nylex

DIGITAL RAIN GAUGE

Product Code: 719011

USER MANUAL

CONTENTS

INTRODUCTION

Thank you for selecting the Nylex Digital Rain Gauge.

The device contains a wireless self-emptying rain collector for measuring rainfall and temperature, and a LCD monitor. The wireless rain collector sensor is fully assembled and calibrated for your easy installation. It transmits data by a low power radio frequency to the LCD monitor up to 100m away (line of sight).

The LCD monitor displays the rainfall and temperature data received from the sensor outside. It remembers the data over a time range for you to monitor and analyze the weather status for past 24 hours. It has advance features such as the HI/LO Alert alarm which will alert the user when the set high or low weather criteria are met. Day and data stamps are also provided to the corresponding maximum and minimum records for each weather details.

The system also analyse the records for your convenient viewing, such as the display of rainfall in terms of rain rate, hourly, daily, weekly, monthly and yearly records.

With above features, the system is truly a remarkable personal Rain Gauge for your own backyard.

NOTE:
This instruction manual contains useful information on the proper use of this product. Please read this manual through to fully understand and enjoy its features.
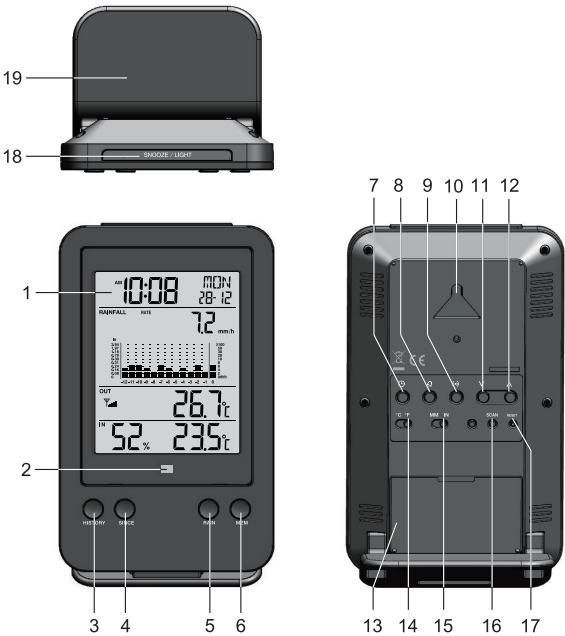
PRODUCT FEATURES

- Large backlit LCD monitor
- Hourly rain rate display
- Total Hourly, Daily, Weekly, Monthly and Yearly rainfall display
- Data logger stores and gathered data to display rainfall according to your selected time-scale (current status, past 24 hours, past 31 days, past 52 weeks, past 12 months or past 5 years)
- Graphical histogram display to show variation of rainfall pattern in your selected time-scale (current status, past 12 hours, past 12 days, past 12 weeks, or past 12 months at a time)
- SINCE function to display TOTAL rainfall from a customized commencing date
- Measures outdoor temperature at the same time with indoor temperature and humidity
- Real time clock display
- 100 m (500 ft) sensor transmission range (within ine sight)
- Data retention storage even during batteries changes
- High / Low Alert function
- Maximum / minimum memory function with time stamp
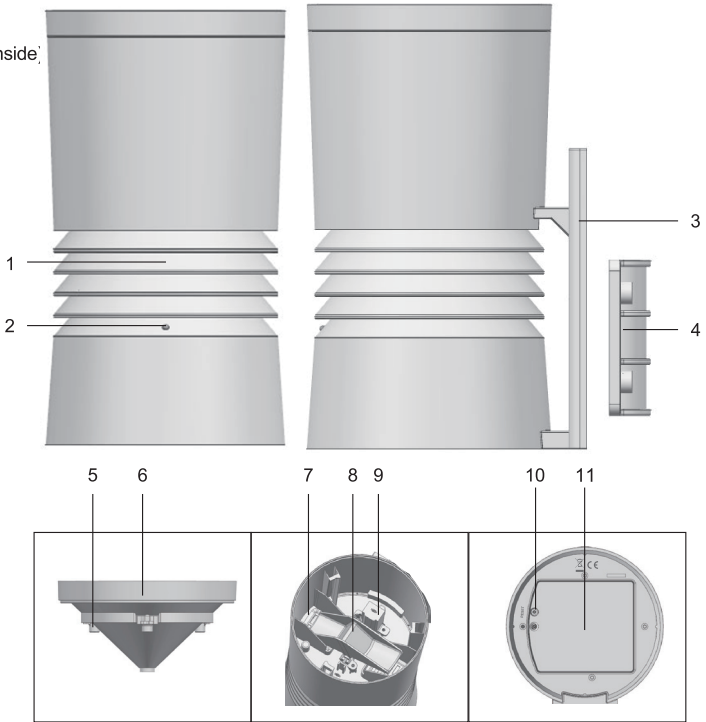- Alarm function with ice-alert function

