

698 – 806 MHz

824 – 960 MHz

- Designed for co-siting purposes
- Enables feeder sharing
- Integrated auto-sense technology for automatic DC / AISG detection and bypass functionality.

Combine Mode (near BTS):

In combine mode, the auto-sense combiner has the ability to operate in three different functions. These functions define the prioritisation of the DC input signals (more details on next page):

1. First In - First Out Function (Factory default setting)
2. Priority Controlled Function
3. Exclusive User Function

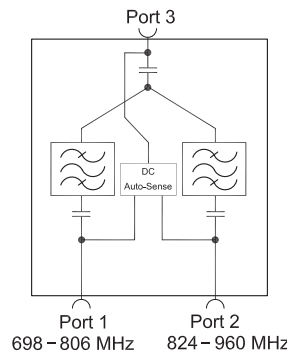
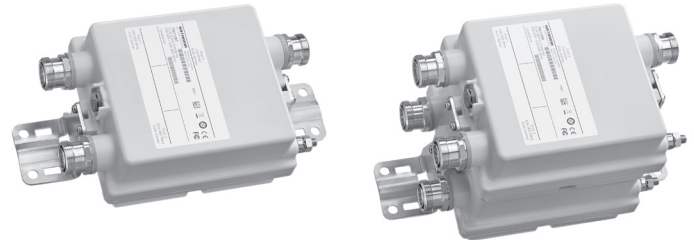
Split Mode (near antenna):

In split mode, the auto-sense combiner automatically detects connected Antenna Line Devices and bypasses or stops the DC / AISG signal accordingly.

A detailed manual about Auto-Sense technology can be downloaded on our homepage.

- 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
- Low insertion loss
- High input power

AUTO-SENSE



Technical Data

Type No.	78211287 Single Unit	78211288 Double Unit
Pass band		
Band 1 [MHz]	698 – 806	
Band 2 [MHz]	824 – 960	
Insertion loss		
Port 1 ↔ Port 3 [dB]	< 0.3 (698 – 796 MHz); < 0.5 (796 – 806 MHz)	
Port 2 ↔ Port 3 [dB]	< 0.5 (824 – 834 MHz); < 0.3 (834 – 960 MHz)	
Isolation		
Port 1 ↔ Port 2 [dB]	> 50	
VSWR	< 1.2 (698 – 806 MHz / 824 – 960 MHz)	
Impedance [Ω]	50	
Input power		
Band 1 / Band 2 [W]	< 500 / < 500	
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 3 [mA]	Auto-sense (max. 2000)	
Port 2 ↔ Port 3 [mA]	Auto-sense (max. 2000)	
Lightning protection [kA]	3, 10/350 μs pulse	
Mounting [mm in]	Wall mounting: With 4 screws (max. 8 0.315 diameter) Mast mounting: With included clamp set	
Weight [kg lb]	Single Unit: 2.5 5.51 / Double Unit: 5.0 11.02	
Packing size [mm in]	Single unit: 365 x 235 x 145 14.37 x 9.25 x 5.71 / Double unit: 365 x 235 x 210 14.37 x 9.25 x 8.27	
Dimensions (w x h x d) [mm in]	Single Unit: 153 x 170.5 x 80.5 6.02 x 6.71 x 3.17 / Double Unit: 153 x 170.5 x 165.5 6.02 x 6.71 x 6.52 (without connectors, without mounting brackets)	

clamps included

936.5358/a Subject to alteration.

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Accessories (included)

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



Accessories (order separately)

Type No.	Description
78410367	50-Ohm load



Auto-Sense Combiner Functions for the Interconnection of Different Base Stations (Installation Close to the Base Station – Combine Mode)

First In - First Out Function (Factory Default Setting)

If the First In – First Out function is set, then the first base Station (BTS) which supplies the auto-sense combiner with DC voltage at any input port is bypassed to the common port. The DC from further base stations will be ignored.

Priority Controlled Function

If the priority controlled function shall be used, a corresponding priority table is set ex-factory which needs to be defined by the customer when ordering. One example of a prioritisation table is shown below. In case DC / AISG signals are applied to two or more input ports simultaneously, the BTS with the higher priority will be bypassed to the common port. Any DC signal from a lower prioritised input port will not be bypassed. If the port with the highest priority is not supplied with a DC signal, the DC signal from the BTS with the next lower priority will be connected through to the common port.

Connector	Priority
Port 1	B (lowest)
Port 2	A (highest)

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.

Please note: If the combiner is mounted near the antenna (split mode), the behaviour is independent of any of the prioritisation functions described above. In this mode, the auto-sense combiner automatically detects Antenna Line Devices at the output ports and bypasses or blocks the DC/ AISG signal at each port accordingly.

