



AWT2-3910

Common Name 18 Port (2P/4P x 3) 1.9M Low Band, Mid Band Modular Tri-Sector, T2 Series

| | | | | |
|--------------|-------|------|------|-----------|
| 698-960MHz | 6 | eRET | 15.0 | 70° |
| 1710-2690MHz | 12 | eRET | 17.8 | 65° |
| Frequency | Ports | Tilt | Gain | Beamwidth |

PRODUCT INFORMATION

The Alpha Wireless Modular Tri-Sector T2 Series is a flexible antenna platform designed for Streetwork deployments. The AWT2 Platform is made up using discrete parts:

| Part | Part Name | Description |
|------|--------------------------------|---|
| 1 | The Base Stack Interface. | Is used to attach the Base Stack to the Monopole. It is attached to the Base Stack in the factory |
| 2 | The Base Stack | This is the antenna stack supplied with the AWT2-3910 |
| 3 | The Extension Stack. Optional. | This antenna stack is not supplied with the AWT2-3910. It can be bought at a later date and mounted on top of the Base Stack if additional capacity is required |

The AWT2-3910 consists of a single antenna stack. This is described in the table below.

| Stack Type | Frequency Bands | Ports per Stack |
|-----------------|-------------------------------|-------------------------------|
| Base Stack | 698-960MHz | 6 |
| | 1710-2690MHz | 12 |
| Extension Stack | Dependent on what is ordered. | Dependent on what is ordered. |

Each stack is made up of three panels that are positioned at 0°, 120° and 240° in the Azimuth plane. These individual panels are replaceable in the field for upgrade or maintenance purposes.

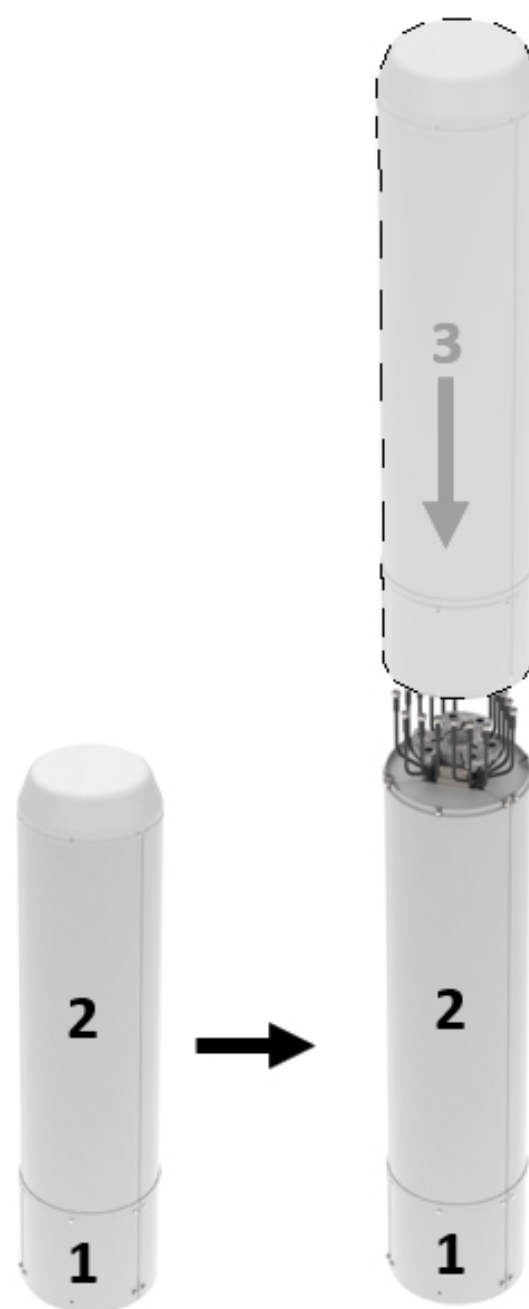
Important: The Alpha Wireless AWT2 series can only support a single Base Stack and a single Extension Stack. The Alpha Wireless AWT4 series can support a single Base Stack and up to three Extension Stacks

APPLICATION

Sector antennas support multiple antennas into one attractive package. These canisters deliver an elegant macro solution for pole-top, rooftop and streetworks applications. Alpha Wireless produces one of the smallest diameter canisters in the marketplace.

