

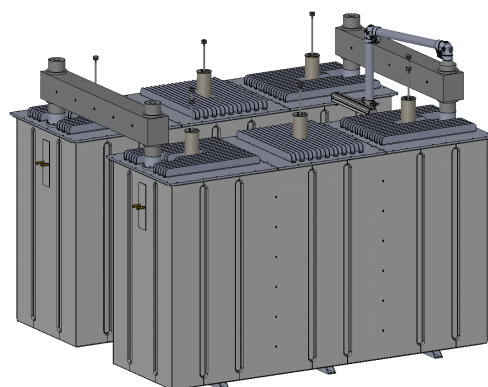


RFS offers a comprehensive range of FM combiners to suit all common FM combining applications. The balanced, or constant impedance, bandpass design provides the best possible frequency response and specifications, and is ideal for large multi-station channel combiners or when frequency spacings are very close.

A balanced module consists of a balanced pair of bandpass filters, two 3dB couplers and a balancing load. The narrowband input corresponds to the filter resonant frequency, whereas the wideband input can be any other frequency in the 87.5 - 108 MHz band. The wideband input signal loss is very low because it does not pass through the bandpass filters. Modules can therefore be cascaded to form a multichannel combiner. The modular design enables extra channels to be easily added at a future date.

**FEATURES / BENEFITS**

- Compact size with small footprint for design power rating
- Can be field retuned to any frequency in the 87.5 - 108MHz band
- Invar temperature compensation for stable operation
- Vertical entry and exit without additional elbows
- Natural convection cooling
- Group delay corrector modules are available for complex multichannel systems
- Custom options with U-Links, motorised coaxial switches, monitoring systems, etc. are available



Balanced FM Combiner with 3 Pole 600mm Filters

**Technical features**

**STRUCTURE**

<b>Product Line</b>		Combiner Radio
<b>Product Type</b>		Band II (VHF) FM Balanced Combiner
<b>Filter Type and Size</b>		3 Pole, 600mm

**ELECTRICAL SPECIFICATIONS**

<b>Frequency Range</b>	MHz	87.5 - 108	
<b>Impedance</b>	$\Omega$	50	
<b>Minimum Channel Spacing</b>	MHz	0.8	0.4
<b>Narrowband Input Power</b>	kW	30 (Temp Rise: 30°C)	20 (Temp Rise: 30°C)
<b>Narrowband Insertion Loss</b>	dB	<0.25	<0.4
<b>Amplitude Variation</b>	dB	< 0.1 to $\pm 200$ kHz	< 0.1 to $\pm 100$ kHz
<b>Group Delay</b>	ns	< 28 to $\pm 100$ kHz	< 390 to $\pm 100$ kHz
<b>Wideband Input Insertion Loss</b>	dB	<0.1	
<b>Return Loss</b>	dB	>30	
<b>Isolation - N/B to W/B</b>	dB	>32	
<b>Isolation - W/B to N/B</b>	dB	>50	
<b>Model</b>		CA3P600B31	CA3P600B49
<b>Input Connector</b>		3-1/8" EIA (unflanged female) (Note 1)	3-1/8" EIA (unflanged female) (Note 1)
<b>Wideband Input Connector</b>		3-1/8" EIA (unflanged female) (Note 1)	6-1/8" EIA (unflanged female) (Note 1)
<b>Output Connector</b>		3-1/8" EIA (unflanged female) (Note 1)	6-1/8" EIA (unflanged female) (Note 1)
<b>Maximum Output Power</b>	kW	50	160

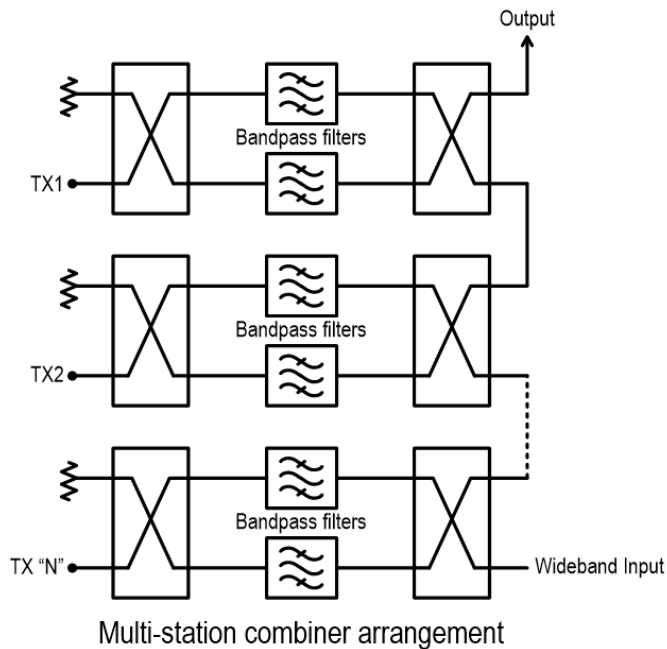
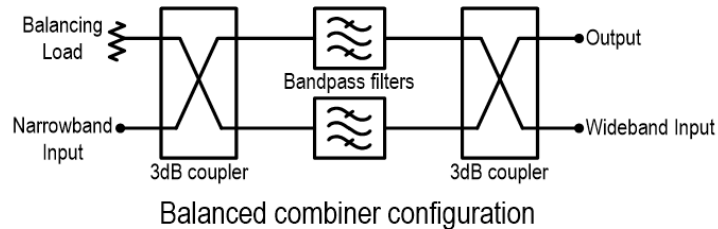


**MECHANICAL SPECIFICATIONS**

<b>Model</b>		CA3P600B31	CA3P600B49
<b>Weight</b>	kg (lb)	310 (683)	350 (772)
<b>Dimensions (Height or Length)</b>	cm (in)	140 (55)	160 (63)
<b>Dimensions (Width)</b>	cm (in)	179 (70)	179 (70)
<b>Dimensions (Depth)</b>	cm (in)	150 (59)	150 (59)
<b>Cooling</b>		Natural convection	

**TEMPERATURE SPECIFICATIONS**

<b>Maximum Operating Temperature</b>	°C (°F)	80 (176)	
<b>Ambient Temperature Range</b>	°C (°F)	-5 to 55 (23 to 131)	
<b>Maximum Temperature Rise</b>	°C (°F)	30 (86)	
<b>Humidity</b>	%	95, non-condensing	



[External Document Links](#)

**Notes**

- Note 1. Other connectors are available on request