OVERVIEW

LCD Monitor

1. LCD display with backlight
2. Alert LED indicator
3. **[HISTORY]** button
4. **[SINCE]** button
5. **[RAIN]** button
6. **[MEM]** button
7. **[CLOCK]** button
8. **[ALARM]** button
9. **[ALERT]** button
10. Wall mounting hole
11. **[DOWN]** button
12. **[UP]** button
13. Battery compartment
14. **[°C/°F]** slide switch
15. **[MM/IN]** slide switch
16. **[SCAN]** button
17. **[RESET]** button
18. **[SNOOZE/LIGHT]** button
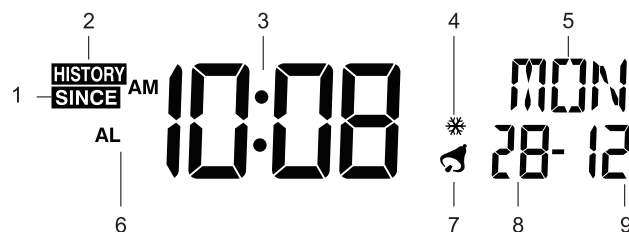19. Table stand

Wireless Rain Gauge Sensor

1. Radiation shield
   (Temperature sensor casing built inside)
2. Red LED indicator
3. Mounting base
4. Mounting claim
5. Latch
6. Rain collector
7. Drain holes
8. Tipping bucket
9. Rain sensor
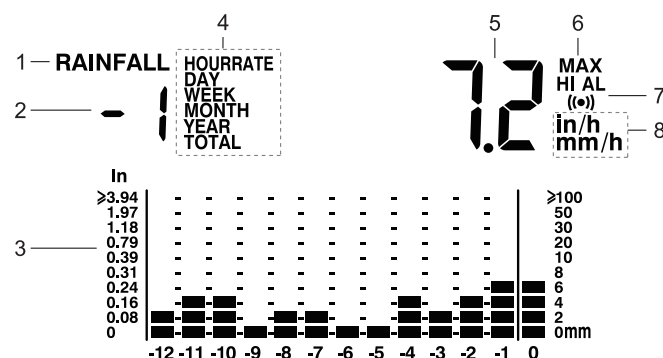10. **[RESET]** button
11. Battery door

LCD MONITOR

Normal Time and Calendar

1. SINCE icon
2. HISTORY icon
3. Time
4. Ice pre-alert on
5. Day of the week
6. Alarm mode
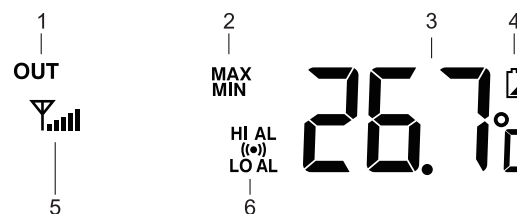7. Alarm icon
8. Date
9. Month

Rainfall Window

1. Rainfall indicator
2. Past time
3. Histogram
4. Time range record indicator
5. Rainfall reading
6. MAX indicator
7. HI Alert and Alarm
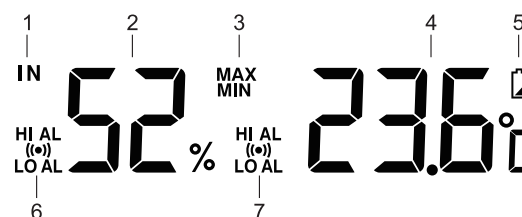8. Rainfall unit (**in/h** / **mm/h**)

Outdoor Weather Window

1. OUT indicator
2. MAX/MIN indicator
3. Outdoor temperature
4. Low battery indicator for sensor
5. Outdoor signal strength indicator
6. HI / LO Alert and Alarm

Indoor Weather Window

1. IN indicator
2. Indoor humidity
3. MAX/MIN indicator
4. Indoor temperature
5. Low battery indicator for main unit
6. HI / LO Alert and Alarm for humidity
7. HI / LO Alert and Alarm for temperature
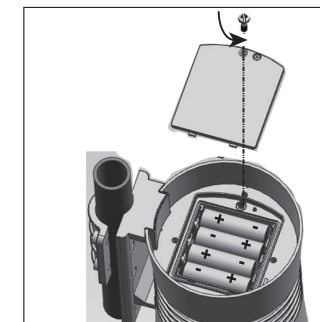
INSTALLATION OF WIRELESS RAIN GUAGE SENSOR

Your wireless rain gauge sensor measures rainfall and temperature for you. It's fully assembled and calibrated for your easy installation.

