Dual-Band Combiner

690 - 2180 MHz
LTE 800 / CDMA 850 / GSM 900 / GSM 1800 / UMTS 2100

2400 - 2700 MHz
WIMAX / LTE 2600

• Designed for co-siting purposes
• Enables feeder sharing
• Can be used as a combiner near the BTS or in a reciprocal function near the antenna
• Suitable for indoor or outdoor applications
• Wall or mast mounting
• Double unit for XPOL antennas
• Built-in lightning protection
• External DC stop available as an accessory
• Extremely small dimensions and low weight
• Very low insertion loss
• High input power

Technical Data

| Type No. | 78211189
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Unit</td>
<td></td>
</tr>
</tbody>
</table>

**Pass band**

| Band 1 | 690 - 2180 MHz |
| Band 2 | 2400 - 2700 MHz |

**Insertion loss**

| Port 1 ↔ Port 3 | < 0.2 dB (690 - 2180 MHz) typ. 0.1 dB |
| Port 2 ↔ Port 3 | < 0.15 dB (2400 - 2700 MHz) typ. 0.1 dB |

**Isolation**

| Port 1 ↔ Port 2 | > 50 dB (690 - 2180 MHz), > 48 dB (2400 - 2700 MHz) |

**VSWR**

| | < 1.22 (690 - 2180 MHz) |
| | < 1.2 (2400 - 2700 MHz) |

**Impedance**

50 Ω

**Input power**

| Band 1 / Band 2 | < 500 W / < 500 W |

**Intermodulation products**

< -160 dBc (3rd order; with 2 x 20 W)

**Temperature range**

-55 ... +60 °C

**Connectors**

7-16 female (long neck)

**Application**

Indoor or outdoor (IP 66)

**DC/AISG transparency**

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Unit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>By-pass (max. 2500 mA)</td>
<td>By-pass (max. 2500 mA)</td>
</tr>
</tbody>
</table>

**Lightning protection**

3 kA, 10/350 μs pulse

Without lightning protection

**Mounting**

Wall mounting: With 4 screws (max. 8 mm diameter) / Mast mounting: With additional clamp set

**Weight**

2.8 kg

**Packing size**

266 x 196 x 180 mm

**Dimensions (w x h x d)**

141 x 119 x 98.5 mm (without connectors, without mounting brackets)

906.4558a

All specifications are subject to change without notice. The latest specifications are available at www.kathreinusa.com

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com
## Dual-Band Combiner

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Clamp set suitable for mast diameter of</th>
</tr>
</thead>
<tbody>
<tr>
<td>734360</td>
<td>34 - 60 mm</td>
</tr>
<tr>
<td>734361</td>
<td>60 - 80 mm</td>
</tr>
<tr>
<td>734362</td>
<td>80 - 100 mm</td>
</tr>
<tr>
<td>734363</td>
<td>100 - 120 mm</td>
</tr>
<tr>
<td>734364</td>
<td>120 - 140 mm</td>
</tr>
<tr>
<td>734365</td>
<td>45 - 125 mm</td>
</tr>
<tr>
<td>*1311847</td>
<td>50 - 145 mm</td>
</tr>
</tbody>
</table>

*U.S. Customers order 1311847

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Clamp set suitable for mast diameter of</th>
</tr>
</thead>
<tbody>
<tr>
<td>78210850V01</td>
<td>DC stop</td>
</tr>
<tr>
<td>78410367</td>
<td>50-Ohm load</td>
</tr>
</tbody>
</table>

### Accessories (order separately)

**Typical Attenuation Curves**

---

Please Note:

- The mounting plates can be removed by loosening the screws (M5 x 12) and replaced with other means of mounting, always provided that the max. drilled depth of 7.5 mm is respected with the choice of replacement screws.

- As a result of more stringent legal regulations and judgements regarding product liability, we are obliged to point out certain risks that may arise when products are used under extraordinary operating conditions.

- Extraordinary operating conditions, such as heavy icing or exceptional dynamic stress (e.g. strain caused by oscillating support structures), may result in the breakage of a mast mounted device or even cause it to fall to the ground.

- These facts must be considered during the site planning process.

- The Dual-band Combiners are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1 E and have passed environmental tests as recommended in ETS 300 019-2-4.

- The installation team must be properly qualified and also be familiar with the relevant national safety regulations.

- The details given in our data sheets have to be followed carefully when installing the combiners and accessories.

- The limits for the coupling torque of RF connectors, recommended by the connector manufacturers must be obeyed.

- Terminate unused inputs with a suitable 50-Ohm load, e.g. 784 10367.

- Any previous datasheet issues have now become invalid.
Dual-Band Combiner

690 - 2180 MHz
LTE 800 / CDMA 850 / GSM 900 / GSM 1800 / UMTS 2100

2400 - 2700 MHz
WIMAX / LTE 2600

Application example

Dual-band Combiner 78211189 (double unit)

Subject to alteration.

The latest specifications are available at www.kathreinusa.com
Dual-Band Combiner

690 - 2180 MHz
LTE 800 / CDMA 850 / GSM 900 / GSM 1800 / UMTS 2100

2400 - 2700 MHz
WiMAX / LTE 2600

Dimensions

Front view

Side view

Top view

Bottom view

All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com