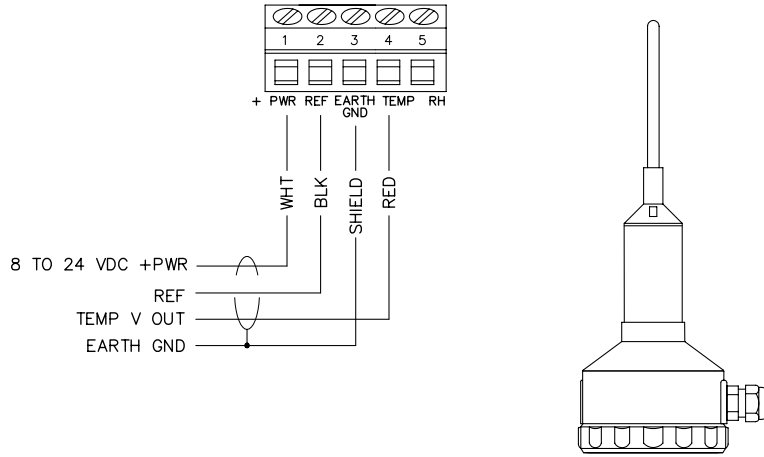
**Date / Place:** Traverse City, Michigan, USA February 19, 1996

*David Poinsett*

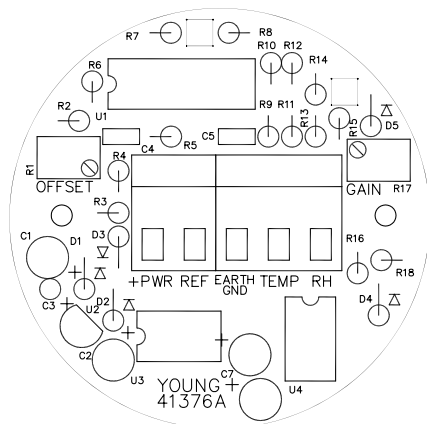
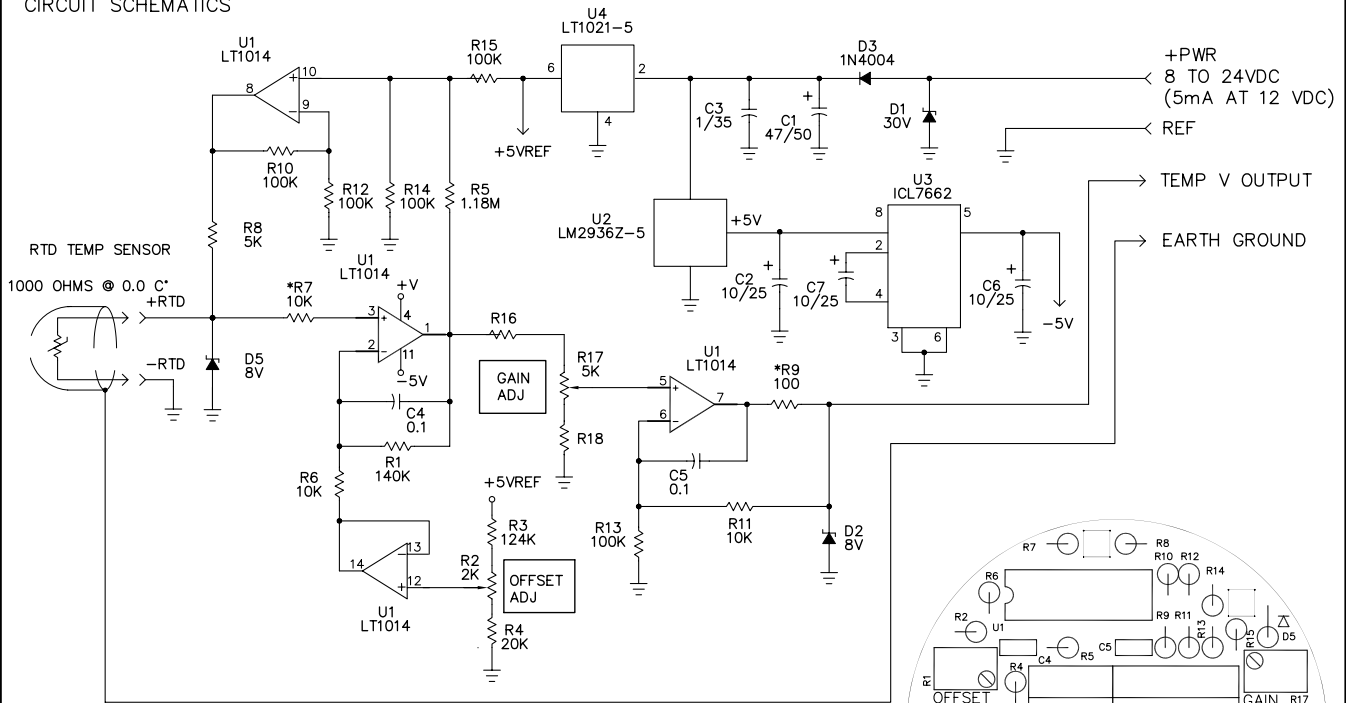
David Poinsett  
R & D Manager, R. M. Young Company



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		