Battery and Installation

Unscrew the battery door at bottom of the unit and insert the batteries according to the "**+/-**" polarity indicated. Screw the battery door compartment on tightly. Press **[RESET]** button after each battery change.
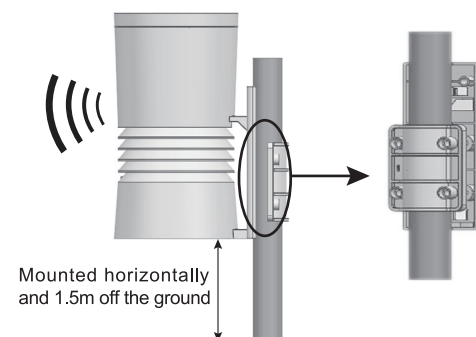
NOTE:
 The red LED will begin flashing every 12 seconds.

Mounting Guidelines

1. Install the Rain Collector in an open location with no obstructions above and around the sensor for accurate rain and temperature measurement.
2. Ensure the rain gauge is installed as level as possible to achieve accurate rain measurement.

Mounted horizontally and 1.5m off the ground

LCD MONITOR

Stand and Batteries Installation

The unit is designed for desktop or wall mount for easy viewing.

1. Remove the battery door of the main unit.
2. Insert 2 new AA size batteries according to the "**+/-**" polarity mark on the battery compartment.
3. Replace the battery door.
4. Press the **[SCAN]** button.
5. Once the batteries are inserted, all the segments of the LCD will be shown briefly.
6. The clock will start scanning for the wireless signal reception 917 MHz in 8 seconds.

NOTE:
If no display appears on the LCD after inserting the batteries, press the **[RESET]** button by using a pointed object.

Pairing of Wireless Sensor with LCD Monitor

After insertion of batteries, the LCD monitor will automatically search and connect the wireless sensor (antenna blinking).

Once the connection is successful, antenna mark and readings for outdoor temperature and rainfall will appear on the display.

Changing Batteries and Manual Pairing of Sensor

Whenever you changed the batteries of the wireless sensor, pairing must be done manually.
1. Change the batteries to new ones.
2. Press the **[RESET]** button on the sensor.
3. Press the **[SCAN]** button on the Display Main Unit.

NOTE:
1. Pressing **[RESET]** button at bottom of the wireless sensor will generate a new code for pairing purpose.
2. Always dispose old batteries in an environment safe manner.

To Manually Set the Clock

1. Press and hold **[CLOCK]** button for 2 seconds until "12 or 24 Hr" flashes.
2. Use **[UP]** / **[DOWN]** button to adjust, and press **[CLOCK]** button to proceed to the next setting.
3. Repeat 2 above for setting of **HOUR**, **MINUTE**, **YEAR**, **MONTH**&**DATE** or **DATE**&**MONTH**, **MONTH**, **DATE**, **HOUR OFFSET**, **LANGUAGE**.

NOTE:
1. The unit will automatically exit setting if no key was pressed in 60 seconds.
3. The range of hour offset is between -23 and +23 hours.
4. The language options are English (**EN**), French (**FR**), German (**DE**), Spanish (**ES**), Italian (**IT**), Dutch (**NL**) and Russian (**RU**).

To Turn on/off Alarm Clock (With Ice-alert Function)

1. Press the **[ALARM]** button any tine to show the alarm time.
2. Press **[ALARM]** button to activate the alarm.
3. Press again to activate alarm with ice-alert function.
4. To disable the alarm, press until the alarm icon disappears.

❄ 🔕	❄ 🔔	❄ 🔔
Alarm off	Alarm on	Alarm with ice-alert

To Set the Alarm Time

1. Press and hold **[ALARM]** button for 2 seconds to enter alarm setting mode. HOUR will begin flashing.
2. Use **[UP]**/**[DOWN]** button to adjust HOUR, and press **[ALARM]** button to proceed to set MINUTE.
3. Repeat 2 above to set MINUTE, then press **[ALARM]** button to exit.

