SYDOR TECHNOLOGIES



INFINITION 10 GHz DOPPLER RADAR BR-1001

COMPLEX MEASUREMENTS—CRITICAL RESULTS

FEATURES

- Versatile antenna for use at ther muzzle or medium range
- Rugged design to prevent dust & water damage
- Operational in a range of temperature and weather conditions

APPLICATIONS

- Ammunition Testing
- Armor Testing
- Muzzle & Residual velocity measurement
- Strike Velocity

ABOUT THE 10 GHz DOPPLER RADAR BR-1001

The BR-1001 Doppler Radar Antenna utilizes the Doppler principle to measure the velocity of moving objects. It is particularly well suited for measuring the velocity at the gun muzzle, but is also powerful enough to measure at medium range depending on the caliber. This radar unit is ideal for measuring on 5.56 mm to 155 mm projectiles.

The radar antenna consists of a transmitting and a receiving antenna (bistatic configuration). The transmitter output power can be selected between 0.2W and 2W to accommodate short and long range measurements. The receiver has very low noise figure in order to provide maximum sensitivity and detection range.

When used in conjunction with Infinition's junction box and TestCenter Doppler processing software, it provides a powerful tool for ballistic analysis.

The BR-1001 housing has been designed using magnesium casting to provide excellent rigidity while minimizing its weight. The entire unit is sealed to prevent dust and water from entering the housing and damaging the electronic components. The radar is painted white to minimize sensitivity to the heat generated by the sun. The BR-1001 unit can operate under a wide range of temperature and weather conditions.

The performance of the BR-1001 unit has been calculated based on actual measurements on different projectile calibers. The range performance in the table below takes into account the effect of the projectile aspect angle along the trajectory.

PRODUCT SPECIFICATIONS

- Antenna Gain: 23 dBi
- Antenna Type: Flat Panel Microstrip
- Beamwidth: 9 x 11 degrees
- Polarization: Vertical (horizontal optional)
- Transmitter Output Power: 0.2 or 2 W, selectable
- Modulation: None
- Frequency: 10.525 Ghz (nominal)
- Stability: +/- 15ppm
- Receiver Noise Figure: <3dB (all loses combined)
- Radial Velocity Coverage: 30 - 5000 m/s
- Operating Temperature: -20 to 50 degC
- Supply: 115 VAC 60 Hz 1.0A (North American Model) 230 VAC 50 Hz 0.5 A (European Model)
- Dimension: 51 cm x 27 cm x 13 cm
- Weight: 14 kg
- Approvals: FCC, CE

INFINITION

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