Leica AR20

Visionary 3D GNSS Antenna Matchless multipath suppression







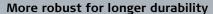
Leica AR20

Future-proof GNSS infrastructure



New innovative design choke ring antenna

The AR20 is a newly designed 3D GNSS choke ring antenna with variable choke rings for superior tracking performance. The precision design also allows for very low and stable phase centre offsets and very smooth symmetry of the phase centre variations versus azimuth and elevation.



The newly designed AR20 choke rings are treated with a newer and more robust double treatment for longer lasting durability in all environments. An optional radome cover is also available for added protection.

Additional power surge protection

The innovative integrated multi-stage power surge arrestor for the AR20 enhances protection against power surges in the electrical system, typically caused by lightning or any other source of high voltage.

Superior multipath performance

The AR20 has excellent Axial Ratio at low elevations which results in superior multipath rejection across all GNSS frequency bands including L5, due to the new 3D (inside) design. Traditional 2D choke ring designs are typically optimised for a single frequency band, while the AR20 has been optimised for superior multipath performance across all GNSS frequency bands.

| Technical Specification | |
|-------------------------|--|
| Design | Planar structure with 3D choke ring ground plane |
| Signals tracked | GPS: L1, L2 (including L2C), L5 GLONASS: L1, L2, L3, L5 Galileo: E1, E5a, E5b, E5ab (AltBOC), E6 BeiDou: B1, B2, B3 QZSS: L1, L1C, L2C, L5, L1-SAIF, L6 NavIC: L5 L-Band (incl. SBAS, TERRASTAR and CDGPS) |
| Phase centre | Accuracy: Typically less than 1 mm Repeatability: Within 1 mm |
| Dimensions (H x W) | 163 mm x 320 mm |
| Weight | 5.9 kg |
| Supply voltage range | 3.3 – 12 VDC |
| Connector | N-Type (female) |
| Mounting | Standard 5/8" whitworth thread |
| Nominal impedance | 50 ohms |
| Current | 100 mA maximum |
| Gain (typically) | 29 dB or 40 dB optional |
| Noise figure | Less than 2.0 dB |





| Technical Specification | |
|--------------------------|---|
| Axial ratio | Less than 1.2 at zenith |
| Lightning Protection | Integrated 3 stages surge protector to comply with at least 4kV surge waveform (IEC 61000-4-5 class 4 voltage level) |
| Temperature range | ISO9022 and MIL-STD-810G Operating: –55° C to +85° C Storage: –55° C to +85° C |
| Environmental protection | Humidity: up to 100% Rain, dust, sand, wind: IP67 – Protection against blowing rain and dust. Waterproof to temporary submersion into water (1 m depth) |
| RoHS complaint | Yes |
| Vibration | ISO9022-36-05, 10 to 55 Hz; ± 0.15 mm, 5 cycles |
| Drop | Withstands 1.0 m drop onto hard surfaces |
| Antenna cables | Are available in lengths of 1.2/2.8/10/30/50/70 metres. Longer cables available on request |
| Radome | Available as option |



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