

# HY-RS3E Piezoelectric Precipitation Sensor

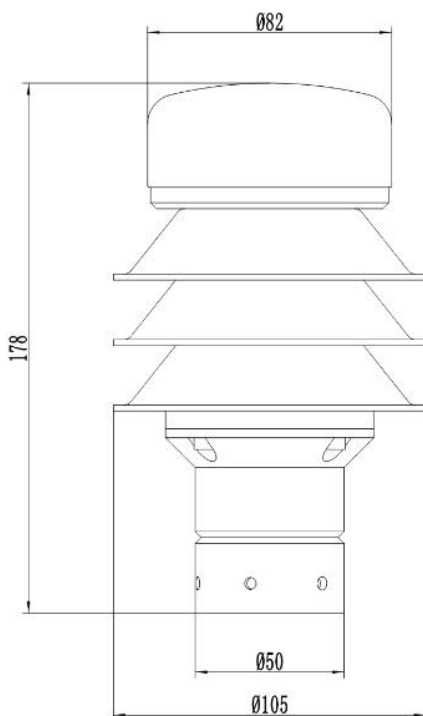
## Introduction

HY-RS3E piezoelectric rain sensor measures the weight of a single raindrop and calculates rainfall. Falling speed of raindrop increases until the upward force of air resistance equals the downward force of gravity, at which time the object reaches the terminal velocity. According to the formula  $P=mv$ , the impact weight can be obtained by measuring raindrop impact and then the continuous rainfall amount can be obtained. Piezoelectric rain sensors have no mechanical parts, therefore it's more robust, sensitive and reliable than traditional rain gauges.

## Application

Weather observation  
Emergency services  
Agriculture and horticulture  
Environmental monitoring  
Flood warning system  
Automatic irrigation control

## Dimension



## Specification

Optional with extra cost

Temperature: -40~+80°C Principle: NTC  
Resolution: 0.1°C Accuracy: ±0.5°C

Optional with extra cost

Humidity: 0-100% Principle: Capacitive  
Resolution: 0.1% Accuracy: ±2%

Optional with extra cost

Pressure: 150-1100hPa Principle: Piezoelectric  
Resolution: 0.1hPa Accuracy: ±1 hPa

Precipitation intensity: 0-500 mm/hr  
Rain accumulation: 0~999999999 mm

Principle: piezoelectric  
Resolution: 0.01mm Accuracy: ±10%

Serial Output: RS232 or RS485

Formats: unsolicited ASCII, NMEA0183,  
MODBUS-RTU, SDI-12

Baud: 1200, 4800, 9600, 19200, 38400

Power consumption: 7-30 VDC < 110 mA typical

Operating temperature: -40 ~ +70°C

