

AMP-LR SERIES

Universal Rack Amplifier Platform

Features

- compact 19", 2 U rack device
- rugged design
- dual channel
- flexible in AMP combinations
- AC mains supply

Applications

- R&D
- EMC compliance testing
- FM and DAB broadcast TX
- medium power wideband amplifiers
- BOS / TETRA



At a Glance

The AMP LR SERIES is a 19" 2U universal amplifier rack device platform. The customer has the option of either configuring up to four amplifiers of the same frequency range in order to increase the output power, or freely combining up to four amplifiers of different frequency bands as a multi-channel setup.

All AMP-LR SERIES units are powered from a central AC power source and feature rear panel N-coaxial connectors, as well as most of them a DB9 connector for a floating contact interface.

Health Monitoring

AMP-LR has a condition monitoring interface that monitors internal temperature and supply currents. The interface is equipped with potential-free relay contacts that allow remote monitoring.

Flexible Rack Amplifier Solutions

With the portfolio of available amplifier modules, solutions on customer demands can be realized without the demand of work and cost in construction or development.

Available AMP Modules

Becker Nachrichtentechnik has a wide portfolio of AMP modules for the integration into the AMP-LR rack housing. Please visit the ordering guide below for further information.

Medium Power Wideband Amplifiers

Also, wideband amplifier solutions in the medium power medium class are available in the AMP-LR chassis.

Rugged Design

The aluminium housing of the AMP-LR series protects the device against mechanical impacts and gives a good shielding. The internal amplifier modules have milled aluminium housings. These shielding properties makes the AMP-LR amplifier series suitable for professional applications with high demands in RF dynamic properties also in EMC requirements.

Common Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
number of sections	n_{AMP}		2			
RF connector type	X_{RF}	N female				
impedance	Z_{IN}/Z_{OUT}		50		Ω	
power supply	U_{AC}	90		260	V	AC, 50 ... 400 Hz
power consumption	P_{AC}		200		W	depending on AMP configuration
power socket	X_{AC}	IEC-60320 C14				country specific power cable
status signaling		floating relay contact				
relay current	I_{STAT}			1	A	
relay voltage	U_{STAT}			42	V	
status socket	X_{STAT}					rear side
dimensions	W x H x D	approx. 483 x 89 x 265			mm	without connectors, 19", 2 U
weight	m		3		kg	depending on AMP configuration
operating temp. range	T_o	+5		+40	$^{\circ}C$	
storage temp. range	T_s	-40		+70	$^{\circ}C$	



Ordering Guide

Product	Description	P/N
AMP-LR SERIES	Universal Rack Amplifier Platform	2200.5502

Available Amplifier Types

Name	Description
AMP7610849L	80 W FM Linear Power Amplifier Module 76 ... 108 MHz
AMP17024048L	60 W DAB Linear Power Amplifier Module 170 ... 240 MHz
AMP38047048L	60 W Linear Power Amplifier Module 380 ... 470 MHz
AMP1053045L	30 W Linear Power Amplifier Module 10 ... 530 MHz
AMP3060036	4 W Ultra High Linearity Full Redundant Wideband Amplifier Module 30 ... 600 MHz
LNA1080014	600 mW Pre-Amplifier Module 10...800 MHz
AMP590033	2 W Booster Amplifier Module 5 ... 900 MHz
AMP590033H	2 W HiIP3 Amplifier Module 5 ... 900 MHz
AMP5170033	2 W HiIP3 Amplifier Module 5 ... 1700 MHz
AMP5220031	1 W High Dynamic Amplifier Module 5 ... 2200 MHz
AMP5270026	400 mW High Dynamic Amplifier Module 5 ... 2700 MHz
AMP20280035B	4.5 W Wideband Amplifier Module 20 ... 2800 MHz
AMP01600017B	50 mW Ultra-Wideband Amplifier Module 100 kHz ... 6500 MHz
AMP300600040L	10 W Power Amplifier Module 300 ... 6000 MHz
AMP17001300038L	6 W Power Amplifier Module 1700 ... 13000 MHz
AMP20002000042L	15 W Power Amplifier Module 2000 ... 20000 MHz
AMP101800030	1 W Ultra-Wideband Linear Amplifier Module 10 ... 18000 MHz



Dual Channel Combination Guide

	AMP7610849L 76...108 MHz - 80 W	AMP17024048L 170...240 MHz - 60 W	AMP38047048L 380...470 MHz - 60 W	AMP1053045L 10...530 MHz - 30 W	AMP3060036 30...600 MHz - 4 W	LNA1080014 10...800 MHz - 600 mW	AMP590033 5...900 MHz - 2 W	AMP590033H 5...900 MHz - 2 W	AMP5170033 5...1700 MHz - 2 W	AMP5220031 5...2200 MHz - 1 W	AMP5270026 5...2700 MHz - 400 mW	AMP20280035B 20...2800 MHz - 4.5 W	AMP01600017B 100 kHz ... 6500 MHz - 50 mW	AMP300600040L 300...6000 MHz - 10 W	AMP17001300038L 1700...13000 MHz - 6 W	AMP20002000042L 2000...20000 MHz - 15 W	AMP101800030 10...18000 MHz - 5 W
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AMP300600040L 300...6000 MHz - 10 W																	
AMP17001300038L 1700...13000 MHz - 6 W																	
AMP20002000042L 2000...20000 MHz - 15 W																	
AMP101800030 10...18000 MHz - 5 W																	



