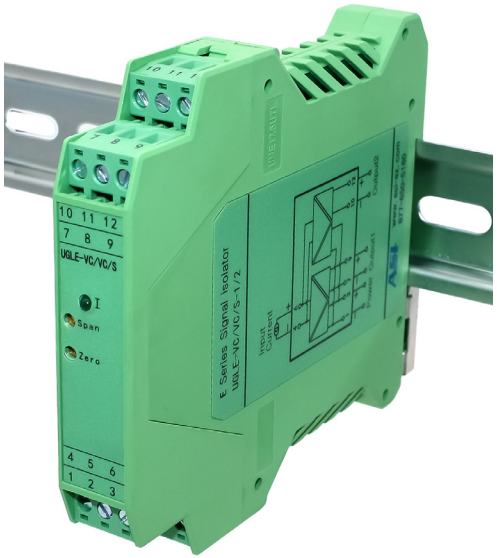
ASI451124 Analog Signal Splitter



The ASI451124 4-20mA Signal Splitter ensures precise and interference-free signal duplication, allowing one input signal to be distributed into two fully isolated outputs. Designed for industrial process control, automation systems, and SCADA applications, this DIN rail-mounted signal conditioner operates on 24V DC power, making it ideal for multi-point signal distribution in PLCs, remote I/O, and monitoring applications.

With high accuracy and fast response time, the ASI451124 prevents ground loops, electrical noise, and signal degradation, ensuring stable and efficient control system performance.

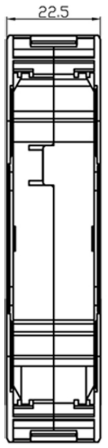
Technical Information	
Power Supply	24V DC ± 10%
Power Consumption (24V DC Power Supply)	≤ 60mA
Output Accuracy (20°C)	0.5% F.S.
Temperature Drift (-20°C to +60°C)	0.05% F.S./10°
Response Time	≤ 100mS
Dielectric Strength	1500 Vac; 1min
Insulation Resistance (Between Input, Output and Power)	≥ 100M Ω, 500 Vdc
Electromagnetic Compatibility	GB/T 18266(IEC 61326-1)
Ambient Temperature	-20°C to +60 °C
Wire Size	20-14 AWG
Stripping Length	8mm
Dimensions (DxWxH)	99 x 17.5 x 114mm

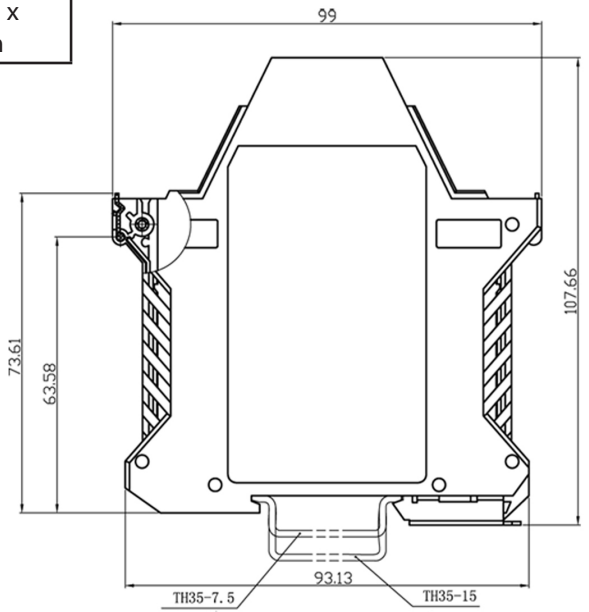
INPUT	
Input Signal	4-20mA
Input Impedance	≤ 100 Ω
OUTPUTS	
Output Signal	4-20mA
Load Resistance	R ≤ 300 Ω

Accessories	
Label Markers	
Circuit Jumper	
DIN RAIL (7.5mm or 15mm)	
DIN RAIL End Stops	

