

# TBC0037F2V51-1

## TWIN TRIPLEXER PCS/AWS/WCS

Kaelus world proven outdoor solutions provide strong RF performance coupled with rugged features. The TBC0037 Tri Band Combiner combines the PCS, AWS and WCS bands. Used to minimize infrastructure capital expenditure and improving network reliability.

### FEATURES

- Designed for multi-band, co-located sites
- Mechanical switch allows switching of DC/AISG to any port
- Twin configuration
- Suitable for outdoor and indoor applications; wall or mast mounting



### TECHNICAL SPECIFICATIONS

| PORT NAME                | PCS                                       | AWS                                       | WCS                                       |
|--------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Passband                 | 1850 - 1990MHz                            | 1695 - 1780MHz / 2110 - 2200MHz           | 2305 - 2360MHz                            |
| Insertion loss           | 0.25dB typical                            | 0.3dB typical                             | 0.25dB typical                            |
| Return loss              | 18dB minimum                              | 18dB minimum                              | 18dB minimum                              |
| Maximum input power      | 200W (average) / 2kW (PEP)                | 200W (average) / 2kW (PEP)                | 200W (average) / 2kW (PEP)                |
| Intermodulation products | 153dBc maximum all ports 2 x 20W carriers | 153dBc maximum all ports 2 x 20W carriers | 153dBc maximum all ports 2 x 20W carriers |

#### ELECTRICAL

|                                          |                   |
|------------------------------------------|-------------------|
| Impedance                                | 50Ohms unbalanced |
| Isolation between bands                  | 50dB minimum      |
| Phase linearity variation over any 10MHz | 10° maximum       |
| Group delay variation over any 10MHz     | 10ns maximum      |

#### DC / AISG

A field selectable DC/AISG path is achieved via mechanical links on a IEC60130-9, 8-pin female connector (see mechanical diagram). It is Kaelus's recommendation that due to AISG link budget reasons that a maximum of 2 DC/AISG paths are activated simultaneously without active repeating of the AISG signal.

|                                     |                        |
|-------------------------------------|------------------------|
| Passband                            | 0 – 3MHz               |
| Insertion loss, single DC/AISG pass | 1dB maximum            |
| Return loss, single DC/AISG pass    | 12dB minimum           |
| Insertion loss, two DC/AISG pass    | 4.5 dB typical         |
| Return loss, two DC/AISG pass       | 9dB typical            |
| Input voltage range                 | ± 31V                  |
| DC current rating                   | 2A continuous, 4A peak |
| Compliance                          | AISG 1.1/2.0           |

#### ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

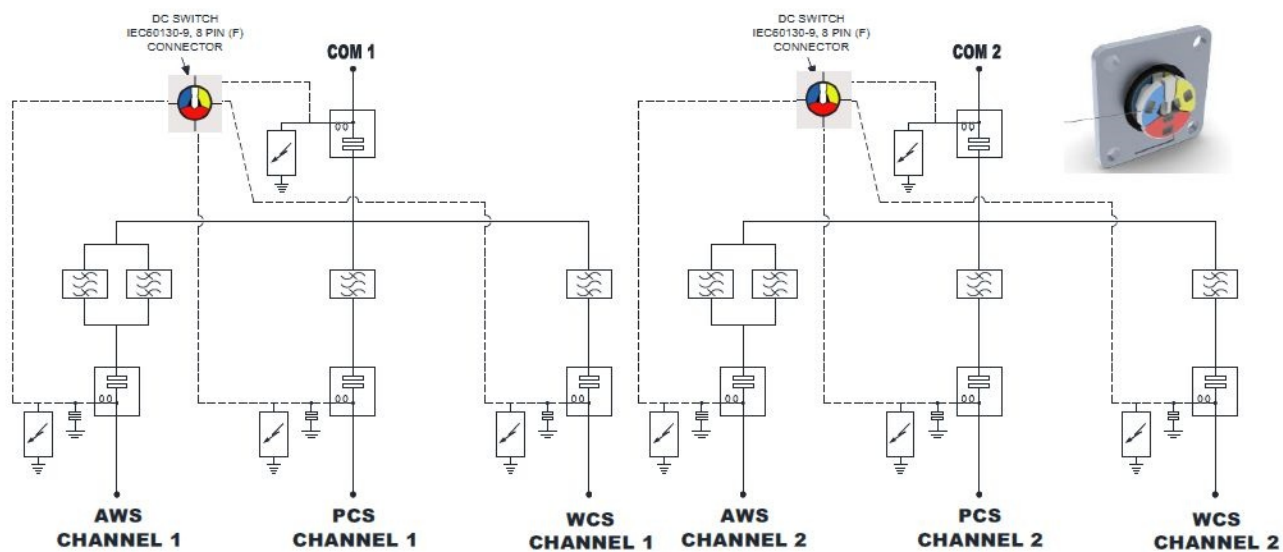
|                      |                                                |
|----------------------|------------------------------------------------|
| Temperature range    | -20°C to +65°C   -4°F to +149°F                |
| Ingress protection   | IP67                                           |
| Lightning protection | IEC61000-4-5, RF: ±5kA maximum (8/20us)        |
| MTBF                 | >1,000,000 hours                               |
| Compliance           | EMC:EN301 489, ETSI EN 300 019 class 4.1, RoHS |

| MECHANICAL           |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Dimensions H x D x W | 240x 220 x 110mm   9.4 x 8.7 x 4.3in                                          |
| Weight               | 8.5kg   18.7lbs                                                               |
| Finish               | Powder coated, light grey (RAL7035)                                           |
| Connectors           | DIN 7-16 (F) x 8 long neck                                                    |
| Mounting             | Pole/wall bracket supplied with two metal clamps for 45-178 mm diameter poles |

## ORDERING INFORMATION

| PART NUMBER    | CONFIGURATION     | OPTIONAL FEATURES | CONNECTORS | DC/AISG CONFIGURATION |
|----------------|-------------------|-------------------|------------|-----------------------|
| TBC0037F2V51-1 | TWIN 2 in / 6 out | DC SWITCH         | 7/16 (F)   | FIELD CONFIGURABLE    |

## ELECTRICAL BLOCK DIAGRAM



# MECHANICAL BLOCK DIAGRAM

