VAISALA

Vaisala
Forward Scatter
FD70 Series

Vaisala Forward Scatter FD70 Series

Vaisala Forward Scatter FD70 Series is the seventh generation of Vaisala visibility and present weather sensors. FD70 Series is designed based on more than 30 years of forward scatter technology development experience. This technology innovation sets a new standard in precipitation identification, quantification, and visibility determination accuracy.

FD70 Series consists of two product models: FD71P full-featured visibility and present weather sensor and FD71 visibility sensor.

Both product models can function as stand-alone units, interoperate as an integral part of Vaisala systems, or work with different third-party systems.

FD70 Series can replace older Vaisala forward scatter sensors and provides a unique set of new features and capabilities.

Visibility range of up to 100 km
Meteorological Optical Range (MOR)

Thin light sheet and fast sampling rate
for detection and processing of each particle as single event

Superior precipitation type identification
even for low-intensity and mixed or frozen precipitation

Best-in-class precipitation intensity and accumulation measurement as each single precipitation particle is identified

Independent window contamination measurement and compensation
to ensure constant accuracy and ease of maintenance

Proven look-down geometry
to protect against common measurement disturbances

Optimal forward scatter angle of 42°
as recommended by ICAO and FAA

Versatile connectivity
to enable easy remote access

Meteorology

- Best-in-class 3-in-1 performance: visibility, present weather, and precipitation quantification
- Significant enhancement of drizzle, freezing rain, hail, and ice pellet identification
- Easy maintenance and long lifetime

FD70 Series is based on innovative integration of forward scatter and disdrometer technologies. It can detect and identify each droplet correctly. It provides accurate visibility measurement with proven calibration traceability and a range of up to 100 km. FD71P has superior precipitation type identification capability and enhances precipitation intensity and accumulation measurements. FD70 Series was developed to meet the WMO SYNOP reporting needs for precipitation and obscuration types.

As a factory-calibrated, plug-and-play sensor it is easy to install. FD70 Series uses a window contamination compensation algorithm and heating to enable reliable operation in the harshest environments. Unlike weighing rain gauges, FD71P provides nearly maintenance-free measurements of precipitation intensity and accumulation. FD70 Series offering also includes spare parts and 24/7 technical support.

Airport Weather

- Accurate measurement for RVR
- Enhanced freezing precipitation detection
- Robust and intelligent operation for constant performance

Vaisala has more than 40 years of experience in airport weather products and continues investing significantly in future development. Efficient airport utilization and bringing passengers home safely are fundamental needs of airports today. Vaisala weather solutions support airports in this respect.

As part of the Vaisala AviMet® System, FD70 Series improves airport safety and operational efficiency. It is the best-in-class visibility and present weather sensor and a key component for runway visual range (RVR) calculations where accuracy matters. FD70 Series is an ICAO-compliant sensor with proven calibration traceability.

FD71P incorporates high-accuracy precipitation identification, enhancing freezing rain detection. FD70 Series has robust design with intelligent features for reliable operation and enhanced performance in all weather conditions. It provides consistently accurate data supporting correct operational decisions.