STANDARD & CERTIFICATIONS

Certification BS EN ISO 9001:2015



FEATURES

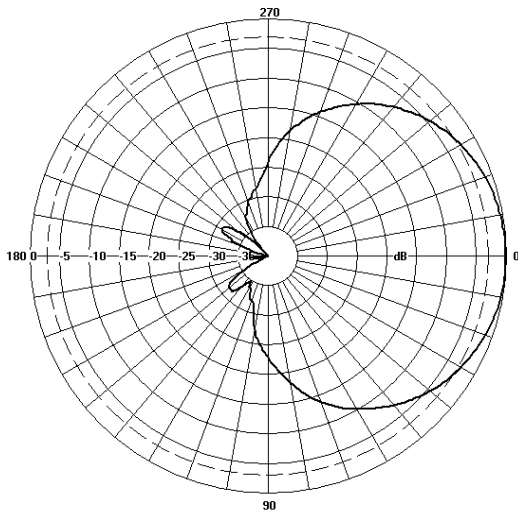
- The AWT2 Series supports up to two modular stacks.
- Field upgradable sectors without decommissioning the other sectors.
- Three sector canister with sectors orientated at 0°, 120° and 240° in the Azimuth Plane.
- 698-960MHz x 2 Ports.
- 1710-2690MHz x 4 Ports.
- 698-960MHz tilt range T2° - T12°.
- 1710-2690MHz tilt range T2° - T12°.
- Low PIM performance to reduce interference.

The parameters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.

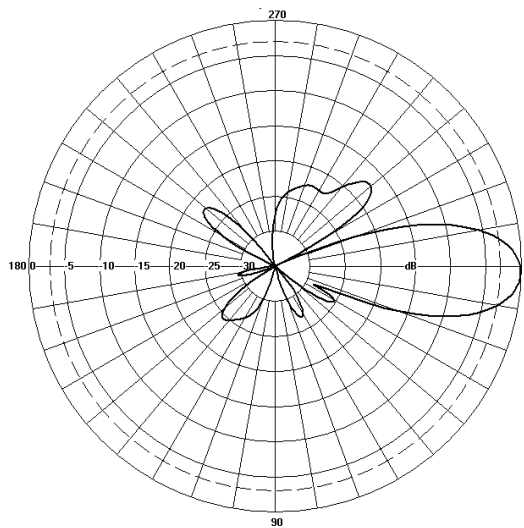
TECHNICAL SPECIFICATION

| Electrical Specifications | | Low Band | | | Mid Band | | | |
|--|---------|----------------------|-----------|-----------|------------|-----------|-----------|-----------|
| Frequency Range | MHz | 698-960 | 790-890 | 890-950 | 1710-1920 | 1920-2170 | 2300-2690 | |
| Polarisation | Degree | +/- 45° Slant Linear | | | | | | |
| Gain | Basta | dBi | 13.8 ±0.5 | 14.2 ±0.5 | 14.5 ±0.5 | 16.8 ±0.5 | 17.1 ±0.5 | 17.3 ±0.5 |
| | Max | dBi | 14.3 | 14.7 | 15.0 | 17.3 | 17.6 | 17.8 |
| Azimuth Beamwidth | Degree | 71° | 68° | 67° | 64° | 64° | 65° | |
| Azimuth Beam Squint | Degree< | 3° | | | 3° | | | |
| Elevation Beamwidth | Degree | 16.5° | 15.0° | 13.8° | 7.5° | 6.7° | 5.7° | |
| Electrical Downtilt | Degree | T2° - T12° | | | T2° - T12° | | | |
| Electrical Downtilt Deviation | Degree< | 1° | 1° | 1° | 1° | 1° | 1° | |
| Impedance | Ohms | 50 | | | | | | |
| VSWR | < | 1.5 | | | | | | |
| Return Loss | dB> | 14 | | | | | | |
| Isolation | dB> | 25 | 25 | 25 | 25 | 25 | 25 | |
| Passive Intermodulation | dBc< | -150 | -150 | -150 | -150 | -150 | -150 | |
| Upper Sidelobe Suppression, Peak to 20° | dB> | 15 | 15 | 15 | 15 | 15 | 15 | |
| Cross-Polar Discrimination | dB> | 15 | 15 | 15 | 15 | 15 | 15 | |
| Max Power Per Port | W | 300 | | | 250 | | | |

