



# MODEL 52202 / 52203

## TIPPING BUCKET RAIN GAUGE

INSTRUCTION SHEET 52202-90  
REV 01-01

### INTRODUCTION

The YOUNG Model 52202 / 52203 Tipping Bucket Rain Gauge meets the specifications of the World Meteorological Organization (WMO). Extensive use of molded thermoplastic components gives maximum performance and resistance to corrosion. Model 52202 is heated for year-round use, Model 52203 is unheated for use in temperate climates.

### LOCATION OF RAIN GAUGE

Precipitation measurement is greatly affected by location of the rain gauge. Select a location that is naturally protected from gusts and crosswinds. Avoid a site prone to contamination from debris such as falling leaves, dirt, etc...

### INSTALLATION

The Model 52202 / 52203 is fully calibrated at the factory. The movable bucket is retained to prevent damage during shipment. On installation, the following procedure should be followed.

1. Loosen 3 screws that retain housing to base assembly. Carefully lift housing free of base.
2. Remove shipping retainer from bucket. Verify that bucket tips freely.
3. Attach sensor wires and heater wires (when used) to terminals as shown in wiring diagram.
4. Adjust leveling screws until bulls eye level is centered.
5. Replace housing. If heated, heater wires (gray) must be attached to terminals C & D before housing is fully engaged. Retighten screws.

### MAINTENANCE

The rain gauge should be inspected periodically. Accumulated dirt and debris should be cleaned from funnel, screen and bucket assembly. Electrical connections should be inspected and cleaned. Leveling screws may be readjusted at this time. Periodic recalibration may be desirable to ensure measurement accuracy.

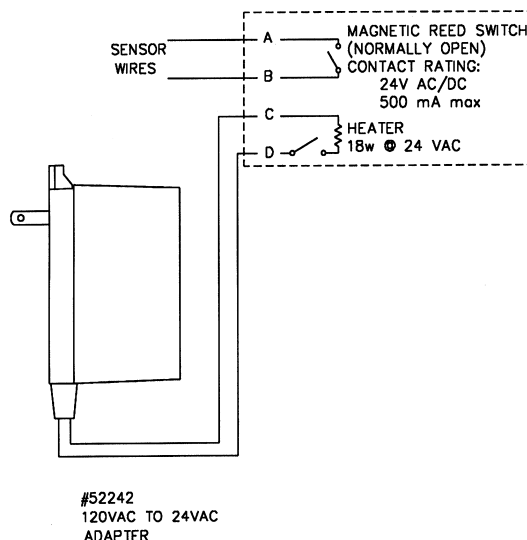
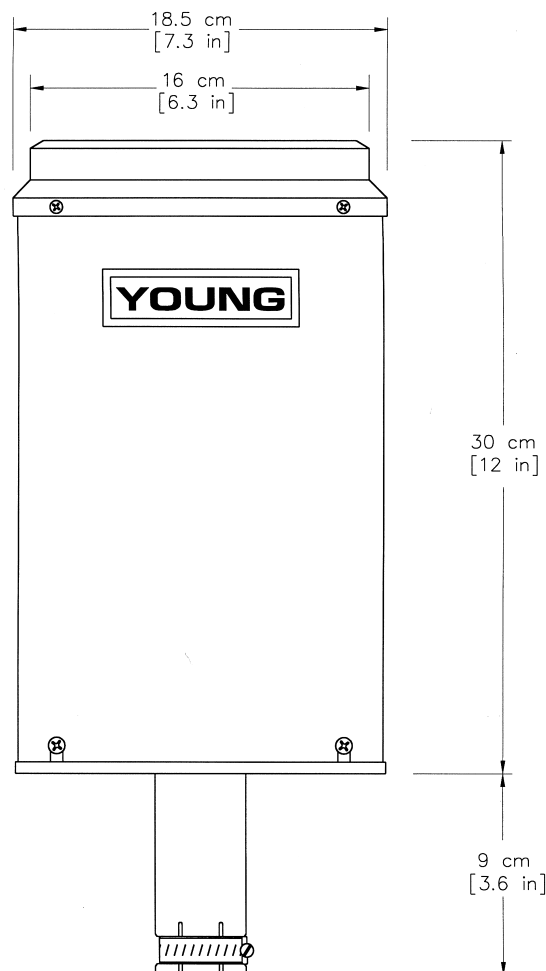
### CALIBRATION

To check or recalibrate the rain gauge, the following steps are suggested:

1. With the rain gauge properly leveled, slowly pour a measured volume of water into the collection funnel. The rate should be about 10ml per minute which is approximately 1 inch per hour. The bucket should tip 5 times for each 10 ml of water. For example, 100 ml should give a count of 50 ±1. Bucket tips may be counted manually or with a counter connected to the rain gauge terminals.
2. If the count shows an error of more than 2%, adjust the calibrating screws to correct the error. Raise the screws if the count is low, lower the screws if the count is high. **Always adjust both screws equally.**

### SPECIFICATIONS

CATCHMENT AREA:	200 cm <sup>2</sup>
RESOLUTION:	0.1 mm per tip
ACCURACY:	2 % up to 25 mm / hr
OUTPUT:	Magnetic reed switch, normally open
CONTACT RATING:	24V AC / DC 500 mA MAX
OPER. TEMP:	-20°C to + 50°C (heated)
POWER:	18 Watts @ 24 VAC for heater only



## **WARRANTY**

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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**

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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.

### **Declaration of Conformity**

**Application of Council Directives:**

89/336/EEC

**Standards to which Conformity is Declared:**

EN 50081-1  
EN 55022 (CISPR 22 class A)  
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:**

52202/52203/1999

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

**Date / Place:**

Traverse City, Michigan, USA May 3, 1999



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