Quad Channel Combination Guide

	AMP3060036 30...600 MHz - 4 W	LNA1080014 10...800 MHz - 600 mW	AMP5900033 5...900 MHz - 2 W	AMP5900033H 5...900 MHz - 2 W	AMP5170033 5...1700 MHz - 2 W	AMP5220031 5...2200 MHz - 1 W	AMP5270026 5...2700 MHz - 400 mW	AMP20280035B 20...2800 MHz - 4.5 W	AMP01600017B 100 kHz ... 6500 MHz - 50 mW	AMP101800030 10...18000 MHz - 5 W
AMP3060036 30...600 MHz - 4 W										
LNA1080014 10...800 MHz - 600 mW										
AMP5900033 5...900 MHz - 2 W										
AMP5900033H 5...900 MHz - 2 W										
AMP5170033 5...1700 MHz - 2 W										
AMP5220031 5...2200 MHz - 1 W										
AMP5270026 5...2700 MHz - 400 mW										
AMP20280035B 20...2800 MHz - 4.5 W										
AMP01600017B 100 kHz ... 6500 MHz - 50 mW										
AMP101800030 10...18000 MHz - 1 W										



Combined Power Amplifier Variants

Name	Description
AMP3060039-R	8 W High Linearity Power Amplifier 30...600 MHz
AMP3060042-R	16 W High Linearity Power Amplifier 30...600 MHz
AMP590036-R	4 W Booster Amplifier 5...900 MHz
AMP590039-R	8 W Booster Amplifier 5...900 MHz
AMP590036H-R	4 W HiIP3 Laboratory Amplifier 5...900 MHz
AMP590039H-R	8 W HiIP3 Laboratory Amplifier 5...900 MHz
AMP5170026-R	400 mW HiIP3 Laboratory Amplifier 5...1700 MHz
AMP5170029-R	800 mW HiIP3 Laboratory Amplifier 5...1700 MHz
AMP20280038B-R	7 W Wideband Amplifier 20...2800 MHz
AMP20280041B-R	14 W Wideband Amplifier 20...2800 MHz
AMP300600043-R	20 W Power Amplifier 300...6000 MHz
AMP17001300041-R	12.5 W Power Amplifier 1700...13000 MHz
AMP20002000045-R	30 W Power Amplifier 2000...20000 MHz
AMP101800033-R	2 W Ultra-Wideband Power Amplifier 10...18000 MHz
AMP101800036-R	4 W Ultra-Wideband Power Amplifier 10...18000 MHz



Appearances

number of N-connectors on the back depend on product variant

Front View

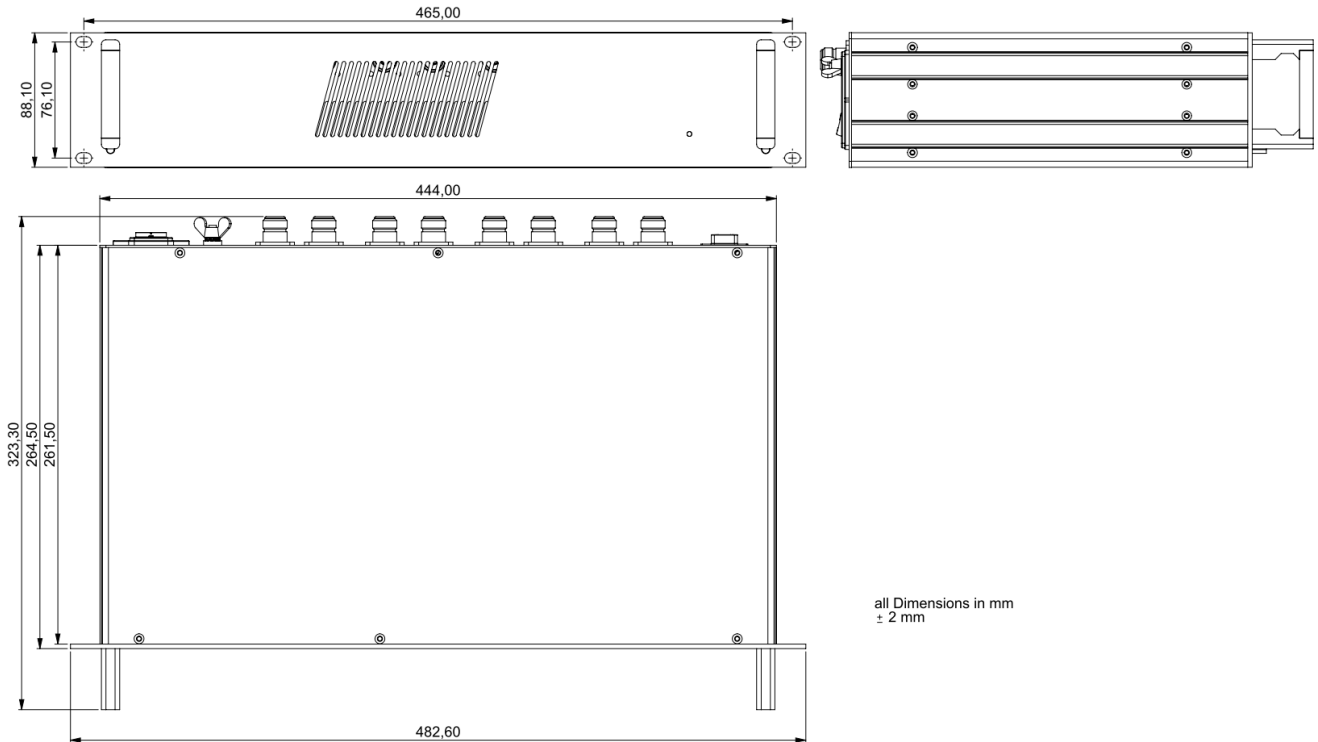


Rear View



Dimensions

number of N-connectors on the back depend on product variant



PIN Assignment STATUS

floating contacts

PIN	Designation	Remark
3	REL_COM	relay common
4	REL_OK	OK when closed
5	REL_FAIL	failure when closed
1,2, 6-9	n.c.	Not connected