NOTE:
1. Once set the alarm time , alarm function activate automatically.
2. Pressing the **[ALARM]** button twice when alarm time is being displayed will activate the temperature-adjusted pre-alarm. The alarm will sound 30 minutes earlier if it detects outside temperature is below -3°C.

RAINFALL

The device displays how many mm / inches of rainfall are accumulated in one hour time period, based on current rainfall rate that is updated every minute.
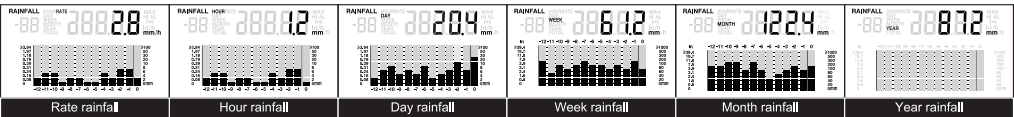
To Select the Rainfall Display Mode

Press **[RAIN]** button to toggle between:
- **RATE** Current rainfall rate in past an hour (e.g., 07:40~08:40)
- **HOUR** The HOUR display indicate the total rainfall from on the hour
- **DAY** The DAY display indicate the total rainfall from midnight
- **WEEK** The WEEK display indicate the total rainfall from the current week
- **MONTH** The MONTH display indicate the total rainfall from the current calendar month
- **YEAR** The YEAR display indicate the total rainfall from the current calendar year

NOTE:
User can select the measurement unit for rainfall by sliding the **[MM/IN]** switch.

Graphical Histogram Display

Histogram presents an easy view of rainfall change pattern over a period of time in a graphical manner. The time scale of the graph automatically changes according to the rainfall display modes:
  Rate >> Hour >> Day >> Week >> Month >> Year

Rate rainfall	Hour rainfall	Day rainfall	Week rainfall	Month rainfall	Year rainfall

1. By default, the graph is presented in Hourly scale when rainfall is in Rain Rate.
2. There is no graphical display when Yearly Rainfall is selected.
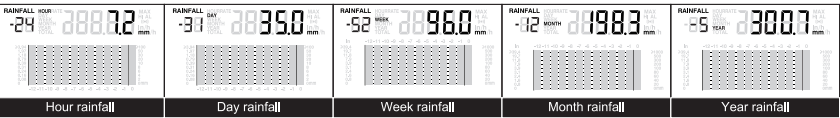
Total Rainfall SINCE function

Press **[SINCE]** button to display the total rainfall record. The connecting data and year will be shown.

To clear the existing commentary date and reset it to re-start again, press and hold **[SINCE]**. The total rainfall will now be equal to TODAY rainfall and the unit will start again to collect the rainfall data.

To Select the Measurement Unit for the Rainfall

1. Slide the **[MM/IN]** switch to **<MM>** position to select millimeter unit.
2. Slide the **[MM/IN]** switch to **<IN>** position to select inch unit.

HISTORY DATA OF ALL RECORD

Data logger stores and gathered data to display rainfall according to your selected time-scale (current status, past 24 hours, past 31 days, past 52 weeks, past 12 months or past 5 years)

To check history data:

1. Press **[RAIN]** button to select rainfall display modes.
2. Press the **[HISTORY]** button to read the data.

The LCD will display the past indoor temperature & humidity, outdoor temperature, value of rainfall and their time and date.

| Hour rainfall | Day rainfall | Week rainfall | Month rainfall | Year rainfall |

NOTE:
The main unit can check the records according to the time and calendar of the clock, i.e. it can check the records of the past, but can not check the records in the future.
E.g. The main unit recorded data from Jan. 1st, 2012 to Feb. 31st, 2014. Then time is set to be Jan. 1st, 2013. It can only check the data of 2012.

TEMPERATURE DISPLAY

User may select temperature unit by sliding the **[°C / °F]** switch.

MAXIMUM / MINIMUM MEMORY FUNCTION

To Check the Memory

Press **[MEM]** button repeatedly to check the maximum/minimum records.

Area	Outdoor Temperature		Indoor Temperature		Indoor Humidity		Hour/Day/Week/Month/Year rainfall
Type of memory	Max.	Min.	Max.	Min.	Max.	Min.	Max.

