

## Present Weather Detectors and Visibility Sensors PWD Series

The right visibility data for meteorological use, at the right price



### Key benefits

#### The right instrument for the right purpose

The PWD Series includes a range of visibility instrumentation to ensure the right combination of technology and sensors. The key is access to the data that satisfies your monitoring and planning objectives without overspending on things you don't need.

#### Easy installation and expandability

PWD sensors are compact, lightweight (less than 1m long), factory calibrated, and plug-and-play ready. They can function stand-alone or as part of a larger system with flexible mounting options on any existing mast. All models can be easily and economically upgraded to meet changing measurement needs.

#### Accuracy in all conditions

Built to perform, Vaisala's pioneering sensor design provides constant, reference-grade performance — even for intense precipitation and mixed precipitation. They precisely assess real-time visibility and, with certain units, precipitation type, intensity, and accumulation.

#### Economical operation and maintenance

The rugged, modular, weather-proof design uses no movable or consumable parts and makes for quick repairs. The visibility sensor is protected against contamination with the optical components pointed downward and hoods protecting the lenses. This weather-proof design delivers low life cycle costs and less maintenance.

The visibility depends on many factors such as humidity, wind speed, temperature, and precipitation. It may sound simple, but any meteorologist will tell you that visibility is one of the hardest parameters to accurately measure and forecast.

Vaisala Present Weather and Visibility Sensors PWD Series is designed to meet the unique challenges of visibility and present weather measurement for weather-related and general forecasting applications. Their dependability and ease of use make them ideal in environments where much is at stake.

The PWD Series delivers a mix of visibility measurement range (Meteorological Optical Range or MOR), characterization of reduced visibility, precipitation type identification, precipitation accumulation/intensity measurement, and report formats (WMO, NWS code tables). They provide off-the-shelf accuracy and reliability and can be easily and economically upgraded. Wherever visibility measurements are necessary, Vaisala offers a cost-effective and reliable solution that grows to meet your measurement needs.

## PWD Series at a glance

### Key features

**Exceptional data capture** that measures visibility, and present weather for some models, in maximum ranges from 10m to 50km (30ft to 31mi) MOR.

**Rugged, weather-proof design** ensures low maintenance and high data availability for reliable results over a long lifespan.

**Downward-facing sensor hoods** protect the optical surfaces from external contaminants.

**Forward scatter visibility sensors** for greater accuracy in calculating visibility.

**Capacitive RAINCAP® precipitation sensors** in advanced models capture multiple precipitation types, intensity, and accumulation in real time. Even light drizzle is detected.

**Optional hood heaters** prevent ice and snow accumulation in wintry conditions.

|   | PWD10       | PWD12       | PWD20         | PWD22         | PWD50       |
|---|-------------|-------------|---------------|---------------|-------------|
| Weatherproof design                               | ●           | ●           | ●             | ●             | ●           |
| Meteorological Optical Range (MOR)                | 2km (1.2mi) | 2km (1.2mi) | 20km (12.4mi) | 20km (12.4mi) | 50km (31mi) |
| Forward scatter visibility sensors                | ●           | ●           | ●             | ●             | ●           |
| Capacitive RAINCAP® sensors                       |             | ●           |               | ●             | ●           |
| Indicates reduced visibility cause                |             | ●           |               | ●             | ●           |
| Accurate present weather measurement              |             | ●           |               | ●             | ●           |
| Weather type identification                       |             | 4 types     |               | 7 types       | 7 types     |
| Measures precipitation intensity and accumulation |             | ●           |               | ●             | ●           |
| Analog and serial line outputs                    | ●           | ●           | ●             | ●             | ●           |
| Optional hood heaters for winter conditions       | ●           | ●           | ●             | ●             | ●           |

## Why Vaisala?

### Experience with perspective

Having launched our first present weather and visibility sensor in 1990, Vaisala is a trusted expert in forward scatter systems. Our unique understanding of weather measurement has made Vaisala a leader in weather observation solutions. The technologies we offer are the result of our own R&D, and our solutions and services are used in environmental monitoring systems, helideck monitoring systems, and marine weather reporting worldwide. Our extensive expertise and global presence — with more than 20,000 devices in over 120 countries and all seven oceans — makes us your global weather expert.

### Support to count on

Look to Vaisala for dependable support, project capabilities, and training so you can get the most from your system. We provide project management, installation, training, acceptance testing, engineering, consulting, and ongoing service agreements. With decades of experience providing the best technologies and the finest support, Vaisala's philosophy of partnership is unmatched in the industry.

# VAISALA

[vaisala.com/meteorology](https://vaisala.com/meteorology)



Scan the code for more information

Ref. B212230EN-A ©Vaisala 2020

This material is subject to copyright protection, with all copyrights retained by Vaisala and its individual partners. All rights reserved. Any logos and/or product names are trademarks of Vaisala or its individual partners. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of Vaisala is strictly prohibited. All specifications — technical included — are subject to change without notice.