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Ceilometer CBME120

Datasheet

Ceilometer CBME120

The cloud ceilometer CBME120 is a compact and lightweight standalone instrument for measuring 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 CBME120 ceilometer is ideal for use in aviation and meteorological applications and is suitable for installations on land, ships and for offshore use.

CBME120 is the third generation of ceilometers and is based on the proven and widely used model CBME80.

Features

- Reliable operation
- Easy installation and maintenance
- Very long laser life (10 years)
- 12.000 m / 40.000 feet measuring range
- Low weight and low power consumption

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Reliability

The manufacturer has designed and manufactured ceilometers the last 20 years and delivered more than 2300 ceilometers worldwide. The ceilometers are very reliable with proven MTBF of over 10 years.

The ceilometer come with a standard 1 year warranty, with the option of extending the warranty up to 5 years in total.

Service and maintenance

The CBME120 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 CBME120 includes a number of pre-defined telegram formats and built-in support for RS-232, RS-485 and FSK for easy installation and integration.

Performance

Range	0 — 12.000 m / 0 — 40.000 ft
Reporting resolution	5 m / 10 ft, units selectable (Backscatter in 10 m / 30 ft resolution)
Accuracy	Greater of ±5 m or ±1% of height Measured against hard target
Reporting interval	Periodic (15-120 s), selectable Polling (any interval)
Laser safety	Eye safe Class 1M in accordance to IEC 60825-1

Environmental

Operating temperature	-40 — +60 °C / -40 — 140 °F
Weight	15 kg (standalone)

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, FSK/V23
Data	Cloud height (up to 3 bases) or vertical visibility Cloud amount / sky condition (up to 4 layers) Status information Backscatter profile

Options and accessories

Options	Window blower Solar shutter Local display Housing classification, IP66 Tilt Contamination detection Colour: military green
Accessories	Graphic software (PC) Cloud Presentation Suite Digital display Demodulator

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