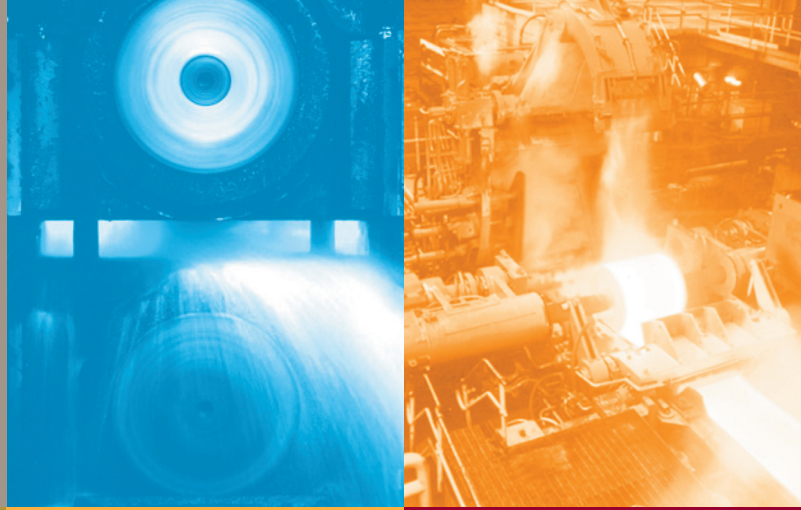


# G123-821-001

## MINI DDV AMPLIFIER



The G123-821 Mini DDV Amplifier is a  $\pm 1$  Amp output amplifier suitable for driving a Moog Mini DDV. Its bipolar output enables the DDV to produce flow to both ports A and B, an essential feature in a closed loop servo system.

### Application:

Its intended application is to accept a command from a servo amplifier output and produce a proportional  $\pm 1$ A output for the coil of a Mini DDV.

### Inputs:

Three permanently connected input signals are summed to produce the  $\pm 1$ A output. This feature simplifies initial set up, the user needing only to connect to the required terminals and set the 4-20mA switch on the circuit board to the appropriate position.

### Wire break:

When 4-20mA is selected, a wire break output is enabled and will indicate if the input connection has been lost. The output is normally on and turns off if a wire break is detected.

### Enable:

An enable input turns the output current amplifier on and off.

### Frequency response:

A user accessible plug-in capacitor sets the frequency response.

### Set up:

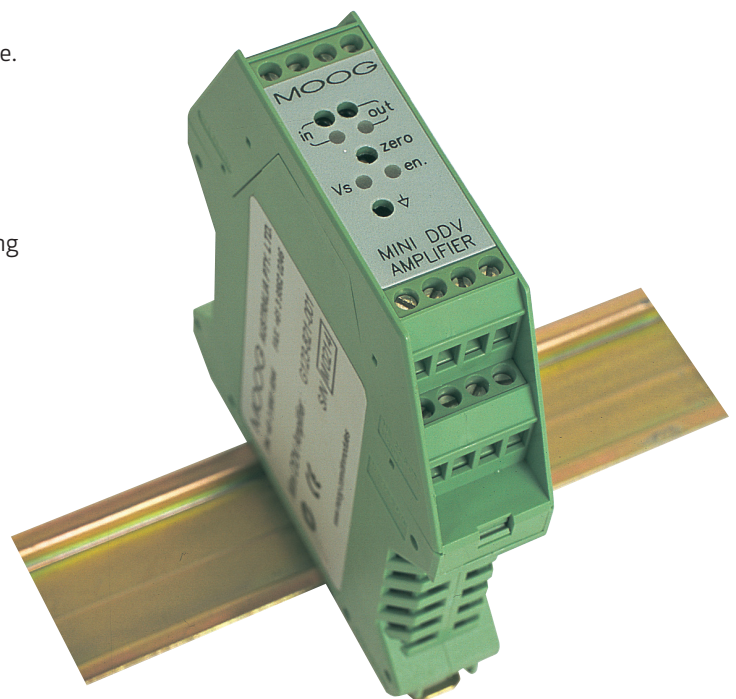
Front panel indicators and test points provide ease of set-up and trouble shooting.