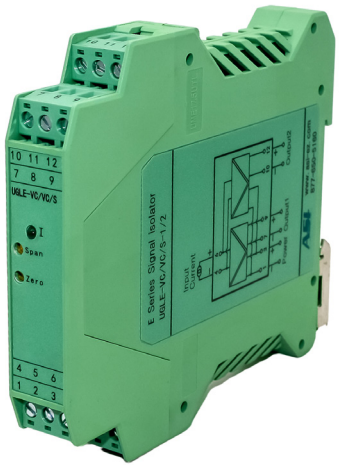
Key Features & Benefits:

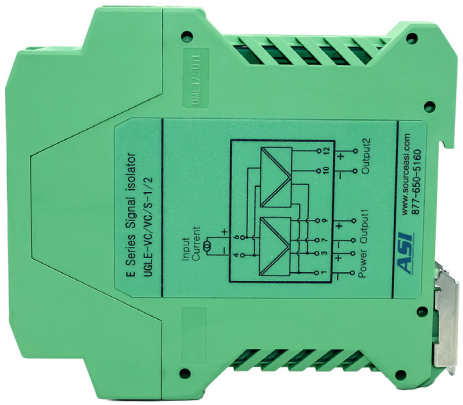
- Multi-Point Signal Distribution –
  Converts one 4-20mA input into 2 isolated outputs, enabling multiple device connections.
- Prevents Ground Loops & Signal Noise – Ensures stable, interference-free signal transmission, protecting control systems
  from electrical disturbances.
- High Accuracy & Fast Response –
  Reliable signal replication for precise control and real-time monitoring.
- DIN Rail Mounted for Easy Installation – Compact form factor allows quick integration into control panels and industrial enclosures.
- 24V DC Powered – Efficient and reliable operation, ensuring compatibility with standard industrial power supplies.
- Industrial-Grade Durability – Built to withstand harsh environments, ensuring long-term performance in process automation applications.
- Cost-Effective Alternative to Major Brands – Delivers high-performance signal splitting at a lower cost than Phoenix Contact, Weidmüller, and other premium brands.

