MESOTECH INTERNATIONAL

Professional Ceilometer

MT-CH0001, MT-CH0002

The Professional Ceilometer is a standalone instrument for detecting cloud height from an eye-safe laser. It uses the Light Detection and Ranging (LIDAR) principle with a low power diode laser. This highly reliable and accurate ceilometer has a detection range up to 40,000 feet, as well as a demonstrated mean-time-between-failures of over 150,000 hours. The ceilometer is designed for fixed and mobile installations.

The main advantages of this ceilometer are its size, weight, power requirement, and modern design. The small size and weight make it ideal for mobile use and facilitates easy, one-person maintenance. The ceilometer can be carried in one hand and can operate from a 12 VDC battery, solar supply, or AC mains power. The primary advantage of the ceilometer is its modern electronic design, which includes only two replaceable subassemblies and allows complete field replacement without adjustments or calibration.

The Professional Ceilometer employs unique digital signal processing techniques that enable detection of up to five cloud layers. This special design also extends the life of the laser beyond 10 years. The ceilometer has outputs for different types of display and recording units. An RS-232 interface supports local control, test, and data acquisition, and an internal FSK modem offers remote control and data acquisition. A digital readout on the ceilometer enclosure provides cloud base and operating status information.

The ceilometer has built-in test equipment for automatically adjusting its operating parameters and for self-diagnostics. The cyclic self-testing completely covers the ceilometer's operation and reports current status in every output message. It does not require periodic calibrations or adjustments. The ceilometer has been tested to IEC environmental standards for vibration, shock, impulse voltages, transients, operating temperature, and EMI susceptibility and emissions.

Technical Specifications

Range:	MT-CH0001: 0 to 40,000 ft. MT-CH0002: 0 to 25,000 ft.
Resolution:	30 ft.
Accuracy:	30 ft. or 2%, whichever is greatest
Measure interval:	30 and 60 seconds
Outputs:	One service port (RS-232C) One data port (RS-232C or FSK) Local readout display (option)
Output data:	Cloud height (up to 9 bases), cloud depth, sky coverage (option), backscatter signal profile, vertical visibility, maximum discernable range, self-test data
Operating temp:	-50°C to +60°C
Power supply:	110/240 VAC or 12 VDC @ 30 VA Heaters 160 VA, Blower 250 VA
Color:	Gloss white or military green
Weight:	15 kg (32 lbs) without stand
Dimensions:	358 mm x 408 mm x 232 mm (14 in x 16 in x 9 in)
Laser safety:	Class 1 laser product, SSIFS 1980:2 (SS-EN60825)

Ordering Options

Cloud Ceilometer, 110 VAC, 240 VAC, 12 VDC

Support stand for fixed installations

Support stand with tilting capability

Blower option for removing snow from lenses.

Compatible FSK modem for data acquisition unit.

Digital readout for CBME120 enclosure

Digital display for remote viewing

Sun protection option for equatorial installations.

Graphic display software for Microsoft Windows

The Mesotech Professional Ceilometer is an excellent choice for aviation use.

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