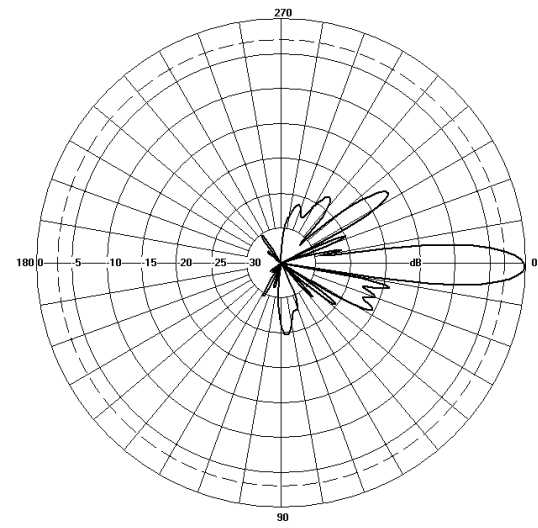
Representative Pattern Files



Azimuth



Low Band



Mid Band

Elevation

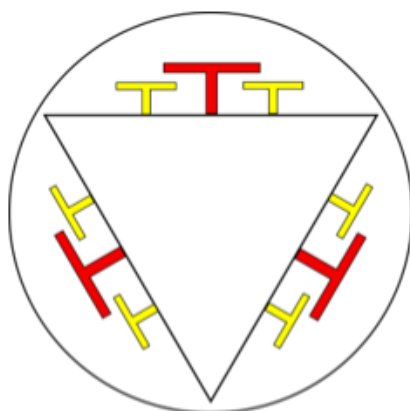
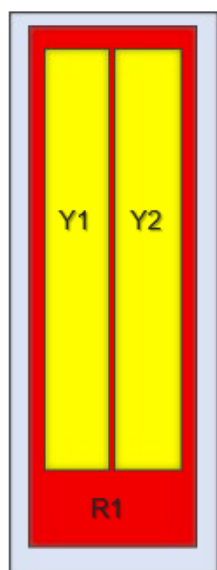
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

| | | |
|--|----------------------|---------------------------------------|
| Total Tri-Sector Dimensions | mm (in) | 1910 (75.2.1) x 406 (16) - (L x Ø) |
| Size of Crate 1 - Base Stack and Interface (LxWxD) | mm (in) | 2100 (82.6) x 570 (22.4) x 628 (24.7) |
| Size of Crate 2 - Extension Stack (LxWxD) | mm (in) | N/A |
| Weight of Crate 1 - Base Stack and Interface | kg (lb) | 149 (327.8) |
| Weight of Crate 2 - Extension Stack | kg (lb) | N/A |
| Weight of Base Interface and Base Stack (1 & 2) | kg (lb) | 96.5 (212.3) |
| Weight of Extension Stack (3) | kg (lb) | N/A |
| Connector Type (Female) | - | 4.3-10 |
| Connector Position | - | Bottom |
| Connector Quantity | - | 18 (6P Low Band, 12P Mid Band) |
| Windload Frontal (at Rated Wind Speed: 150km/h) | N (lbf) | 640 (144) |
| Windload Lateral (at Rated Wind Speed: 150km/h) | N (lbf) | 640 (144) |
| Survival Wind Speed | km/h (mph) | 200 (125) |
| Radome Material | - | UV Stabilised ASA capped ABS |
| Radome Colour | RAL | 7035 (light grey) |
| Product Compliance Environmental | - | RoHS |
| Lightning Protection | - | DC Grounded |
| Cold Temperature Survival | Celsius (Fahrenheit) | -40 (-40) |
| Hot Temperature Survival | Celsius (Fahrenheit) | 70 (158) |

