

380 – 960 MHz

1695 – 1780 / 2095 – 2200 MHz

1850 – 1920 / 1930 – 2000 MHz

AUTO-SENSE

- Designed for co-siting purposes
- Enables feeder sharing
- Suitable for indoor or outdoor applications
- Integrated auto-sense technology for automatic DC/AISG detection and by-pass functionality

Combine Mode (near BTS):

DC/AISG auto-sense for port 1 to 3 and short circuit detection on port 4

Factory configurable behavior:

First In - First Out Function (Factory default setting)

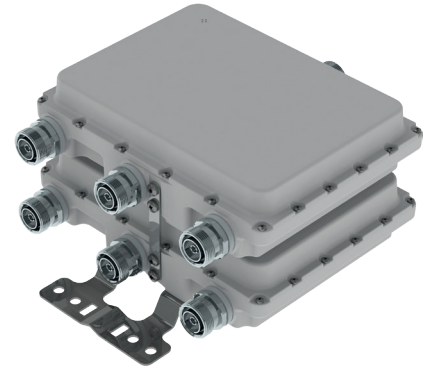
Priority Controlled Function

Exclusive User Function

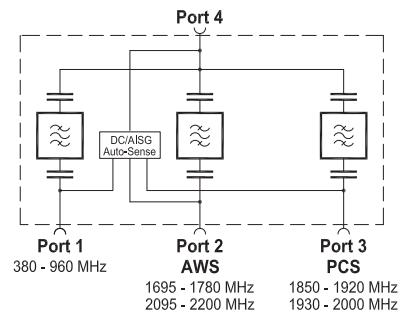
Split Mode (near antenna):

Automatic DC/AISG by-pass from port 4 to port 1 ... 3 if no short circuit is detected

- A short circuit detection is performed before allowing a DC/AISG signal to be passed from one of the ports 1 ... 3 to the common output (port 4) or vice versa. If a short circuit exists then a DC-Stop is activated on the corresponding RF-path.
- A detailed manual about Auto-sense technology can be downloaded on our homepage.



Double Unit



Technical Data

Type No.		78210788v01 Double unit	
		clamps included	
Pass band			
Band 1	MHz	380 – 960	
Band 2	MHz	1695 – 1780 (Rx) / 2095 – 2200 (Tx)	
Band 3	MHz	1850 – 1920 (Rx) / 1930 – 2000 (Tx)	
Insertion loss			
Port 1 ↔ Port 4	dB	< 0.2 (380 – 960 MHz)	
Port 2 ↔ Port 4	dB	< 0.3 (1695 – 1780 / 2095 – 2200 MHz)	
Port 3 ↔ Port 4	dB	< 0.3 (1850 – 1920 / 1930 – 2000 MHz)	
Isolation			
Port 1 ↔ Port 2	dB	> 50 (380 – 960 / 1695 – 1780 / 2095 – 2200 MHz)	
Port 1 ↔ Port 3	dB	> 50 (380 – 960 / 1850 – 1920 / 1930 – 2000 MHz)	
Port 2 ↔ Port 3	dB	> 50 (1695 – 1780 / 1850 – 1920 / 1930 – 2000 / 2095 – 2200 MHz)	
VSWR		< 1.25	
Impedance	Ω	50	
Input power per Band	W	< 250 (operational) / < 500 (survival)	
Intermodulation products	dBc	< -160 (3 rd order; with 2 x 20 W)	
Temperature range	°C °F	40 ... +60 -40 ... +140	
Connectors		7-16 female (long neck)	
Application		Indoor or outdoor (IP 66)	
DC/AISG transparency			
Port 1 ↔ Port 4	mA	Auto-sense (max. 2000)	
Port 2 ↔ Port 4	mA	Auto-sense (max. 2000)	
Port 3 ↔ Port 4	mA	Auto-sense (max. 2000)	
Mounting	mm in	Wall mounting: With 4 screws (max. 8 0.315 diameter) / Mast mounting: With included clamp set	
Weight	kg lb	6.3 13.88	
Dimensions (w x h x d)	mm in	244 x 184.5 x 130.1 9.61 x 7.26 x 5.12 (without connectors, without mounting brackets)	

936.5057/b Subject to alteration.

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

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Accessories (included)

Type No.	Clamp set suitable for mast diameter of mm in
734365	45 – 125 1.77 – 4.92

Clamp Set



Accessories (order separately)

Type No.	Description
78410367	50-Ohm load

50-Ohm load



First In - First Out Function (Factory Default Setting)

If the First In – First Out function is set, then the first base station which supplies the combiner with DC voltage at any input port is bypassed to the common port. The DC from the second base station will be ignored.