Diagram 1

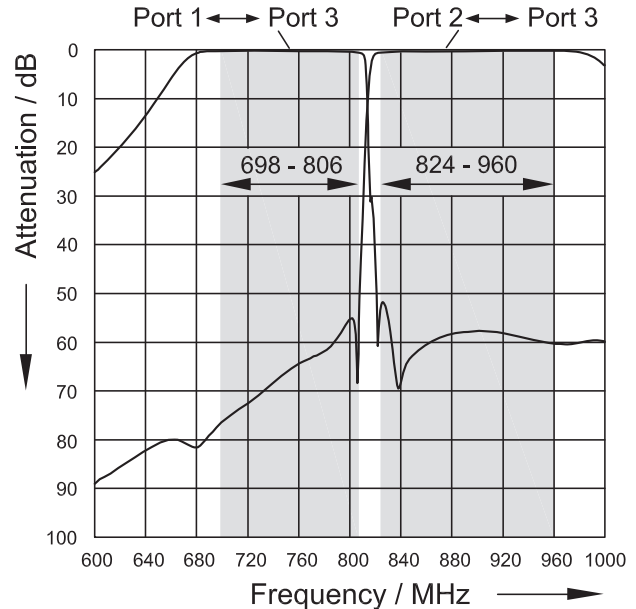
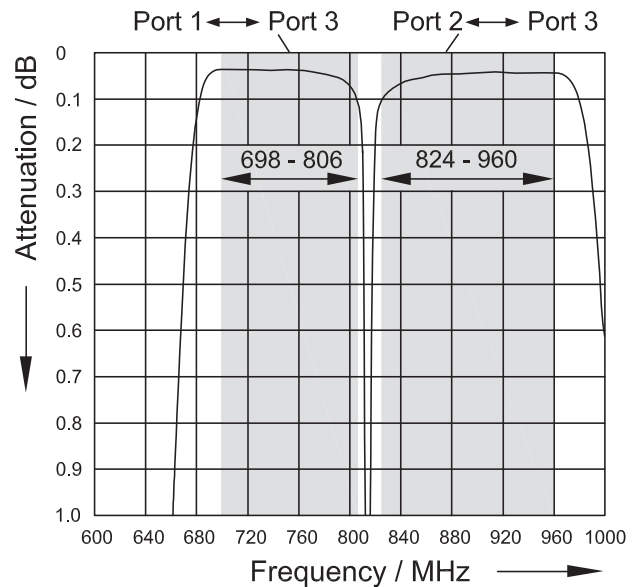


Diagram 2

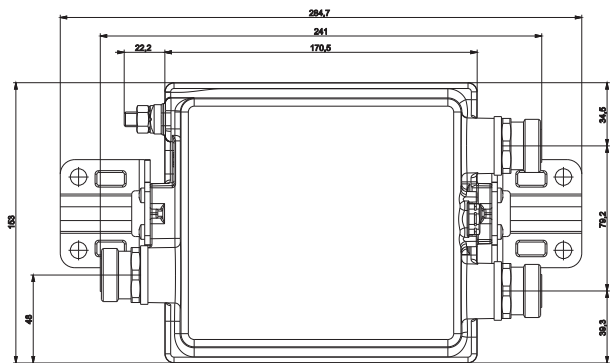
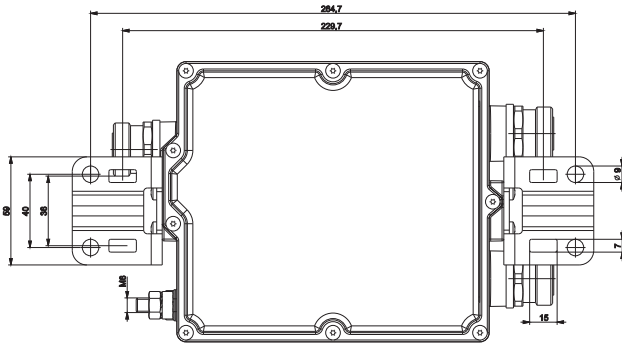
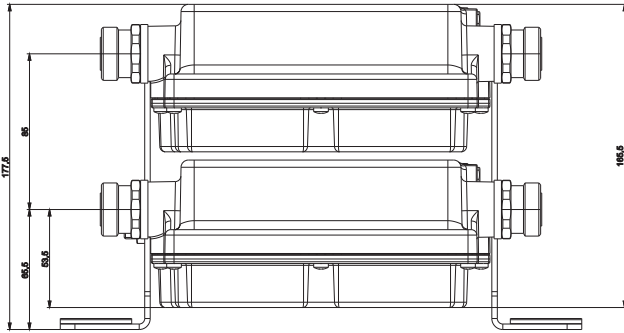
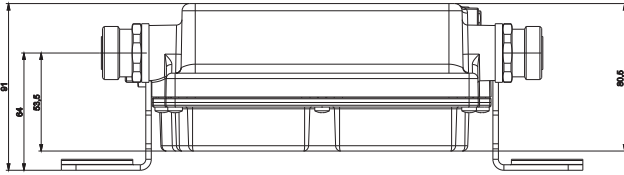


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Dimension



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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 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. 78410367.

Any previous datasheet issues have now become invalid.