Array Layout and RET Information



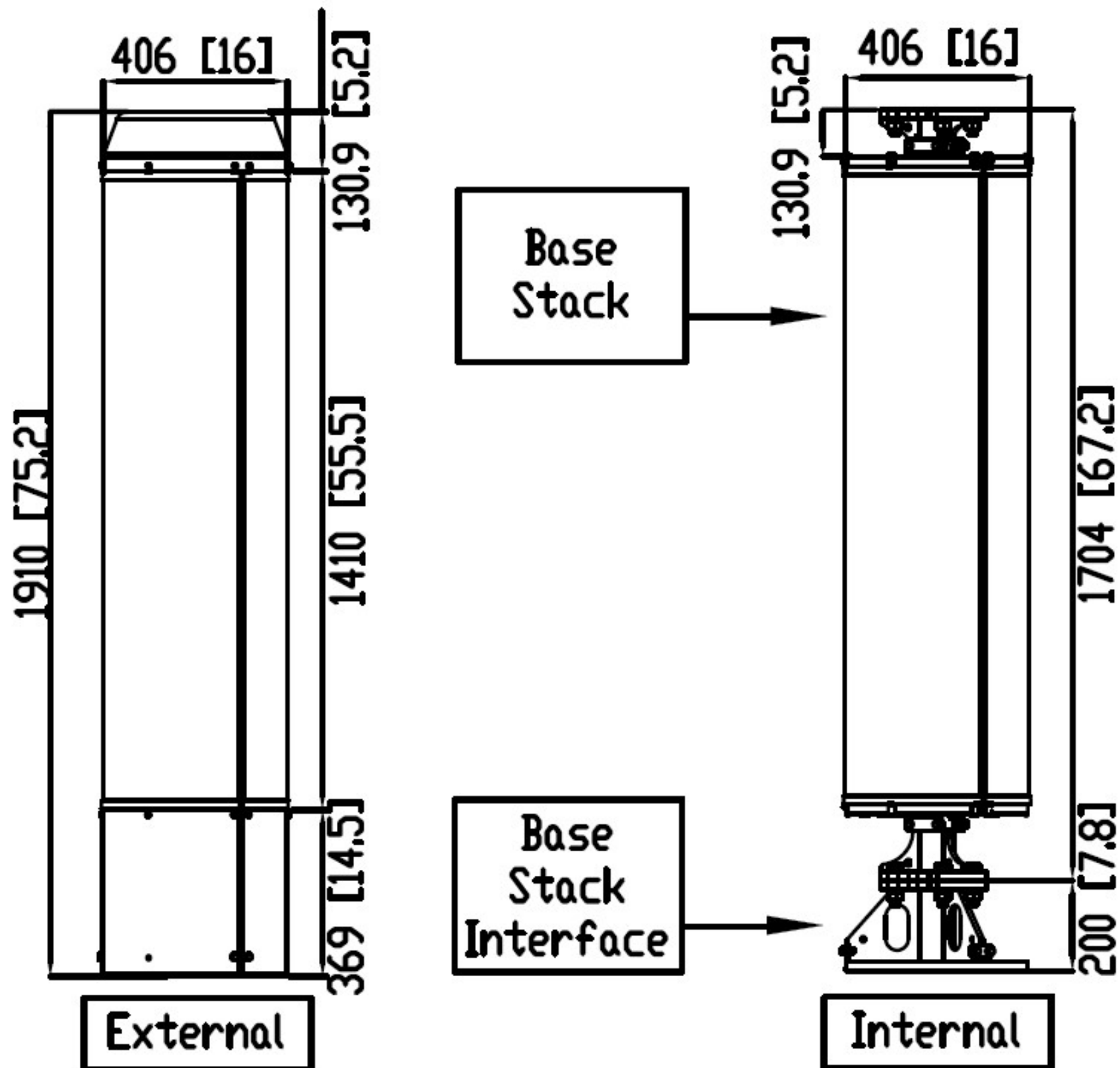
Array layout depicts one individual sector.
Note: Coloured box sizes do not represent antenna sizes.