NOTE:
When maximum or minimum reading is displayed, the corresponding timestamp will be shown.

To Clear Individual Records

While displaying the maximum/minimum records, press and hold **[MEM]** button for 2 seconds to clear the individual record.
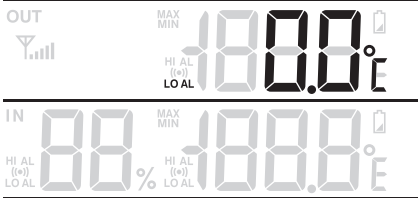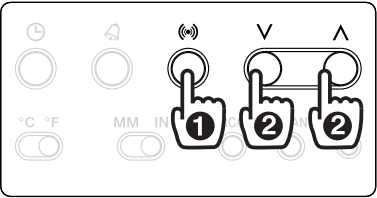
HI / LO ALERT

HI/LO are used to alert you of certain weather conditions. Once activated, the alarm will turn on and red LED starts flashing when a certain criterion is met. The following are areas and type of alert provided.

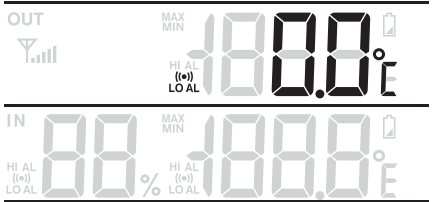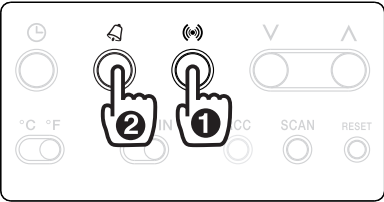| Area	Type of Alert available
Indoor temperature	HI and LO alert
Indoor humidity	HI and LO alert
Outdoor temperature	HI and LO alert
Hour Rainfall	HI alert
Day Rainfall	HI alert *

NOTE:
* Daily rainfall since midnight.

To Set the HI / LO Alert

1. Press the **[ALERT]** button until the desired area is selected.
2. Use **[UP]** / **[DOWN]** buttons to adjust the setting.
3. Press **[ALERT]** button to confirm and continue to next setting.

To Enable / Disable the HI / LO Alert

1. Press **[ALERT]** button until the desired area is selected.
2. Press **[ALARM]** button to turn the alert on or off.
3. Press **[ALERT]** button to continue to next setting.

NOTE:
1. The unit will automatically exit setting mode in 5 seconds if no key is pressed.
2. When ALERT alarm is on, the alert LED indicator, the area and type of alarm that triggered the alarm will be flashing and the alarm will sound for 2 minutes.
3. To silence the Alert alarm beeping, press the **[SNOOZE/LIGHT]** button, or let the beeping alarm automatically turn off after 2 minutes.

WIRELESS SIGNAL RECEPTION

| No sensor | Signal searching | Strong signal | Weak signal | Signal lost |

The wireless sensor is capable of transmitting data wirelessly over an approximate operating of 100m range (line of sight). Occasionally, due to intermittent physical obstruction or other environment interference, the signal may be weaken or lost. In the case that the sensor signal is lost completely, you will need to relocate the display main unit or the wireless sensor.
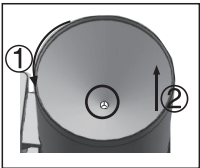
DATA CLEARING

During installation of the wireless sensor, the sensors were likely to be triggered, resulting in erroneous rainfall and wind measurements. After the installation, user may clear out all the erroneous data from the LCD monitor, without needing to reset the clock and re-establish pairing.

1. Press and hold **[HISTORY]** button for 3 seconds.
2. Press [**UP**] or [**DOWN**] button to choose "**YES"** or "**NO**".
3. Press **[HISTORY]** button to confirm . This will clear out any data recorded before.

MAINTENANCE OF RAIN GAUGE

1. Rotate the rain collector in anticlockwise direction.
2. Gently remove the rain collector.
3. Clean and remove any debris or insects.

