

# Dual-Band Combiner

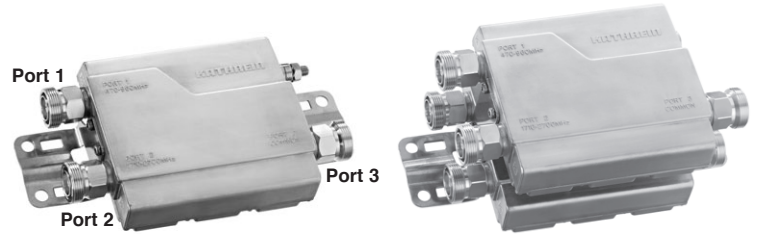
**KATHREIN**

Antennen · Electronic

**470 – 960 MHz**  
LTE 800 / CDMA 850 / GSM 900

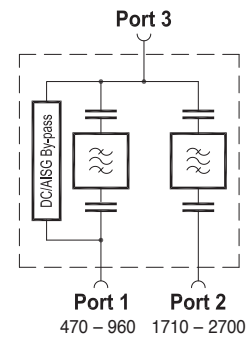
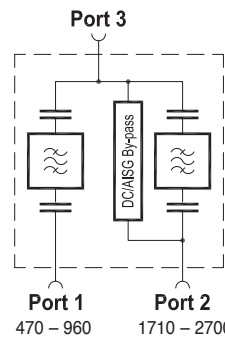
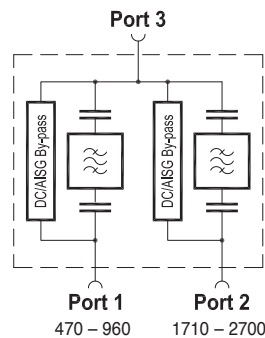
**1710 – 2700 MHz**  
GSM 1800 / UMTS 2100 / WiMAX / LTE 2600

- 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
- Available as a single unit, or for XPol antennas as a double unit
- Built-in lightning protection
- External DC stop available as an accessory
- **Extremely small dimensions and low weight**
- **Very low insertion loss**
- **High input power**



782 10660, 782 10662, 782 10664  
Single Unit

782 10661, 782 10663, 782 10665  
Double Unit



## Technical Data

Type No.	782 10660 Single Unit	782 10662 Single Unit	782 10664 Single Unit
	782 10661 Double Unit	782 10663 Double Unit	782 10665 Double Unit
Pass band Band 1 Band 2	470 – 960 MHz 1710 – 2700 MHz		
Insertion loss Port 1 ↔ Port 3 Port 2 ↔ Port 3	< 0.1 dB (470 – 960 MHz) < 0.1 dB (1710 – 2700 MHz)		
Isolation Port 1 ↔ Port 2	> 55 dB (470 – 960 MHz) / > 65 dB (1710 – 2700 MHz)		
VSWR	< 1.2 (470 – 960 / 1710 – 2700 MHz)		
Impedance	50 Ohm		
Input power Band 1 / Band 2	< 650 W / < 350 W		
Intermodulation products	< -160 dBc (3 <sup>rd</sup> 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 Port 1 ↔ Port 3 Port 2 ↔ Port 3	<b>By-pass</b> (max. 2500 mA) <b>By-pass</b> (max. 2500 mA)	<b>Stop</b> <b>By-pass</b> (max. 2500 mA)	<b>By-pass</b> (max. 2500 mA) <b>Stop</b>
Lightning protection	3 kA, 10/350 μs pulse		
Mounting	Wall mounting: With 4 screws (max. 8 mm diameter) / Mast mounting: With additional clamp set		
Weight	Single Unit: 1.2 kg / Double Unit: 2.4 kg		
Packing size	Single Unit: 285 x 157 x 93 mm / Double Unit: 285 x 157 x 148 mm		
Dimensions (w x h x d)	Single Unit: 126 x 145 x 38 mm / Double Unit: 126 x 145 x 93 mm (without connectors, without mounting brackets)		

936.3891/a Subject to alteration.