| Array | Frequency MHz | Ports | RET |
|-------|---------------|-------|-----|
| R1 | 698 - 960 | 1 - 2 | 1 |
| Y1 | 1710 -2690 | 3 - 4 | 2 |
| Y2 | | 5 - 6 | 3 |

| Configuration | |
|-------------------------|--|
| 698-960 MHz | One RET per array: R1 x 3 Sectors |
| 1710-2690 MHz | One RET per array: Y1, Y2 x 3 Sectors |
| Total Quantity | Nine RET Motor Controllers |
| Location and Interface | |
| RET Controller Location | Inside antenna radome housing |
| RET Interface | Pair of AISG 8 Pin DIN connectors, one male, one female |
| RET Interface Quantity | Three pairs of AISG 8 Pin DIN connectors, one per sector |
| RET Interface Location | On connector plate located at bottom of antenna |
| Electrical | |
| Input Voltage | 10 - 30V |
| Power Idle Mode | < 1W |
| Power Active Mode | < 10W |
| Protocol | 3GPP / AISG 2.0 |

TECHNICAL SPECIFICATION

Mechanical Illustration



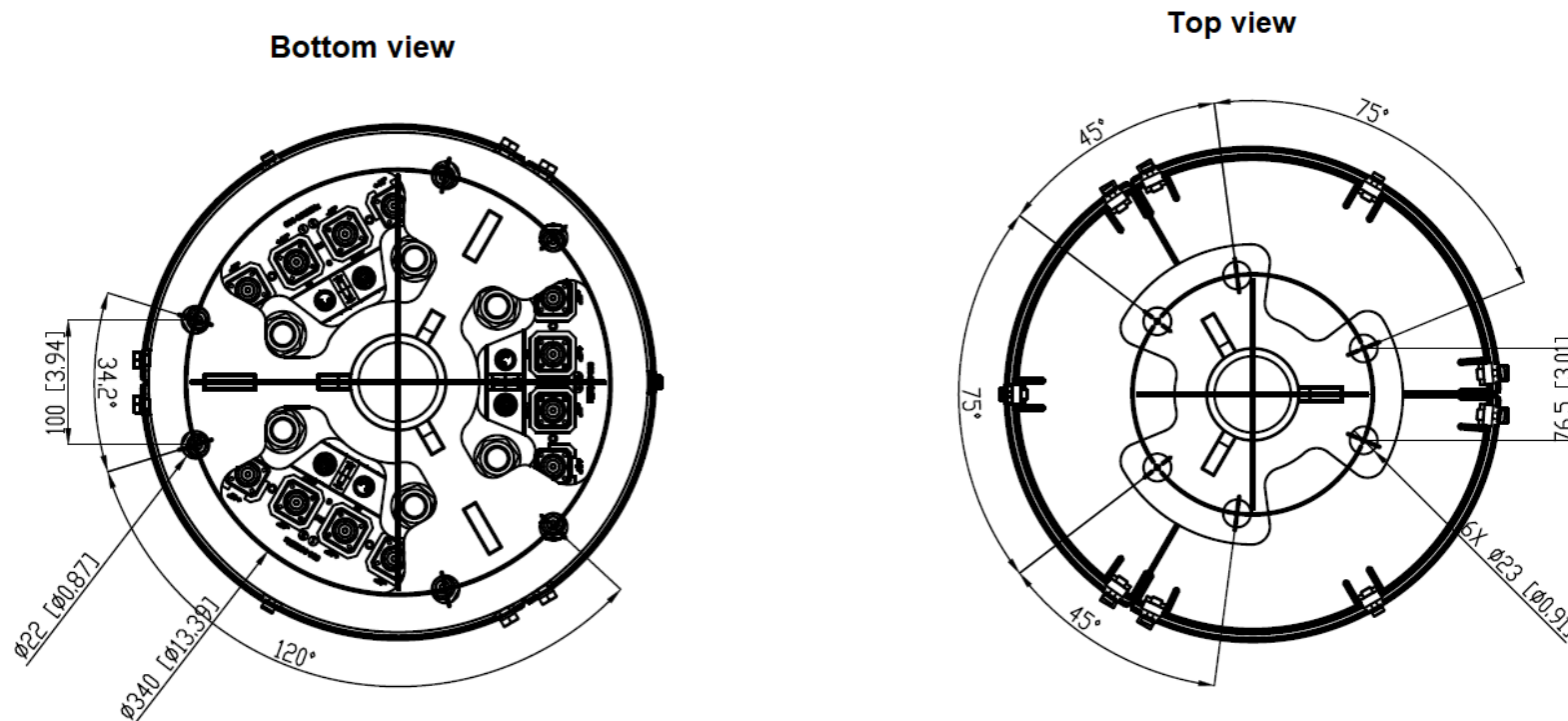
Description of Parts

| AWT2-3910 | |
|----------------------------|---|
| Base Stack Interface | Used as an interface between the Base Stack and the Monopole. |
| Base Stack | This contains the Antenna Sectors. Mounted onto the Base Stack Interface. The top of the Base Stack has a mounting flange onto which an optional Extension Stack may be mounted |
| Extension Stack | The Extension Stack is not supplied with the AWT2-3926 as it is a single stack design. |
