

## ► Aviation Laser Ceilometer

The TL320 Laser ceilometer is a cloud height sensor used mainly at airports to provide cloud base altitude, vertical visibility and sky condition parameters.

Operating according to the LIDAR principle (Light Detection and Ranging), the TL320 sensor can report up to three cloud layers. The TL320 provides the latest state of the art technical development in the field of Laser source and Signal Processing. The transmitter unit uses a pulsed MOPA laser which offers a very high reliability. The wavelength (1550 nm) is particularly suited for measurement under all weather conditions and guarantees a fully eye safe class 1 (complies with ANSI - Z - 136, IEC 825, EN 60825-1 norms).

The TL320 sensor can be used as a stand-alone instrument or integrated into a meteorological system. TL320 ceilometer includes a pedestral base, allowing beam tilting (0°-5°-90°). The tilting position insures a total protection against direct solar radiation and facilitates field testing against a hard target.

The ceilometer opto electronics are enclosed in a rugged housing protecting the sensor from extreme operating conditions. An automatic blower with heater ensures to keep the window clean and dry under all weather conditions.



## > Specifications

<b>► Performance</b>	
Measurement range	0 m – 7 600 m (0 ft – 25 000 ft)
Resolution	3 m (10 ft)
Accuracy	± 3 m below 100 m (± 10 ft below 328 ft) on fix target ± 5 % beyond 100 m (± 5 % beyond 328 ft)
Measurement integration / cycle	4 s / 15 s
Transmitter	MOPA laser (non cooled) $\lambda = 1550\text{nm}$ , energy per pulse = 4 $\mu\text{J}$ , IM class
Receiver	INGaAs PIN photodiode
Optics	bi-static system including a 100mm diameter receiver aperture and a fiber collimation (simplifying receiver photodiode coupling).
<b>► Power supply &amp; data output</b>	
Power	230 VAC +/- 10 %, 45-65 Hz
Interfaces	RS232, FSK, IP
Communication protocol	CIBUS, ASCII, PIRD (IP)
Data messages	cloud layer heights, full backscatter profile, monitoring status, sky cover in octa for each cloud layer, vertical visibility.
<b>► Mechanical</b>	
Electronic cabinet dimensions/ weight (optic/electronic/power supply)	990 x 380 x 460 mm / 35 kg
Pedestal dimensions / weight	953 x 400 x 502 mm / 10 kg
Installation	pedestal unit for beam tilting (0°... 90°)
Window conditioner	window heater and blower
<b>► Environmental</b>	
Environment	-40 °C to + 60 °C
Storage	-40 °C to +70 °C
Humidity	0 to 100 %
Class Protection	IP65
Wind	up to 50 m/s (98 kt)