

Vaisala Forward Scatter Sensor FD70 Enhance weather insights and simplify your network with transformative, trustworthy forward scatter technology



Key benefits

Excellent sensitivity and analysis capabilities

A significant advancement over related technologies, the FD70's single thin light sheet (instead of the conventional light cone) results in high detection sensitivity and scatter-properties analysis of even the smallest single particles.

3-in-one performance

The FD70's highly refined visibility, present weather, and precipitation measurements provide outstanding data quality and value over time.

One FD70 unit replaces up to six separate sensors

Sensors commonly acquired separately — rain gauge, disdrometer, visibility, present weather, temperature, and humidity — are included in the FD70, creating new efficiency and simplicity.

Reliability and compliance — no matter the weather

Automated self-diagnostics, rugged construction, and redundancy of data communication make the FD70 durable under any conditions, with outstanding uptime and data continuity. Virtually maintenance-free, it meets WMO SYNOP reporting needs for precipitation and obscuration types..

Accurate forecasts require accurate in-situ weather information. Precipitation and visibility measurements are among the most impactful ones for accurate forecasting and weather awareness. Improvements in sensing have implications for better decision-making, improved public awareness, safety, and regulatory compliance.

Master the weather, act decisively and protect your community

Accurate, reliable surface weather detection is crucial to the protection of life and property. This is especially true with changing weather patterns, climate change, urbanization, and other related factors.

The Vaisala FD70's seventh-generation technology solves these perennial problems, providing best-in-class, 3-in-1 performance for outstanding visibility, present weather, and precipitation quantification in a proven, dependable design.

Maintain reference-grade performance in the harshest conditions

Detect even the smallest droplet and reach visibility range of up to 100 km. FD70's pioneering and unique design provides constant, reference grade performance to detect everything from freezing drizzle to sandstorms.

Innovative integration of forward scatter and optical disdrometer technologies sets a new standard in precipitation identification, quantification and visibility determination accuracy.

Trusted weather observations for a sustainable future

Key features

Visibility range of up to 100 km (62 mi)
Meteorological Optical Range (MOR)

Proven look-down geometry
to protect against common
measurement disturbances

Thin light sheet and fast sampling rate
for detection and processing
of each particle as single event
from freezing rain, sand and dust
obscuration, to light drizzle.

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

Full industry
compliance
with ICAO, FAA, and
WMO regulations.

Highest representative
extinction coefficient (EXCO)
determination possible

Versatile connectivity
to enable easy remote access

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

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

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

Comprehensive reporting
including visibility, present weather,
precipitation accumulation, temperature, humidity,
droplet size and fall speed distribution,
kinetic energy, and radar reflectivity

Present weather identification available in FD70

- Drizzle
- Rain
- Snow
- Snow grains
- Ice crystals
- Ice pellets
- Freezing drizzle
- Freezing rain
- Snow pellets
- Hail
- Fog
- Mist
- Haze
- Sand
- Dust

Why Vaisala?

The industry's most dependable technology

Vaisala surface weather solutions are built on nearly 50 years of industry leadership. With thousands of units deployed, our technology's precision and ruggedness under the harshest conditions have been validated time and time again.

Backed by 85+ years of experience, we have the most expansive base of installed forward-scatter sensors with a presence on every continent

Support to count on

Know that you're covered if questions arise with 24/7 global support — now and in the future. We offer dependable support, project capabilities and training so you can get the most from your system.

With decades of experience providing the best technologies and the finest support, Vaisala's philosophy of partnership is unmatched in the industry.

VAISALA

www.vaisala.com/FD70



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