FEATURES

- **TWO WIRE LOOP POWER INPUT, TWO WIRE LOOP POWER EACH OUTPUT**
- **INPUT IS OVERCURRENT AND REVERSE POLARITY PROTECTED**
- **BOTH OUTPUTS ARE REVERSE POLARITY PROTECTED TO 90 VDC**
- **EACH OUTPUT CURRENT IS LIMITED TO 20.5 mA**
- **EACH OUTPUT IS ISOLATED FROM THE INPUT AND BOTH OUTPUTS ARE ISOLATED EACH OTHER**
- **IF THE INPUT IS DISCONNECTED BOTH OUTPUTS WILL STAY AT ABOUT 3.85 mA**
- **ISOLATION VOLTAGE > 1000 VDC**
- **ISOLATION RESISTANCE > 100 Mohm @ 500 VDC**
- **QUICK AND SIMPLE WIRING**
- **LxWxH = 90x17.5x56 mm (3.55”x0.69”x2.21”)**
- **WEIGHT = 43 g (1.5 oz.)**

APPLICATIONS

- **INDUSTRIAL SIGNALS ISOLATION**
- **INDUSTRIAL CONTROL**
- **MEASUREMENT APPLICATIONS**
- **SCADA**

1. DESCRIPTION

GAi32 is a loop power 4-20 mA isolated splitter. The input does not provide power. It has to be provided by the device sourcing the 4-20 mA signal or by an external power supply.

The outputs do not provide power to the output loop either, so it has to be provided by the devices receiving the 4-20 mA signal or by an external power supply.

With its DIN rail mounting, very small size, slim design, high isolation and functionality GAi32 is an excellent choice for isolating and splitting 4-20 mA signals.

2. ABSOLUTE MAXIMUM RATINGS *

Operating temperature	0 to 50 °C
Reverse input voltage	90 V DC
Output voltage, each output	40 V DC

*** NOTE: Stresses above those ratings may cause permanent damage to the device.**

3. CHARACTERISTICS

Parameter	Conditions	Min	Typical	Max	Units
Input					
Input voltage drop	0 to 50 °C			6.8	V DC
Each Output					
Power supply	0 to 50 °C, Note 1	7.2		36	V DC
Resolution	0 to 50 °C, 7.2 – 36 V		4		uA
Error	250 ohm load, 24 V, 25 °C, Note 2			0.05	% FS
Power supply error	7.2 - 36V, output at 3.85 mA, 25 °C			0.5	uA/V
Temperature coefficient	0 to 50 °C, 24 V		35		ppm/°C
Isolation voltage	Input to output, output to output	1000			VDC
Isolation resistance	Input to output, output to output, @ 500 VDC	100			Mohm

Note 1: The minimum voltage for the 4-20 mA output to operate is V = 7.2 + R load [ohm] * 0.020 [V DC]
For a GAi32 with a load of 250 ohm, the minimum voltage would be 12.2 V DC.

Note 2: The parameter includes all errors, non-linearity and noise at constant voltage and temperature.

4. APPLICATION

4.1. MECHANICAL

Mounting GAi32 on the DIN rail requires an area of 98 x 17.5 mm (3.86” x 0.69”).

4.2. ELECTRICAL

Here are the terminals numbers:

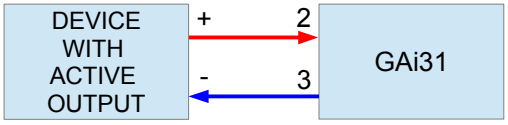
1 – NC (no connect)
2 – Input “+” , current enters the input at this terminal
3 – Input “-”, input current exits the device at this terminal

10 – NC (no connect)
11 – Output 1 “+”, output 1 current enters here
12 – Output 1 “-”, output 1 current exits GAi32 here

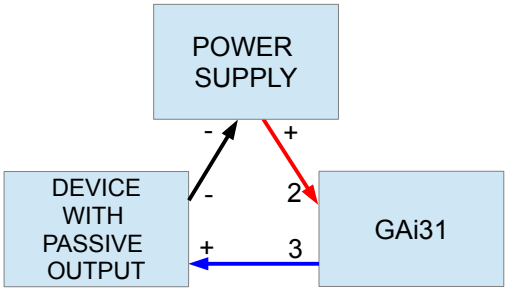
7 – NC (no connect)
8 – Output 2 “+”, output 2 current enters here
9 – Output 2 “-”, output 2 current exits GAi32 here

4.2.1. WIRING

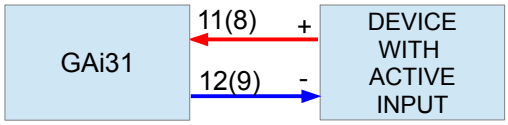
4.2.1.1. WIRING THE INPUT TO AN ACTIVE 4-20 mA DEVICE



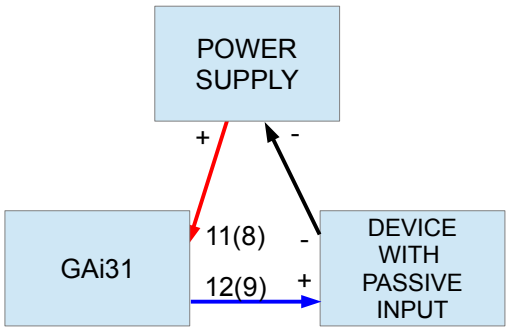
4.2.1.2. WIRING THE INPUT TO A PASSIVE 4-20 mA DEVICE



4.2.1.3. WIRING THE OUTPUT (1 or 2) TO AN ACTIVE DEVICE



4.2.1.4. WIRING THE OUTPUT (1 or 2) TO A PASSIVE DEVICE



5. ORDERING

For ordering please use the G Instruments part number 30118.

IMPORTANT NOTICE

G Instruments reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products at any time without notice.

Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete.

G Instruments does not assume any liability arising from the use of any device or circuit described herein, nor does it convey any license under its patent rights or the rights of others.

Customers are responsible for their products and applications using G Instruments devices. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

G Instruments products are not authorized for use as critical components in life support devices or systems without express written approval of G Instruments.

Trademarks and registered trademarks are the property of their respective owners.