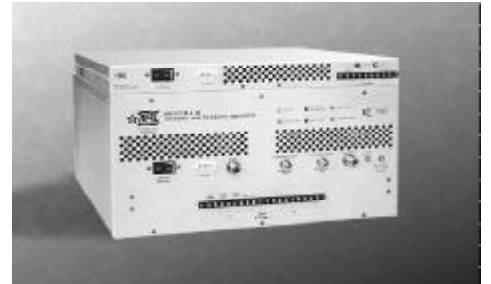


# 40 Watt Multicarrier Power Amplifier

M40



## Expands Your Microcell Footprint

- Broadband Transmit Amplifier
- 40 Watt Composite Transmit Output
- Transmit Gain Adjust
- Also Available with Diversity Low Noise Uplink Amplifiers
- Weatherized Enclosure Available
- Unsurpassed AML Technical Support

# Microcell 40 Multicarrier Amplifier

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## Functional Description

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The M40 amplifies the low power, combined outputs of cellular base station Microcell transceivers and presents the composite multichannel output to the antenna feed. The compact package makes this product ideal for installations that require a physically small base station having channel output powers higher than those available from standard Microcell equipment.

The M40 is available for AC or DC operation and it includes all the features necessary for a quick and effective installation. The optional outdoor enclosure is suited for weather exposed installations.

A Link Balancer™ low noise receive amplifier is available for systems that require additional receive sensitivity to ensure balance between forward and reverse links. The M40 is a member of the AML Communications family of multicarrier amplifiers providing composite output powers of 4 to 140 Watts.

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## General Specifications

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**Frequency**  
869-894 MHz

**Output Power**  
40 Watts Multicarrier composite

**Output Intermodulation**  
FCC emissions to FCC title 47, Part 22.917(b) and Part 15.107(b).

**Gain**  
22 dB nominal

**Gain Adjust (manual)**  
+/- 2 dB nominal

**Gain Flatness**  
+/-0.5 dB max

**Gain Change**  
+/-0.5 dB max (0° to 50° C)

**VSWR Input and Output**  
1.5:1 maximum

**VSWR Monitor**  
Forward and Reverse power  
(-30 dB)

**Dynamic Range**  
IMD is independent of channel loading.  
Minimum output 0.5 Watt composite.

**Integrated Transmit Filter**  
Noise Power -82 dBm @30kHz RBW  
824-849 MHz

**Maximum Safe Input Power**  
+ 30 dBm

**Stability**  
Unconditional

**AC Power**  
110V, 60Hz, 650 Watts  
at Full RF output.

**Heat Contribution**  
2,300 BTU/hr at maximum load

**Thermal Shutdown**  
Thermal self protection shutdown occurs at extreme operating temperatures.

**Operating Temperature**  
0° to + 50° C

**Mechanical**  
Amplifier: 19" rack mount  
8.75" h, 17" d  
Power Supply: 19" rack mount  
1.75" d, 15.5" h

**Weight**  
65 lbs.

## Connectors

AC Power Supply:  
IEC 320 type connector on rear panel  
8' power cord supplied  
Power supply to amplifier interconnect:  
Cable supplied  
Alarms: screw barrier block plus Molex  
P/N 39-29-4049 summary alarm connector  
RF In & Out Type "N" (f)  
Forward and Reverse Power Monitor -  
TNC (f).  
All RF and alarm connectors are front  
panel accessible

## Alarms

Provided as dry contact pairs  
(Open on fault)  
Low Level Main amplifier:  
RF Input has fallen below the  
user set threshold  
Over temperature:  
Amplifier heatsink exceeds + 75°C.  
Thermal Shutdown:  
Amplifier heatsink exceeds + 85°C.  
Input voltage within limits:  
Activates on under/over voltage conditions.  
Overdrive indication.  
Summary fault indicates any alarm.  
Alarms clear on removal of the alarm  
condition.

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## Options

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- Amplifier frequencies: GSM, TACS, and other cellular bands
- 28 dB gain
- 220V to 240V 50/60 Hz operation
- + 26 VDC, 19A operation
- + 19 to + 36 VDC operation
- 7/16" DIN RF power connectors
- LNA accessory chassis
- Built in 3-way input combiner
- Power monitor unit has VSWR alarm
- Air conditioned environmental enclosure

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All of the above specifications are subject to change without notice.  
Patented Feedforward implementation.  
FCC ID LX7PA09002200

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