



Model Number: **22232-N5N5**

RF Engineering
and Custom Build

Hybrid 8-way L-band Active Splitter & Combiner

With Dual Redundant Amplifiers, LNB Powering & Internal 10MHz Source



Front View of Model 22232-N5N5

This high resilience hybrid unit comprises a 8-way L-band active splitter and a 8-way L-band active combiner in a 2U, 19" rack chassis.

The unit benefits from dual redundant amplifiers and dual redundant power supplies. LNB referencing is provided on the common port via an internal 10MHz source.

Amplifier current sensing triggers the automatic switchover to the (cold standby) redundant amplifier. Monitoring of the power supplies and amplifiers can be done via the front panel status LEDs or via a dry contact alarm port on the rear panel.

A 10MHz reference signal which is available on the 10MHz OP port via a 50 ohm BNC female connector. If desired this may be injected onto the OUTPUT of the combiner by linking the 10MHz OP to the 10MHz IP connector (also a 50 ohm BNC female connector) using the supplied U-link. When not used the internal 10MHz source can be switched off from the rear panel.



Rear View of Model 22232-N5N5

This particular unit is supplied with 50 ohm N-type connectors, but other impedances and connector types are available (model numbers will vary).





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Technical specifications and operating parameters

RF Parameters		
SPLITTER		
Capacity	8-way	
Frequency Range	850 -2150 MHz (L-band)	
Gain	0 dB \pm 1 dB nominal, mean	
Flatness	850-2150MHz	\pm 1.0 dB
	Any 36MHz	\pm 0.5 dB
1dB Compression	0 dBm	
Noise Figure	10 dB	
Amp Redundancy	1-to-1 cold redundancy & current sensing	
Input Return Loss	18 dB typical	
Output Return Loss	15 dB typical	
COMBINER		
Capacity	8-way	
Frequency Range	850-2150 MHz (L-band)	
Gain	0 dB \pm 1 dB nominal, mean	
Flatness	850-2150MHz	\pm 1.0 dB
	Any 36MHz	\pm 0.5 dB
1dB Compression	+5 dBm	
Noise Figure	10 dB	
Amp Redundancy	1-to-1 cold redundancy & current sensing	
Input Return Loss	18 dB typical	
Output Return Loss	15 dB typical	
10MHz SOURCE		
Internal Reference	10MHz Sine Wave	Ovenised Crystal Oscillator
10MHz Output Level	0 dBm	
Frequency Stability over temperature	$\pm 1 \times 10^{-8}$	0 to +55°C
Reference Source Ageing	$\pm 5 \times 10^{-8}$ / year	
	$\pm 5 \times 10^{-10}$ / day	
Reference Source Phase Noise	<-85 dBc / Hz @ 1Hz	
	<-115 dBc / Hz @ 10Hz	
	<-140 dBc / Hz @ 100Hz	
	<-150 dBc / Hz @ 1000Hz	
	<-155dBc / Hz @ 10000Hz	
Warm up time	<2 minutes	At 25°C to within $<\pm 1 \times 10^{-7}$

Power	
AC Power	85-264Vac 50/60Hz
LNB Power	18V DC, 500mA switch on/off on rear panel (splitter only)
PSU	Dual redundant
Hot-swap PSU	No

System Control	
Display	Front panel LED's for PSU & Amplifier status
Alarms	Dry contact alarm port on rear panel for PSU failure

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	85% non-condensing

Physical	
Input Connector	N-type
Input Impedance	50 Ω
Output Connector	N-type
Output Impedance	50 Ω
Dimensions	2U high x 350mm deep x 19" wide
Weight	8 kg
Colour	White 00-E-55 semi-gloss

Key Features	
Hybrid unit containing 1 x 8-way Splitter & 1 x 8-way Combiner	
Switchable LNB powering	
10MHz Source	
Dual Redundant Amplifiers	
Dual Redundant Power Supplies	
Alarm contacts for external monitoring	

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