| RF Jumpers Base Stack | These are not supplied with the Base Stack. Feeders from the Radio Cabinet feed directly into the connectors located at the bottom of the Base Stack. |
| RF Jumpers Extension Stack | Should an Extension Stack be added to the Base Stack, RF Jumpers are routed behind the Base Stack Radomes |

TECHNICAL SPECIFICATION

Mounting Bracket Kit

406mm Canister Flange Mount



| Mounting Kit Tilt Range | Mounting Kit Material | Mounting Kit Pole Diameter |
|-------------------------|-----------------------|----------------------------|
| 0 | Stainless Steel | 152mm-254mm (6" to 10") |

Ordering Info

| Order Code - Antenna | Description |
|--------------------------|--|
| AWT2-3910 | 18 Ports (2P/4Px3), 698-960/1695-2690MHz, 14/17dBi, Base |
| Order Code - Accessories | Description |
| AW1012-2-FM-FM | RF Jumper Cable, connector types 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6") |
| AW1012-2-FM-NM | RF Jumper Cable, connector types 4.3-10 (m) / N-Type (m), length 2 metres (6'6") |
| AW1014-2-FM-TM | RF Jumper Cable, connector types 4.3-10 (m) / Nex10 (m), length 2 metres (6'6") |
| PADC 1000 | Portable AISG Controller |
| SADC 2000 | Site AISG Controller |
| AW0326-3-PM-PF | AISG Jumper Cable Lengths 3 metres (9' 10") |
| AW0326-10-PM-PF | AISG Jumper Cable Lengths 10 metres (32' 9") |
| AW0326-25-PM-PF | AISG Jumper Cable Lengths 25 metres (82') |
| AW0326-50-PM-PF | AISG Jumper Cable Lengths 50 metres (164') |

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