Priority Controlled Function

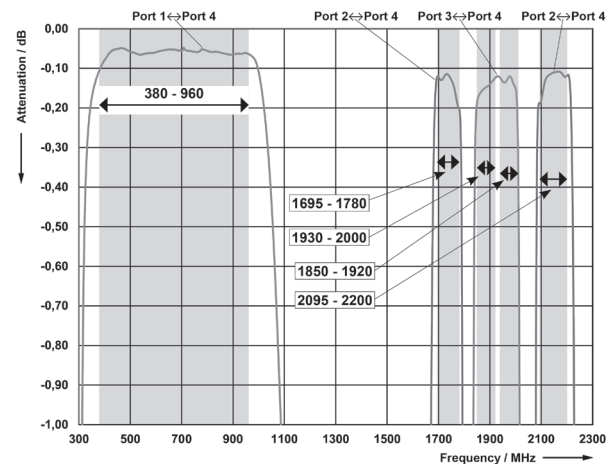
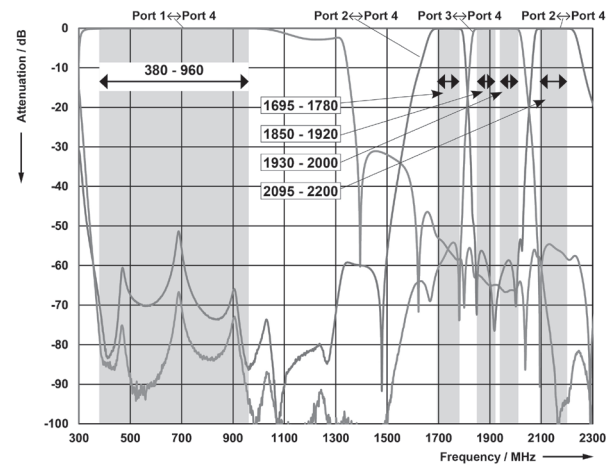
In case DC/AISG signals are applied to two or more ports simultaneously then all DC/AISG signals will be blocked as shown in the logic table below:

Connectors	Logic table							
Port 1	0	1	0	1	0	1	0	1
Port 2	0	0	1	1	0	0	1	1
Port 3	0	0	0	0	1	1	1	1
Port 4	0	1	1	0	1	0	0	0

Exclusive User Function

If the Exclusive User function is set in the combiner, then the first base station which supplies an appropriate DC voltage at any input port is bypassed to the common port. If a second DC/AISG signal is erroneously fed into the combiner, then none of the DC/AISG signals will be allowed to bypass to the common port.

Typical Attenuation Curves

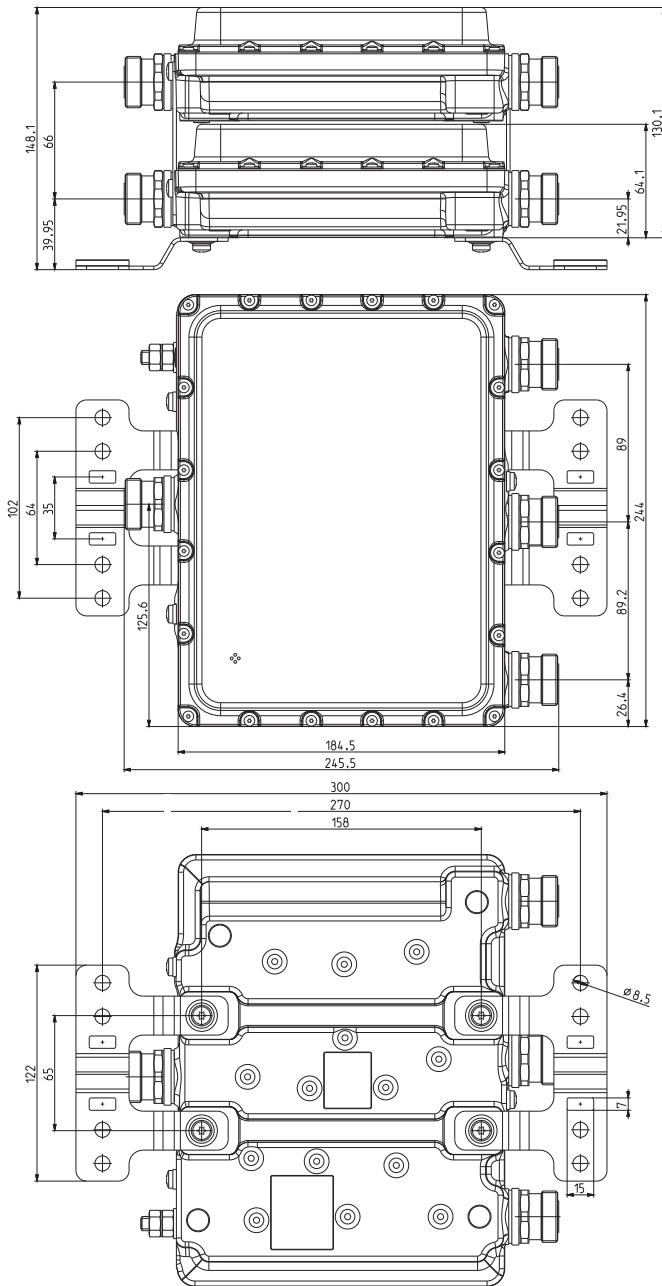


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Dimensions



Please Note:

The mounting plates can be removed by loosening the screws ① to ④ (M5 x 10) and replaced with other means of mounting, always provided that the max. drilled depth of 8.5 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 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 must be obeyed.

Terminate unused inputs with a suitable 50-Ohm load, e.g. 78210367.

Any previous datasheet issues have now become invalid.



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