

## OBJECTIVE

The multi-channel Linear Amplifier LA24 is designed as a low noise, high bandwidth linear amplifier for finely driving magnetic actuators, such as Voice Coil, Moving Iron Controllable Actuators or Limited Angle Torque Actuators from CEDRAT TECHNOLOGIES.

## DESCRIPTION

The Linear Amplifier LA24 is designed as a low noise linear amplifier which displays a signal to noise ratio of 90 dB and requires a standard bipolar stabilized DC source (+/- 48V). The Switching Converter SC24 provides the stabilized bipolar DC source from the main and is inserted in the rack.

Both boards are implemented on a printed circuit board compatible with the standard CEDRAT TECHNOLOGIES rack system. Therefore, the standard configuration is a RK42F+SC24+LA24-1. The multichannel Linear Amplifier LA24 is compatible with controllers from CEDRAT TECHNOLOGIES:

- The UC45 real time controller, as a mezzanine board into the LA24 board
- The UC75 real time controller, as an additional board in the rack, with extended functions.

Several mechatronics functions can be built, ranging from positioning, scanning, stabilization applications.

## PERFORMANCES OF THE LA24 AMPLIFIER

PROPERTIES OF SC24	UNIT	NOMINAL VALUES
<b>&gt; Notes</b>		
Function	Bipolar AC/DC switching converter	
Cooling	Forced air	
Protection	Thermal / Overcurrent	
Main voltage	230/115 auto adaptative	
Main frequency	VAC	50/60
Negative output voltage	HzVDC	-48
Positive output voltage	VDC	48
Current limitation	A	5
Mass	g	1180
Dimensions	mm	12F wide, 3H high

Table 2: properties of SC24



Fig. 1: View of rack including a Switching converter SC24, a Linear Amplifier LA24-2, a UC75 real time controller and a Eddy Current Sensor ECS75-2

PROPERTIES OF SC24	UNIT	NOMINAL VALUES
<b>&gt; Notes</b>		
<b>x: number of channels</b>		
Function	Linear current amplifier	
Max. number of channels	3	
Cooling	Forced air	
Protection	Thermal / Overcurrent	
Negative supply voltage	V	-48
Positive supply voltage	V	48
Min. input voltage	V	-10
Max. input voltage	V	10
Min. output current	A	-1.5
Max. output current	A	1.5
Gain	A/V	0.15
Min. output voltage	V	-36
Max. output voltage	V	36
Min. output inductance	μV	600
Max. output inductance	H	0.8
Signal to noise ratio	dB	90
Loaded output bandwidth (Load of 4mH and 660ohms)	KHz	35
Input impedance	KOhms	10
Mass	g	720
Dimensions	mm	12F wide, 3H high

Table 1: Properties of LA24x