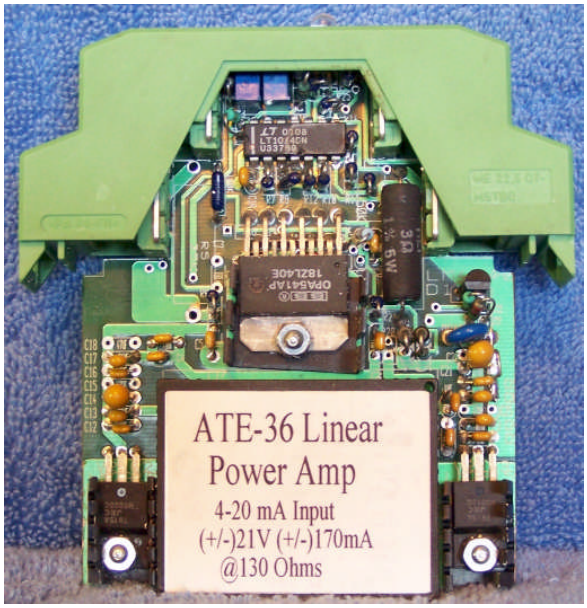


DESCRIPTION

The Model ATE-36 analog linear power amplifier is a custom DIN rail mount (23 mm wide) signal amplifier powered by 24VDC that inputs a 4-20mA input signal and outputs (+/-) 21volts suitable for retrofits to Voith® 130ohm coil hydromechanical servovalves.

Frequency response approximates a single-pole roll-off; Output is down 3db (50%) at 55 Hz with 45 deg phase lag at 35 Hz.

APPLICATION

The Model ATE-36 PT Interface module is intended for use as a booster amplifier for computer control system outputs to drive torque motors, Electro-hydraulic servo valves and voice coil transducers.

STATUS LED

The Model ATE-36 utilizes one status LED to indicate that power is applied.

CALIBRATION

Coarse gain scaling and Ohm value for the input 4-20 mA loop sensing resistor selection are custom factory adjustments. Field adjustments of gain and bias are provided for fine-tuning to final system requirements. Consult the manufacturer for specific instructions on calibration procedures. The input stage of the Model ATE-36 is a differential amplifier, allowing easy swapping of input/output polarity for compatibility with a wide range of systems.

SPECIFICATIONS

Power

Supply: 8.4 to 36 VDC
Consumption: 95mA @ 24VDC idling
current plus the output current to servovalve

Input

DC Voltage Input: 0 to (+/-) 6VDC or,
DC Current Input: 4 to 20mA Current loop

Output

Continuous Power Output

W/ 36 Ohm load: 0 to (+/-) 3.4VDC 85 mA continuous output at 72 Deg F ambient temperature.

W/ 130 Ohm load: 0 to (+/-) 21.5VDC @ 170 mA continuous output at 72 Deg F. ambient temperature. (Tested at worst-case heat build-up conditions at 90mA output into 130 Ohms.)

Short duration power output

Time duration is limited by heat buildup in power amplifier IC. For greater output power thermal capability, consult factory for larger heat sink installation.
W/ 36 Ohm: 0 to (+/-)21 VDC @ 650 mA.