### Housing:

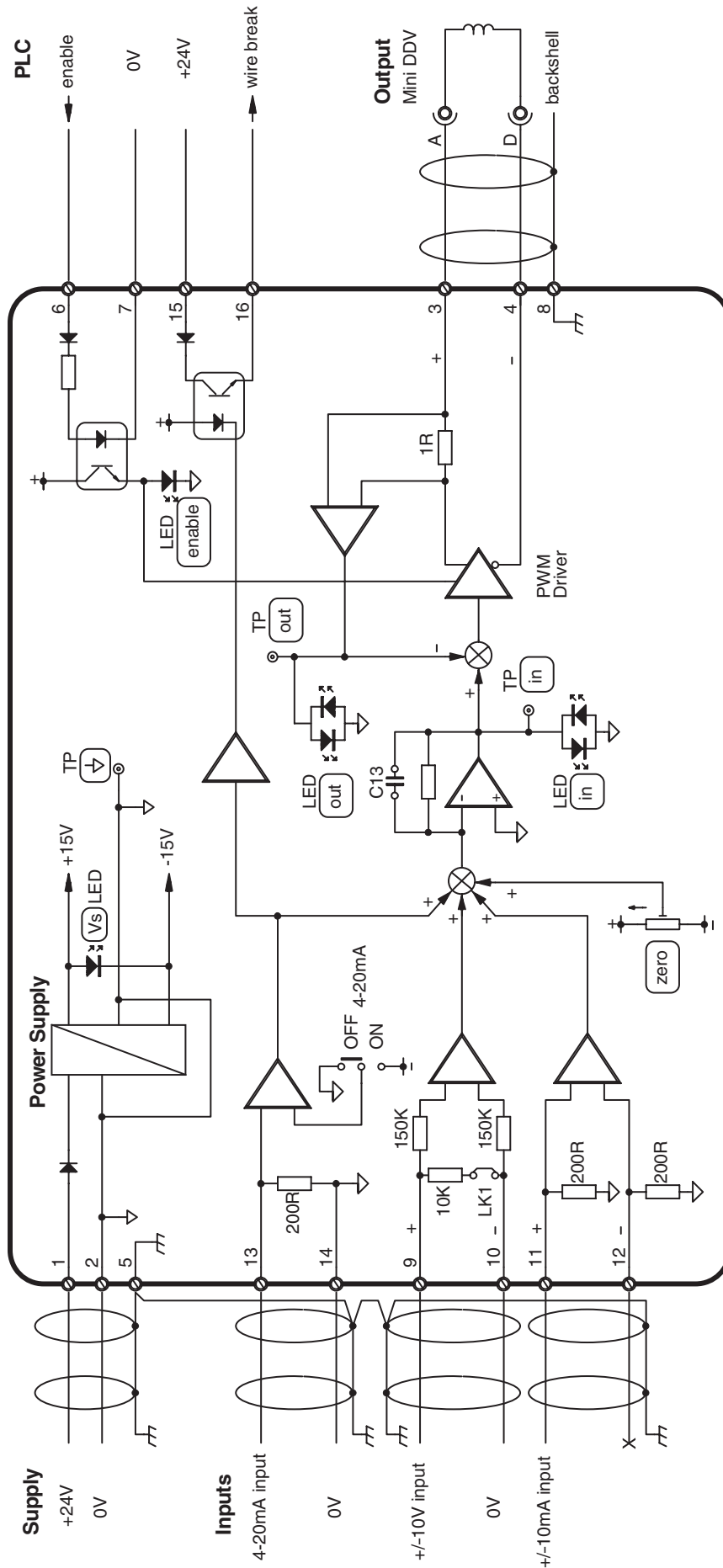
The Mini DDV Amplifier is housed in a compact DIN rail mounting enclosure and requires a 24V DC power supply.

### ADVANTAGES

- $\pm 1$ A output to suit Mini DDV
- PLC and servo amplifier compatible inputs
- 3 permanently connected inputs
- Enable input
- 4-20mA wire break output
- User setable frequency response
- Suited to closed loop applications
- Convenient front panel controls and indicators
- Compact DIN rail housing



## BLOCK WIRING DIAGRAM



\* note: LK1 is a cuttable link on the solder side of the PC B.

## SPECIFICATIONS

Amplifier frequency response figures quoted using an unpressurised Mini DDV D633-7205 as a load.

<b>Command</b>	All 3 inputs constantly summed to produce output Each 100% input produces the maximum 1.0A output
<b>Input 1</b>	0 to ±10V for 0 to ±100% output Differential Input resistance, 10kOhm between the two input terminals Cutttable link to remove the 10kOhm to give 150kOhm
<b>Input 2</b>	0 to ±10mA for 0 to ±100% output Differential Input resistance, 200 Ohm connected to 0V on each input Leave unused input un-terminated
<b>Input 3</b>	4-20mA for ±100% output 12mA = zero current output Single ended Input resistance, 200 Ohm connected to 0V Switch selectable on/off Switch must be turned off if 4-20mA is not connected
<b>Output</b>	0 to ±1.0A (-0%/+10%) Maximum into Mini DDV, ±1.2A PWM @ 24kHz ±10%
<b>Frequency response</b>	Flat to 100Hz @ ±1A Flat to 600Hz @ ±0.4A Flat to 2.0kHz @ ±0.1A Output distorts beyond these limits due to 24V limiting max current drive into the inductive load Plug-in capacitor to limit -3dB point, $C = \frac{1061}{f}$ , f in Hz, C in nano Farad Default C = 2.2nF for -3dB = 480Hz
<b>Maximum load</b>	20 Ohm @ 24V
<b>Minimum load</b>	4mH, 5 Ohm

<b>Zero adjustment</b>	0 to ±0.2A
<b>Enable input</b>	Opto-isolated On, 10 to 24V Off, less than 1.5V or open circuit Input current, 25mA @ 24V
<b>Wire break output</b>	Opto-isolated, normally on For 4-20mA input only Off at <2mA input current (wire break) On if "4-20mA" not selected Output rating, +40V @ 20mA max
<b>Supply</b>	24V DC nominal, 22 to 28V 100mA @ 24V, no load 500mA @ 24V, ±1A Mini DDV load
<b>Front panel Indicators</b>	Vs, internal supply – green in, input command, positive – red negative – green out, output current, positive – red negative – green en, enable – yellow
<b>Front panel test points</b>	in, input command, 0 to ±10V, -3db = 480Hz out, output current, 0 to ±10V, -3db = 480Hz ↓, signal 0V reference
<b>Front panel trim pots</b>	zero
<b>Mounting</b>	DIN rail IP 20
<b>Temperature</b>	0 to +40°C
<b>Dimensions</b>	100W x 108H x 22.5D
<b>Weight</b>	130g

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DIN Mini DDV Amplifier  
Moog Aust/PDF/0418

## **ORDERING INFORMATION**

Mini DDV Amplifier G123-821-001

Delivery includes Mini DDV Amp, M205 DIN fuse holder  
and a 6 page application note.

This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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