

2-30MHz 8Way 1U High Performance Multicoupler "MC-100A"



The MC-100A, is a HF 8 way multi-coupler. It is a high isolation solution for coupling up to 8HF receivers to a single antenna. Using a unique feedback circuit, exceptional linearity performance is achieved. 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. Optional Filter may be fitted to reject LF/MF and VHF 88-108 Broadcast services.

Specification:

Parameter	Limits
Freq	1.5-30Mhz
Gain:	1.5dB nominal
Gain Variation:	+/- 0.5dB max
Noise Figure:	5dB max. (typ 4.3 B)
Number of inputs:	1
Number of outputs:	8
Output Intercept (OPIP):-	
Measured at 2 tones +5dBm, 7Mhz and 11Mhz	3rd Order at 15Mhz, >33dBm min . (typ +35dBm) 2nd order at 18Mhz, >+70dBm min. (typ +75dBm)
P1dB	i/p >16dB.
VSWR input 50ohm:	1.5:1 max. (Return Loss >14dB)
VSWR output 50Ohm	1.3:1 max. (Return Loss >17.7dB)
Isolation Output to output: Output to input:	>30 min >22dB min
Max. input signal CW	20dBm cont.
Lightning Protection	2kV 1.6ns rise time, 50ns duration
Power:	OPT1. Mains 115/230V, set internally, max Power 10W OPT2. DC 24V.

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’.

and an opto-coupler (transistor) is activated to provide remote alarm operation. The remote alarm pins are available on the rear panel (mini fit jnr) connector.

The unique design of the amplifier ensures that levels on the RF output are always <+20dBm ensuring that the following RX’s are not damaged by high level RF.

<u>Mechanical</u>	
Connectors i/p and o/p	RF BNC Female sockets Power/Alarm DC connector is Molex 4W, Mini fit
Dimensions:	19", 1U rack mount,
Colour – Front panel is Black and the rest of the case is Natural Aluminium.	
<u>Environmental</u>	
Temp range: operating:	-10C to +55C storage: -20C to +70C
Humidity	5% to 95% (Non condensing)
MTBF	>75,000hrs (25Deg C, Ground Benign, MIL-HDBK-217F)
Cooling	Case is vented top and bottom

Options: - The complete part number is made as follows:-

MC-100A/(PSU)/(DC)/(Fx)/1U

MC-100A – The core specified Multicoupler

PSU - Mains PSU – uses a low noise switch mode type, 115-230VAC

DC – Allows external powering via a DC source. Eg DC24 = 24 DC external power.

Fx – Specifies a filter type, eg. F1 is Stancom FL001 type

1U – The whole package is in a 1U chassis.

Note when AC and DC are both specified AC is the master supply and the DC is the secondary supply. An internal relay switches between the two.