Mounting

TS32 or TS35 DIN Rail

Pin Connections

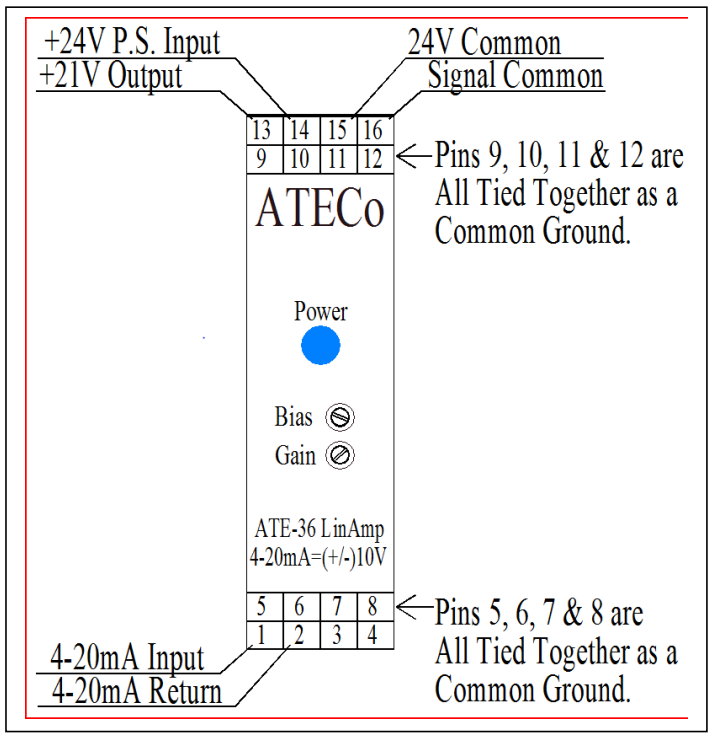
5,6,7,8 & 9,10,11 & 12 Ground Bus
5 & 6 (+/-) Input
7 & 8 N/C
9 Signal Output
10 DC Power (+)
11 & 12 Power & Signal Common

Operating Temperature Range

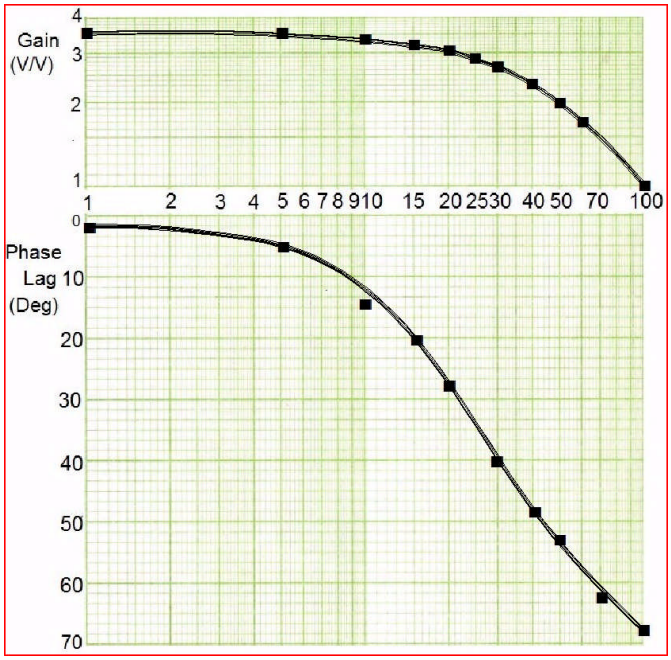
0 to 55 °C (32 to 131 °F) with 130 Ohm load.
0 to 22 °C (32 to 72 °F) with 36 Ohm load.

Storage Temperature Range

-25 to 70 °C (-13 to 158 °F)



Actuation Test Equipment Co. 3393 Eddie Road Winnebago IL 61088 USA
Tel: 815.335.1143 FAX: 815.335.2770



Frequency Response
The frequency response testing shows the output capability of the signal gain and power amplifier sections.

The 4-20 mA sense resistor was removed and the gain and bias were adjusted so the output was a balanced (+/-) 21 volts for a (+/-) 6 volts input for the frequency response tests.

Ordering Instruction
When ordering, please specify the value of the current sensing resistor for the input 4-20mA current loop and the desired output range and load resistance, the input circuit will be custom tailored to fit the application at no extra cost.

