



HPMC-HF116A-HI
1.5-30MHz 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 optional 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.



Specification:

<u>Parameter</u>	<u>Limits</u>
Freq:	1.5-30MHz
Gain:	0 – 2dB nominal
Gain Variation:	+/- 1dB max
Noise Figure:	10dB max. (typ 8.0dB)
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 50Ohm:	1.6:1 max. (Return Loss >13dB)
VSWR output 50Ohm:	1.3:1 max. (Return Loss >17.7dB)
Isolation - Output to output:	>50dB min
Output to input:	>60dB min
Max. input signal CW	20dBm cont.
Power:	Mains 110/220V ac. Selectable. Power 35W

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.

Electrical:

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

Mechanical

Connectors:	I/P	1 x N – Type Female
	O/P	16 x RF BNC sockets
		Power/Alarm DC connector is Molex , Mini fit Jr.
Dimensions:		19", 1U rack mount x 400 deep including connectors

Environmental

Temp range:	operating: -0C to +50C
	storage: -20C to +70C
Humidity	Operating 10% to 90% (Non condensing)
	Storage 5% to 95% (Non condensing)
EMI	FCC Part 15

Cooling

Fan assisted cooling, with rear upper and lower exhaust vents.
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.
- 2 – Remote Alarm on rear Panel – Molex connector with opto isolator output.

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