

# Model GEO-LC7600 / 12000

## LIDAR Ceilometer

The GEO-LC7600 / 12000 cloud ceilometer is a compact and lightweight instrument for accurate and reliable measuring of cloud base height and vertical visibility.

The design is based on the LIDAR principle. The light emitting component is a low power diode laser with the output power limited to an eye-safe level.

It is designed for both fixed and mobile installations and detects up to three cloud layers simultaneously.

The GEO-LC7600 / 12000 ceilometer is ideal for use in aviation and meteorological applications and is suitable for installations on land, ships and for offshore use.

### Service and Maintenance

The GEO-LC7600 / 12000 is easy to install and requires minimal service. A built-in self-diagnostics test system indicates any failures in the event of a malfunction in a status message sent as part of the data message.

The electronics are located in two easily replaceable subunits, i.e. a power supply module and a master unit. The subunits, as well as the laser diode which is placed in the master unit, can be replaced by spare parts without adjustments or recalibration.

### Integration

The GEO-LC7600/12000 includes a number of pre-defined data formats and built-in support of RS-232, RS-485 for easy installation and integration, direct connection to **METEODATA** datalogger.

### Features

- Reliable operation
- Easy installation and maintenance
- Very long laser life (10 years)
- Measuring range versions:
  - 7600 m / 25000 feet
  - 12000 m / 40000 feet
- Low weight and low power consumption



### Technical data

#### Performance

Range	GEO-LC7600: 0 - 7600 m / 0 - 25000 ft GEO-LC12000: 0 - 12000 m / 0 - 40000 ft
Reporting Resolution	5 m / 10 ft, units selectable (GEO-LC12000: backscatter in 10 m / 30 ft resolution)
Accuracy	Greater of $\pm 5$ m or $\pm 1\%$ of height Measured against hard target
Reporting interval	Periodic (15-120 s), selectable
Laser safety	Eye safe Class 1M in accordance to IEC 60825-1

#### Environmental

Operating temperature	-40 to +60 °C -50 to +60 °C (option)
Weight	15 kg (standalone)
Housing Classification	IP66

#### Electrical

Power supply	115V alt 230V AC, 45-65 Hz 12V DC (option)
Power consumption	Electronics 30W Heater 200W (when active)

#### Output

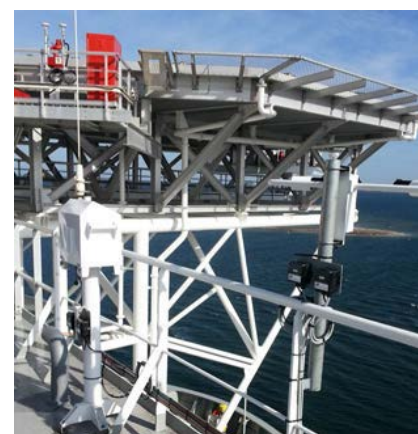
Interface	RS-232, RS-485
Data	Cloud height (up to 3 bases) or vertical visibility Cloud amount / sky condition (up to 4 layers) Status information Backscatter profile

#### Options & accessories

Options	Window blower Solar shutter Local display Tilt Contamination detection Military green color
Accessories	Graphic software (PC) Cloud Presentation Suite Digital display Demodulator

## Main References

- Swedish Meteorological & Hydrological Institute (Sweden)
- China Civil Aviation (China)
- Korean Meteorological Industry (KMIPA, Republic of Korea)
- Norwegian Aviation Board (Norway)
- Swedish Aviation Board (Luftfartsverket)
- Swedish Air Force (Sweden)
- US Air Force (USA)
- Mesotech (USA)



**METEODATA**  
Datalogger / Transmitter Unit  
(3G/GPRS, Radio, Line or Satellite)