TROUBLESHOOTING

Problem / Symptom	Solution
Strange or no measurement of Rain Sensor	1. Check the drain hole in the rain collector. 2. Check the balance of the rain gauge.
Strange or no measurement of Thermo Sensor	1. Check the radiation shield. 2. Check the sensor casing.
☐ displays on the outdoor weather window	1. Change new batteries to the rain gauge. 2. Relocate the main unit and sensor closer to each other. 3. Make sure the main unit is placed away from other electronic appliances that may interfere with the wireless communication (TVs, computers, microwaves). 4. If problem continues, reset both main unit and the sensor.
⅄ and ▬ ▬ ▬ (Signal lost for 15 minutes)	
⅄ and Er (Signal lost for 1 hour)	

PRECAUTIONS

• Read and keep these instructions.
• Heed all warnings.
• Follow all instructions.
• Do not subject the unit to excessive force, shock, dust, temperature or humidity.
• Do not cover the ventilation holes with any items such as newspapers, curtains etc.
• Do not immerse the unit in water. If you spill liquid over it, dry it immediately with a soft, lint-free cloth.
• Do not clean the unit with abrasive or corrosive materials.
• Do not tamper with the unit's internal components. This invalidates the warranty.
• Only use fresh batteries. Do not mix new and old batteries.
• Only use attachments / accessories specified by the manufacturer.
• Images shown in this manual may differ from the actual display.

• When disposing of this product, ensure it is collected separately for special treatment.
• Placement of this product on certain types of wood may result in damage to its finishing for which manufacture will not be responsible. Consult the furniture manufacturer's care instructions for information.
• The contents of this manual may not be reproduced without the permission of the manufacturer.
• When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
• Do not dispose old batteries as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
• Please note that some units are equipped with a battery safety strip. Remove the strip from the battery compartment before first use.
• The technical specifications for this product and the contents of the user manual are subject to change without notice.

SPECIFICATIONS

MAIN UNIT	
Dimensions	95 x 155 x 23 mm (W x H x D)
Weight	212g without batteries
Battery	2 x AA size 1.5V batteries (Alkaline recommended)
Support channels	Wireless sensor (Rain gauge, thermo sensor)
INDOOR TEMPERATURE	
Temp. unit	°C or °F
Displayed range	-40°C to 70°C (-40°F to 158°F) (< -40°C: LO; > 70°C: HI)
Operating range	-10°C to 50°C (14°F to 122°F)
Resolution	0.1°C or 0.1°F
Accuracy	+/- 1°C or 2°F typical @ 25°C (77°F)
Display modes	Current, Min and Max, Historical data for past 24 hours
Memory modes	Max & Min from last memory reset (with time stamp)
Alarm	Hi / Lo Temperature Alert
INDOOR HUMIDITY	
Displayed range	20% to 90% RH (< 20%: LO; > 90%: HI) (Temperature between 0°C to 60°C)
Operating range	20% to 90%RH
Resolution	1%
Accuracy	+/-5% typical @ 25°C (77°F)
Display modes	Current, Min and Max, Historical data for past 24 hours
Memory modes	Max & Min from last memory reset (with time stamp)
Alarm	Hi / Lo Humidity Alert
CLOCK	
Clock display	HH:MM / Weekday
Hour format	12hr AM/PM or 24hr
Calendar	DD/MM/YR or MM/DD/YR
Weekday	7 languages: EN, FR, DE, ES, IT, NL, RU
Hour offset	-23 to +23 hours

WIRELESS SENSOR

Dimensions	109 x 200 x 109 mm (W x H x D)
Weight	372g without batteries
Battery	4 x AA size 1.5V battery
Frequency	917 MHz (Australian)
Transmission	Every 12 seconds

OUTDOOR TEMPERATURE

Temp. unit	°C or °F
Displayed range	-40°C to 80°C (-40°F to 176°F) (< -40°C: LO; > 80°C: HI)
Operating range	-40°C to 60°C (-40°F to 140°F)
Resolution	0.1°C or 0.1°F
Accuracy	+/- 0.5°C or 1°F typical @ 25°C (77°F)
Display modes	Current, Min and Max, Historical data for past 24 hours
Memory modes	Max & Min from last memory reset (with time stamp)
Alarm	Hi / Lo Temperature Alert

RAIN GAUGE

Unit for rainfall	in and mm
Range for rainfall	0~29999 mm (max)
Resolution	0.01" (0.254 mm)
Accuracy	< 0.01" (0.2 mm): +/- 7% or 1 tip; 5" (127 mm): +/- 7%
Display modes	Rainfall in hourly rate, hourly, daily, weekly, monthly and yearly
Memory modes	Maximum rain
Alarm	Hourly or Daily High rainfall alert
Hi display	Hour rainfall > 999.9 mm; Day rainfall > 9999 mm; Week/Month/Total rainfall > 29999 mm

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