



# MODEL 52202 / 52202H / 52203

## TIPPING BUCKET RAIN GAUGE

INSTRUCTION SHEET 52202-90  
REV J012515

### 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.

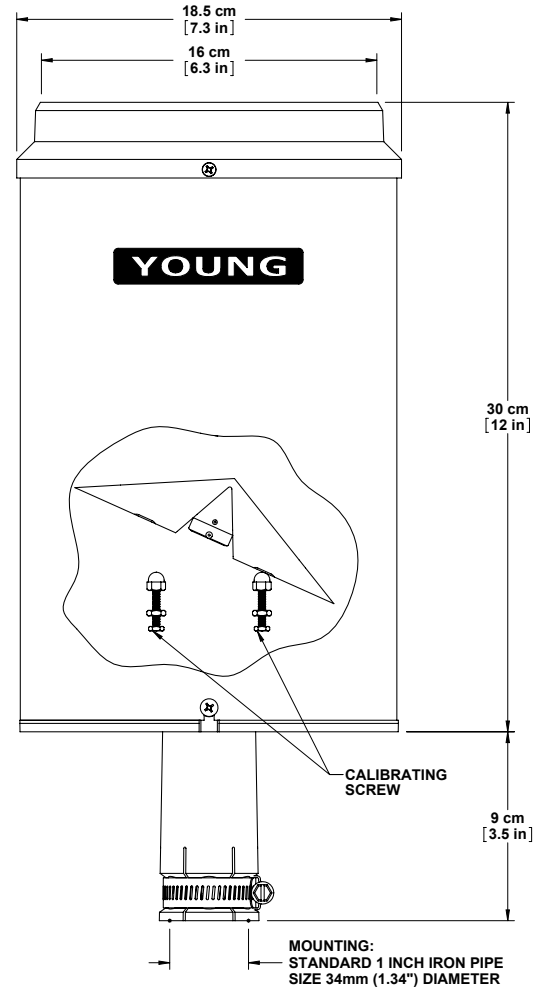
### CALIBRATION

To check or recalibrate the rain gauge, Model 52260 Rain Gauge Calibrator will simplify the process. If a calibration device is not available, the following steps will yield satisfactory results:

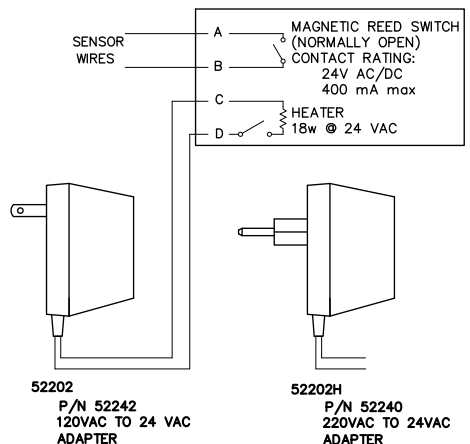
1. With the rain gauge properly leveled, slowly pour a measured volume of water into the collection funnel. The rate should not exceed 10 ml per minute which is approximately 1 inch per hour. The bucket should tip 5 times for each 10 ml of water. For example, 100 ml should give a count of  $50 \pm 1$ . 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, 3% up to 50 mm/hr
Output:	Magnetic reed switch, normally open
Contact Rating:	24V AC/DC 400 mA MAX
Operating Temp:	-20°C to + 50°C (heated)
Power:	18 Watts @ 24 VAC for heater only
Heater Thermostat Set Point:	10°C ± 3°C
Mounting:	Standard 1 Inch Pipe Size, 34mm (1.34") Dia.



### Power Supplies for Heated Models



## **BIRD PROTECTION**

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Model 52250 Bird Wire Assembly will discourage bird perching on the funnel rim. Contact your YOUNG supplier to order this accessory.

## **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**

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

Model 52202 / 52203 TIPPING BUCKET RAIN GAUGE conforms to the provisions of Council Directive 2004/108/EC (December 15, 2004) on Electromagnetic Compatibility