Er:Glass Laser Rangefinder ELEM-DP 10k

Description and Features

ELEM-DP 10k is a compact Laser rangefinder for measuring distances of up to 40 kilometers with an accuracy of better than 5 meters. Based on a diode pumped Er:Glass Laser, the ELEM-DP 10k provides high pulse repetition rates of up to 20 Hz. Working at a wavelength of 1.54 μm, the Laser spot is invisible to the human eye and not detectible by I²-based night vision equipment. It is eyesafe according to Laser class 1M.

Robust and easy to integrate

The compact design allows for easy integration into various measuring systems. The rangefinder has a single interface for the power supply and different serial and bus communication interfaces. It is suited for usage under harsh environmental conditions. For co-alignment with other sensors, a red LED collimator is integrated.

Benefits

- Compact and lightweight design
- Eyesafe operation
- High repetition rate
- Long distance measurements

Applications

- Naval, army and airborne fire control systems (FCS)
- Target tracking systems and anti-aircraft systems
- Military surveillance
- Multi-sensor platforms
- Electro-optic tracking systems (EOTS)
Specifications

Measurement parameters

- Measuring performance 1) ≥ 10 km
- Total measurement range 50 m ... 40,000 m
- Measuring accuracy 5 m
- Measuring resolution 1 m
- Multiple target detection up to 5 targets
- Target discrimination 20 m
- Measuring rate max. 10 Hz continuous operation, 20 Hz burst operation

Transmitter

- Laser type Diode-pumped Er:Glass Laser
- Operating wavelength ~ 1.54 μm
- Beam divergence 2) ~ 0.5 mrad
- Laser classification 1M (EN 60825-1:2014)
- Guaranteed number of measurements ≥ 5,000,000
- Alignment LED ~ 635 nm

1) measured at standard target 2.3 m x 2.3 m, 10 % albedo, visibility Vn = 10 km | 2) full angle, containing ≥ 80 % of the pulse energy

Receiver

- Detector type Avalanche photo diode
- Receiver optics diameter 50 mm

Communication interfaces

- Data interface CAN-Bus, RS422, RS232

Electrical parameters

- Input voltage range 18 ... 32 VDC
- Current consumption in stand-by ≤ 0.15 A
- Maximum current consumption 8 A (at 20 Hz repetition rate)

Mechanical Dimensions

- Weight ≤ 1600 g
- Dimensions (L x W x H) 223 mm x 60 mm x 124 mm

Ambient conditions

- Operation temperature - 40 °C ... + 70 °C
- Storage temperature - 55 °C ... + 70 °C

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.