Infinition 94 GHz Doppler Radar Antenna (BR-9401)

The BR-9401 Doppler Radar Antenna utilizes the Doppler principle to measure the velocity of moving objects. It is particularly well suited to measure the velocity of small projectiles in movement in a confined space such as small caliber bore. It will properly read projectiles in bore with a diameter of 6.5 mm and above.

Projectile velocity can be measured inside the gun barrel by using the BR-9401 in combination with a reflector, which is typically a metal surface made of aluminum sheet. Special accessories can be provided to properly align the radar beam and the reflector to achieve optimum results. Typically, in-bore measurement can be performed for 6.5 mm bore diameter and above with this radar model.

The BR-9401 has been designed for short range applications, thus this is not a model for long range measurement. It has been specifically designed to measure inbore acceleration of projectiles inside the barrel for small calibers.

Features:
- Specially designed to measure small projectiles in-bore

Applications:
- For use in short range applications
- In-bore measurement of projectiles 6.5 mm and larger
## Radar Specifications

- **Antenna Gain:** 30 dBi typical
- **Antenna Type:** Lens corrected antenna
- **Beamwidth:** 4 x 4 deg.
- **Polarization:** Linear
- **Transmitter Output Power:** +13 dBm
- **Transmitter Source:** Gunn diode, CW
- **Modulation:** None
- **Frequency:** 94.00 GHz (nominal)
- **Precision:** ± 0.1% (following guidelines)
- **Receiver Noise Figure:** ~10 dB
- **Radial Velocity Coverage:** 30-1150 m/s
- **Operating Temperature:** 0 to 50 degC
- **Supply:** 115 Vac 60 Hz 0.3 A for North American Model; 230 Vac 50 Hz 0.15 A for European Model
- **Dimension (antenna head):** 16 cm x 30 cm x 8 cm
- **Dimension (power supply):** 20 cm x 15 cm x 6 cm
- **Weight:** 6 kg
- **Approvals:** N/A

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