SYDOR

TECHNOLOGIES



INFINITION 35 GHz DOPPLER RADAR BR-3502

COMPLEX MEASUREMENTS—CRITICAL RESULTS

FEATURES

- More than 3x improved resolution over a 10.5 GHz radar
- Sensitive to very small projectiles, as small as 1 mm
- Suitable for indoor and outdoor use

APPLICATIONS

- Short range radar applications
- In bore projectile velocity measurements

ABOUT THE 35 GHz DOPPLER RADAR BR-3502

The BR-3502 Doppler Radar Antenna utilizes the Doppler principle to measure the velocity of moving objects. It is a low cost radar that can be used in a variety of application such as projectile muzzle velocity, in-bore measurement, very short range velocity measurement, etc. It is a great alternative to optical chronographs. The BR-3502 is compact as well as easy to deploy and use. It works at 35.5 GHz and provides more than 3 times better resolution than a 10.5 GHz (X-Band) radar, and can therefore be used on very small projectile calibers (ex: 1 mm). The BR-3502 is particularly well suited for interior ballistic ranges where very short range measurements (down to few meters) are performed. It can also be used outside for short range measurement up to 250 meters (and more), depending on projectile caliber.

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

Projectile velocity can be measured inside the gun barrel by using the BR-3502 in combination with a reflector, which is typically a metal plate made out of standard 1/8 inch thick aluminum sheet. Special accessories can be provided to properly align the radar beam and the reflector to achieve optimum results. Typically, inbore measurement can be performed for 20 mm caliber and above

PRODUCT SPECIFICATIONS

- Antenna Gain: 20 dBi
- Antenna Type: Lens Horn
- Beamwidth: 12 x 12 degrees
- Polarization: Circular
- Transmitter Output Power: > 0.1 W
- Modulation: None
- Frequency: 35.5 GHz
- Stability: +/- 0.1%
- Receiver Noise Figure: < 8 dB (all loses combined)
- Radial Velocity Coverage: 30 - 5000 m/s
- Operating Temperature: -20 to 50 degC
- Supply: 115 VAC 60 Hz 0.3A (North American Model) 230 VAC 50 Hz 0.15 A (European Model)
- Antenna Head Dimensions (L X OD): 11.1 x 8.5 cm (4.4" x 3.3")
- Power Head Dimensions: 20 x 15 x 6 cm (7.9" x 5.9" x 2.4")
- Weight: 1 kg (2.2 lbs)
- Approvals: FCC, CE

INFINITION

Sydor Technologies is a proud distributor for Infinition

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