Power On Indicator LED

Signal Conditioner Amplifiers (4)

Signal Bias
Signal Gain

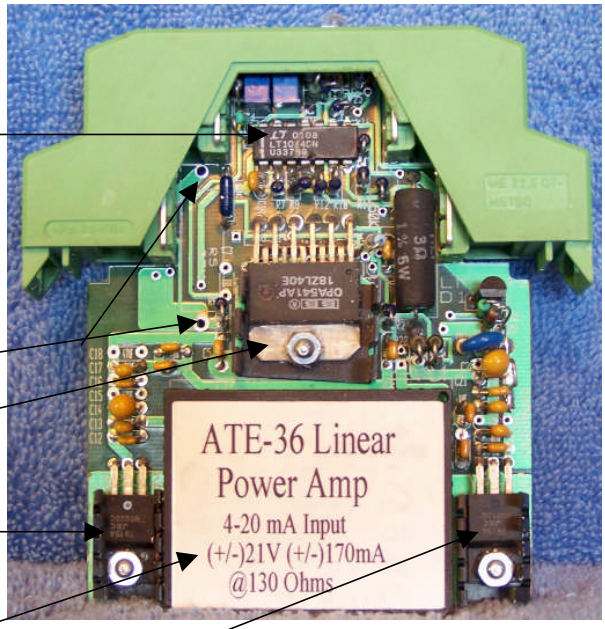
4-20mA Sense resistor pads

Power Amplifier

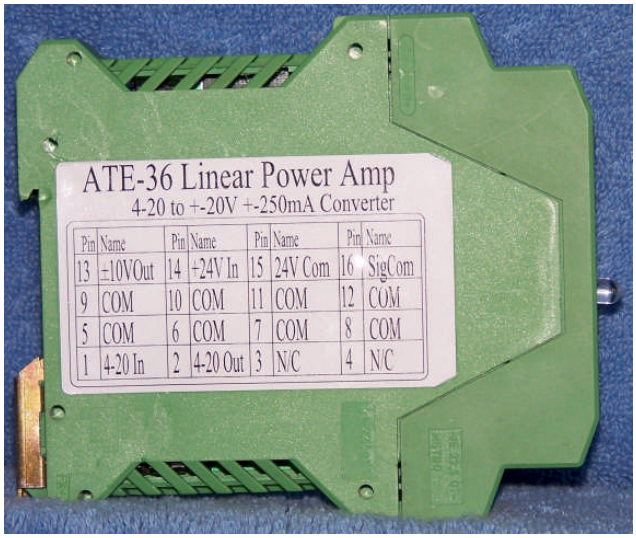
+15V Regulator

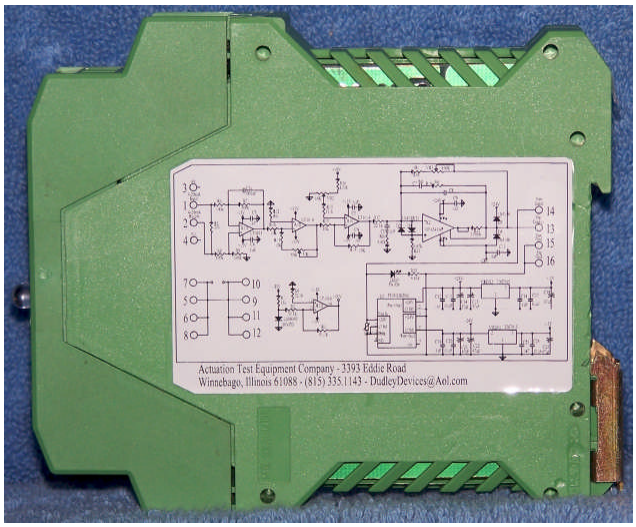
24V Input
(+/-)24V output
Switching power supply

-15V Regulator



Actuation Test Equipment Co. 3393 Eddie Road Winnebago IL 61088 USA
Tel: 815.335.1143 FAX: 815.335.2770





Actuation Test Equipment Co. 3393 Eddie Road Winnebago IL 61088 USA
Tel: 815.335.1143 FAX: 815.335.2770