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## Accessories (order separately)

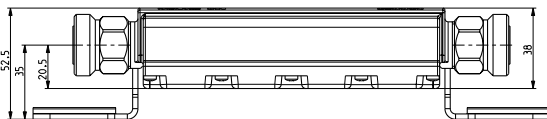
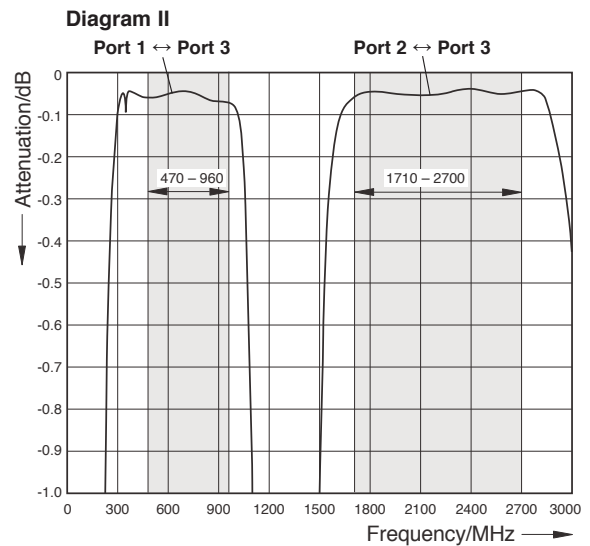
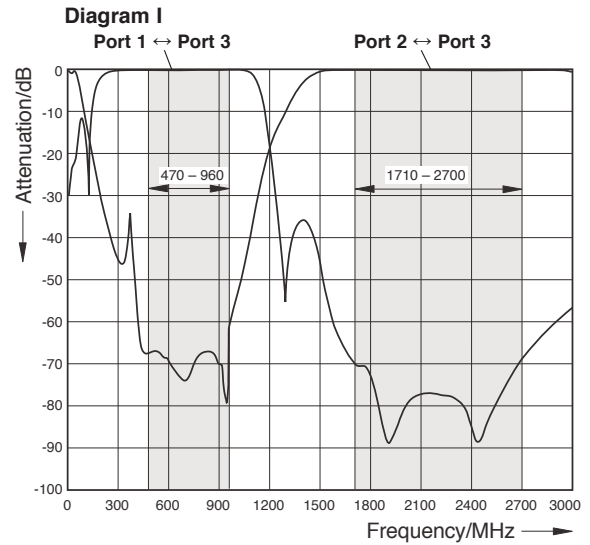
Type No.	Clamp set suitable for mast diameter of
734 360	34 – 60 mm
734 361	60 – 80 mm
734 362	80 – 100 mm
734 363	100 – 120 mm
734 364	120 – 140 mm
734 365	45 – 125 mm
*131 1847	50 – 145 mm

\*U.S. Customers order 131 1847

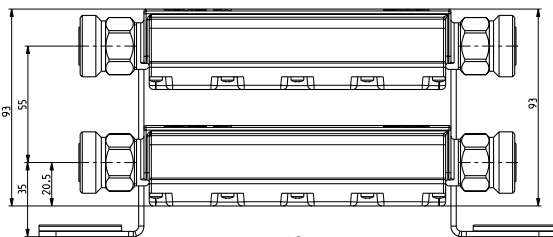
Type No.	Description
782 10850	DC stop
784 10367	50-Ohm load



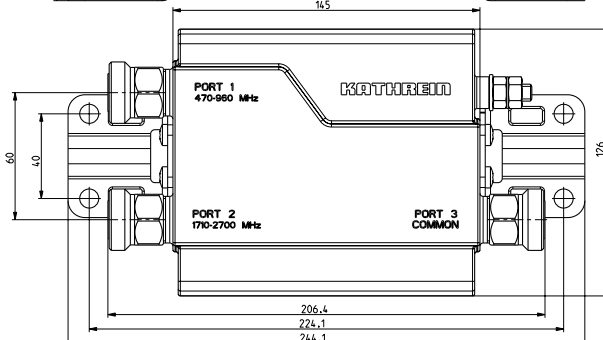
## Typical Attenuation Curves



Side view  
Single Unit



Side view  
Double Unit



Top view  
Single Unit,  
Double Unit

### Please note:

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 combiner 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.



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