



Ceilometer CHM 8k

Cloud Height

Measuring clouds, aerosol height profiles and visibility

The CHM 8k is a new version of the Lufft ceilometer series measuring aerosol height profiles using the LIDAR technique. They determine cloud base heights, penetration depths, mixing layer height and vertical visibility. It determines cloud base height, Sky Condition Index, cloud cover as well as penetration depths. Within its operating range of up to 8000m (26200 ft), it reliably detects multiple cloud layers. The CHM 8k is equipped with an integrated controller offering improved range resolution and a comfortable web interface.

1300m

1500m

Ceilometer CHM 8k 2016

Measuring clouds, aerosol height profiles and visibility

High optical sensitivity for exact results

Accurate results in day- and nighttime are obtained by

- a pulsed diode laser with long life-time
- small bandwidth filters
- a highly sensitive photo receiver

Reliable operation in any climate

The CHM 8k is prepared to work throughout the year and in any climate. Due to its double case structure combined with a window blower and an automatic heating system, the ceilometer is not interfered with fogging, precipitation, freezing or overheating.

The data telegrams in detail

1 - Standard data telegram

Output interval, date, time, detected cloud layers, penetration depths, vertical visibility, max. detection range, local altitude, unit (m/ft), system status, precipitation index, checksum

2 - Extended data telegram

Standard telegram combined with additional status messages and device specific parameters

3 - Raw data telegram

Extended telegram with measured raw data (in NetCDF format)

4 - CHM 8k data telegram

Output interval, date, time, unit, sky condition index, total cloud cover, cloud layers, cloud penetration depths, VOR, max. detection range, quality index aerosol layer, aerosol layer heights, status, checksum

5 - CHM 8k raw data telegram

CHM 8k data telegram with raw data
Exemplary data telegram (standard)...;
29.05.06; 05:25; 00330; 01913; 07725;
0150; 0112; 0772; 01968; 08498; +060;
m; 11111111; ...

Ceilometer CHM 8k 2016			Order No.
Ceilometer			8349.00
Technical Data	Dimensions (LxWxH)	500 mm x 500 mm x 1550 mm	
	Weight	70 kg (130kg incl. packaging)	
Operating conditions	Temperature	-45 °C...55 °C	
	Relative humidity	0 %...100 %	
	Wind	55 ms ⁻¹	
Measuring parameters	Measuring principle	Optical (LIDAR)	
	Measuring range (CBH) ¹	5m...8000m (16ft...26200ft)	
	Accuracy ²	± 5m (± 16ft)	
	Range resolution	5m (16ft)	
	NetCDF raw data resolution	15m (full range, compact file sizes) 5m (5m to 150m range)	
	Time to measure	2s ... 600s (programmable)	
	Targets	Aerosols, clouds	
	Quantities to be measured	- CBH1, preset: 3 layers; maximum 9 layers - Cloud penetration depth - Cloud amount and sky condition index - Vertical visibility (VOR) - Height of aerosol layer - Aerosol backscatter profiles	
Interfaces and software for data output and device configuration	Standard interface	RS485, LAN	
	Communication	LAN Port: Web-Interface Serial Port: DataClient Software or standard terminal programs	
	Optional software	Viewer-Software for convenient visualizing measured results	
Electrical parameters	Power supply	Standard: 230VAC, ± 10% Optional: 110VAC, ± 10%	
	Power consumption	250W (Standard) 800W (in maximum heating mode)	
	UPS functionality (opt.)	Internal backup battery for electronics, > 1 hrs	
Operating safety	Environmental requirements	ISO 10109-11	
	Laser protection class	1M according to DIN EN 60825-1:2014	
	Internal protection class	IP65	
	EMC	Class B, DIN EN 61326-1	
	Electrical safety	DIN EN 61010-1	
	Certifications	CE	

¹)CBH - Cloud Base Height ²) measured on hard target in 8 km distance

RoMiotto Instrumentos de Medição Ltda
 Rua São Leonardo, 187 - Freguesia do Ô - São Paulo - SP
 Cep: 02803-000 | Fone.: (11) 3976-4003 - Fone.: (11) 3999-7737
 www.romiotto.com.br | E-mail: info@romiotto.com.br

- Benefits**
- Great measuring range up to 8 km (26200 ft)
 - Enhanced multiple cloud layer detection
 - Simple and eye-safe routine operation
 - Service-friendly modular device setup
 - Various data telegrams, including raw data
 - GUI software for device control and display of measured backscatter data in NetCDF format

