

Intelleflex Reader Antenna

Intelleflex Corporation offers break-through system performance with its wide coverage single element antenna



Intelleflex single element antenna pair with one transmit and one receive

Intelleflex general purpose antennas are optimized for Intelleflex's RFID system and complement the outstanding performance and range offered by Intelleflex readers and tags. The versatile, multipurpose antennas can be used for long range applications requiring large area coverage.

These rugged antennas can withstand the extreme heat, cold and moisture of outdoor environments encountered in yards and outside dock doors, as well as high humidity, dust and vibrations encountered in manufacturing, warehouse or indoor asset tracking environments. These antennas are designed to be used in pairs with complementary polarizations. A mounting kit is included for easy deployment.

| ELECTRICAL | 12" PATCH ANTENNA | 7.5" PATCH ANTENNA |
|-----------------------------------|--|--|
| Frequency Range | 902-928 MHz (US) 865-870 MHz (Europe/India) | 902-928 MHz (US/Korea) 865-870 MHz (Europe/India) |
| Gain | 6.85 dBil / 9 dBic (no cable loss assumed) | 6 dBil (max) |
| VSWR | 1.5:1 (max) | 1.3:1 |
| Azimuth 3 dB Beamwidth | 63° (typical) | 70° (typical) |
| Elevation 3dB Beamwidth | 63° (typical) | 71° (typical) |
| Polarization | LHCP or RHCP | LHCP or RHCP |
| Sidelobes Level @ 90° | -16 dB (max) | -19 dB (max) |
| Axial Ratio Over Beamwidth | 4 dB (max) | 1.3 dB (max) |
| F/B Ratio | -18 dB (max) -20 dB (typical) | -19 dB (max) |
| Input Impedance | 50 Ohm | 50 Ohm |
| Input Power Handling | 6 W (max) | 6 W (max) |
| Lightning Protection | DC grounded | DC grounded |
| MECHANICAL | | |
| Dimensions (L x W x D) | 12" x 12" x 1" (305 mm x 305 mm x 25 mm) | 7.5" x 7.5" x 1.8" (190 mm x 190 mm x 30 mm) |
| Orientation | Rectangular | Rectangular |
| Weight | 2.64 lb (1,2 kg) (max) | 1.76 lb (0,8 kg) (max) |
| Connector | Reverse-TNC-female (US) N-female (Europe/India) | TNC-female (US/Korea) N-female (Europe/India) |
| Casing | Plastic UV Resistant per ETSI 300 | Plastic UV Resistant per ETSI 300 |
| Base Plate | Aluminum with chemical conversion coating | Aluminum with chemical conversion coating |

| ENVIRONMENTAL | 12" PATCH ANTENNA | 7.5" PATCH ANTENNA |
|------------------------------------|--|---|
| Operating Temperature | -67° to +160°F (-55° to +71°C) | -67° to +160°F (-55° to +71°C) |
| Cold Test | IEC 68-2-1 (-67°F / -55°C for 72 hours) | IEC 68-2-1 (-67°F / -55°C for 72 hours) |
| Heat Test | IEC 68-2-2 (+160°F / +71°C for 72 hours) | IEC 68-2-2 (+160°F / +71°C for 72 hours) |
| Temperature Shock Test | IEC 68-2-14 | IEC 68-2-14 |
| Humidity Test | ETSI EN300-2-4 T4.1E (95% for 144 hours) | ETSI EN300-2-4 T4.1E (95% for 144 hours) |
| Water Tightness | IP67, IEC 529 | IP67, IEC 529 (US/Korea) IP54 (Europe/India) |
| Solar Radiation | ASTM G53 | ASTM G53 |
| Ozone Resistance | ETSI 300 | ETSI 300 |
| Flammability | UL 94, Class HB | UL 94, Class HB |
| Dust Resistance | IP67 | IP67 (US/Korea) IP54 (Europe/India) |
| Salt Spray | IEC 68-2-11 Ka (500 hours) | IEC 68-2-11 Ka (500 hours) |
| Ice and Snow | 1" (25 mm) Radial | |
| Wind Speed | | |
| Survival | 137.5 mph (220 Km/h) | |
| Operation | 100 mph (160 Km/h) | |
| Wind Load Survival | | |
| Front Thrust | 59 lb (26,8 kg) | |
| Side Thrust | 4.84 lb (2,2 kg) | |
| Quasi Random Vibration | 20 g rms for 4 hours | 20 g rms for 4 hours |
| Vehicle Vibration Operating | 1 g rms, 10-500 Hz, in 3 axis | 1 g rms, 10-500 Hz, in 3 axis |
| Mechanical Shock Operating | 10 g, 11 msec, half sine pulse | 10 g, 11 msec, half sine pulse |
| Regulatory Compliance | RoHS, CE 0682 | RoHS, CE 0682 |

Intellex reserves the right to change product information and specifications without notice.

ORDERING INFORMATION

| Part Number | Description |
|-------------|---|
| IA410.1 | 12" antenna pair, one transmit, one receive; 902-928 MHz frequency band; United States |
| IA414.2 | 12" antenna pair, one transmit, one receive; 865-868 MHz frequency band; Europe, India |
| IA412.1 | 7.5" antenna pair, one transmit, one receive; 902-928 MHz frequency band; United States |
| IA412.2 | 7.5" antenna pair, one transmit, one receive; 902-928 MHz frequency band; Korea |

