



Model HPMC-HF116A-HI

1.8-30 MHz, 16 Way, 1U, High Isolation Multicoupler



The HPMC-HF116A-HI, is a HF 16 way multi-coupler. It is a high isolation solution for coupling up to 16 HF receivers to a single antenna. Using a unique feedback circuit, exceptional linearity performance is achieved. Internally the topology of the amplifier chain allows for exceptional isolation. The unit is provided in a 19" 1U high rack mounted case. Health monitoring is provided. Local LED indicates 'STATUS', an opto-coupler output allows remote indication of 'STATUS'. Lighting protection is incorporated.

2 Front Panel fans ensure low temperature reliable operation.

Optional: Filter may be fitted to reject LF/MF and VHF 88-108 Broadcast services.

SPECIFICATIONS	
Parameter	Limits
Frequency	1.8-30 MHz
Gain	0 – 2dB nominal
Gain Variation	+/- 1dB max
Noise Figure	10dB max. (typ 9.3dB)
Number of inputs	1
Number of outputs	16
Input Output Impedance	50 Ohms
Output Intercept (OPIP)	3rd Order >+30dBm min . (typ +35dBm) 2nd Order >+70dBm min. (typ +78dBm) P1dB >16dB.
VSWR input 50 Ohm	1.5:1 max. (Return Loss >14dB)
VSWR output 50 Ohm	1.3:1 max. (Return Loss >17.7dB)
Isolation - Output to output - Output to input	>30dB min (typically 35-40dB) >25dB min
Max. input signal CW	20dBm cont.
Power	Mains 110/220V ac. Selectable. Power 35W

(HPMC-HF116A-HI)

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SPECIFICATIONS

Parameter	Limits
<u>Electrical</u>	
AC Mains Power Connector	3 Pin IEC male connector.
AC Mains Switch	Illuminating Mains Switch is front panel located
AC Mains Fuse	1A, Rear panel mounted
DC Fuse	4A, Front panel mounted
110/220V AC +/-10%, 47-63Hz	Manual Rear Panel selector
<u>Mechanical</u>	
Connectors I/P O/P	1 x N – Type Female 16 x RF BNC sockets Power/Alarm DC connector is Molex , Mini fit Jr.
Dimensions	19", 1U rack mount x 400 deep including connectors
<u>Environmental</u>	
Temp range	operating: -10C to +50C storage: -20C to +70C
Humidity	Operating 10% to 90% (Non condensing) Storage 5% to 95% (Non condensing)
EMI	FCC Part 15
<u>Cooling</u>	Fan assisted cooling, with rear upper and lower exhaust vents.

Alarms/Protection CCT

Alarms – The multicoupler has a ‘on board’ health monitoring circuit which monitors the operation of the active amplifier. Should a fault occur the ‘Status’ LED on the front panel will change from ‘Green’ to ‘Red’. In addition there are 16 independent LEDS on the rear panel which are green when ok, and off when fail.

There are two failure modes:

Critical – Is when a single point failure affects all outputs. In this case the front panel alarm LED will be Red and all rear Green LED’s will be extinguished.

Non-Critical – when a single output only is affected the front panel alarm LED will be RED and only the output(s) affected have an extinguished LED on the rear panel. In a non-critical alarm condition the ‘good’ outputs (Green) can still be used.

NOTE: Do not block the exhaust vents leave adequate specs of at least 20mm above and below the vents.

Options:

1 - The unit can be preceded by a HF band pass filter unit such as the FL003. This can help with strong out of band Broadcast signals.

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