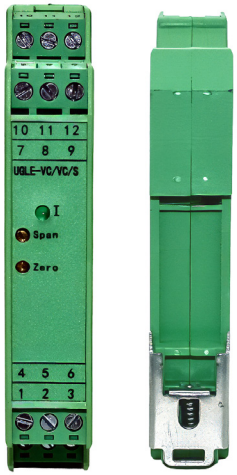




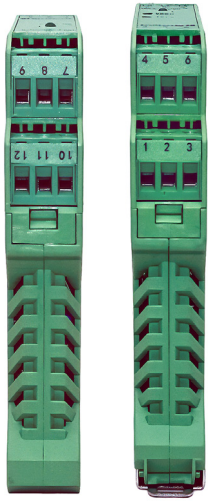
Addtional Photos

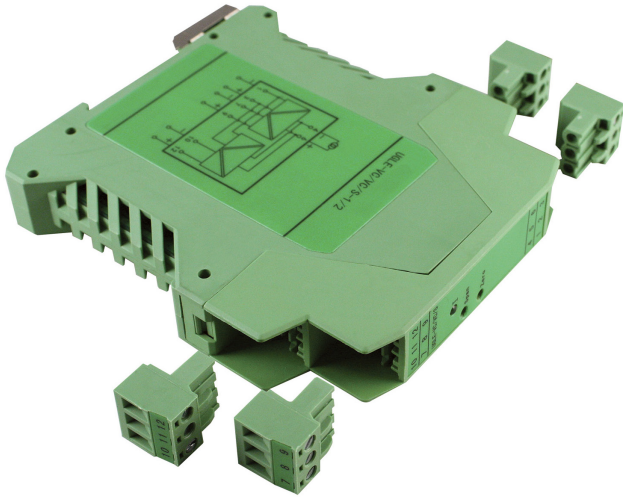




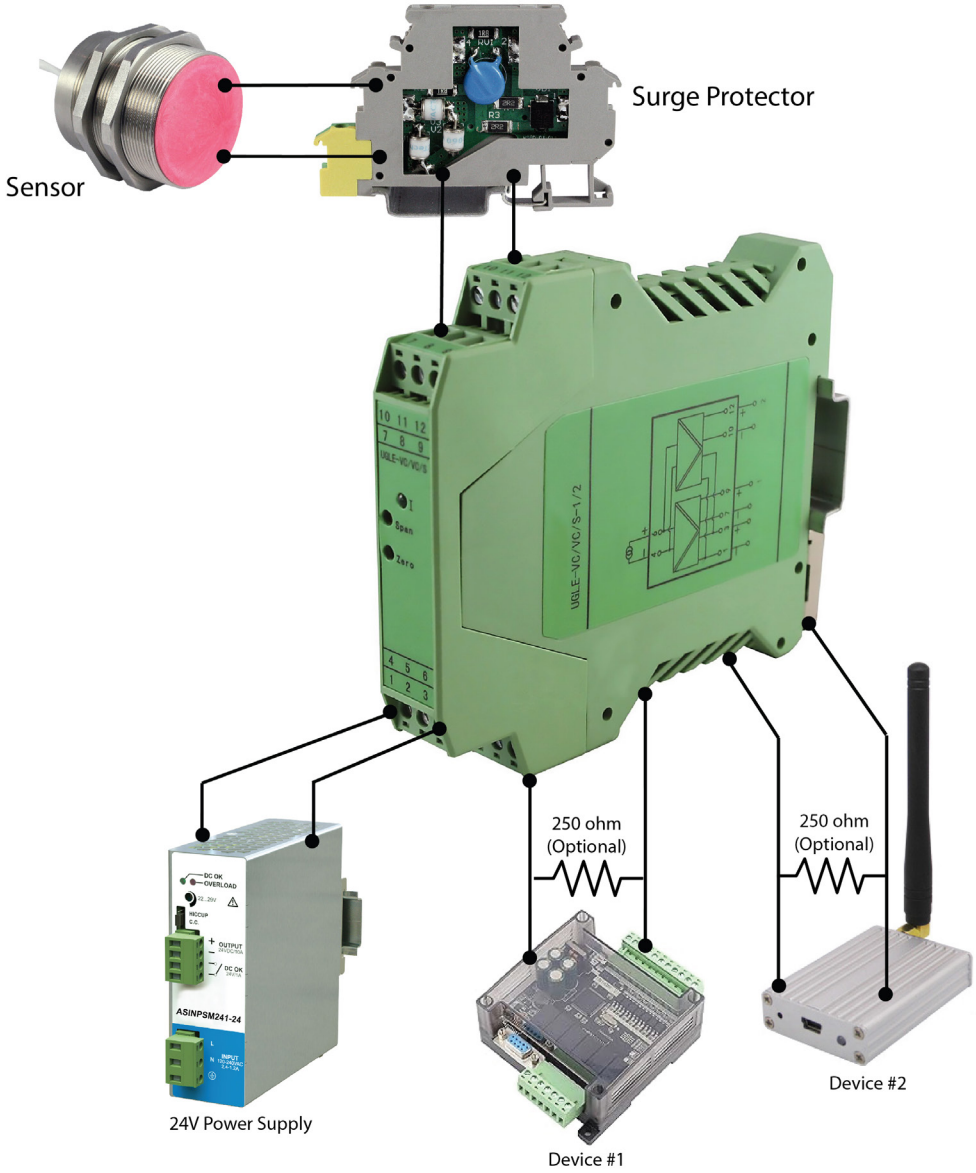


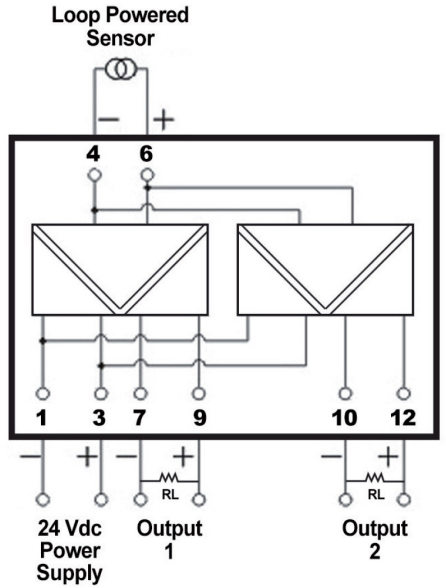


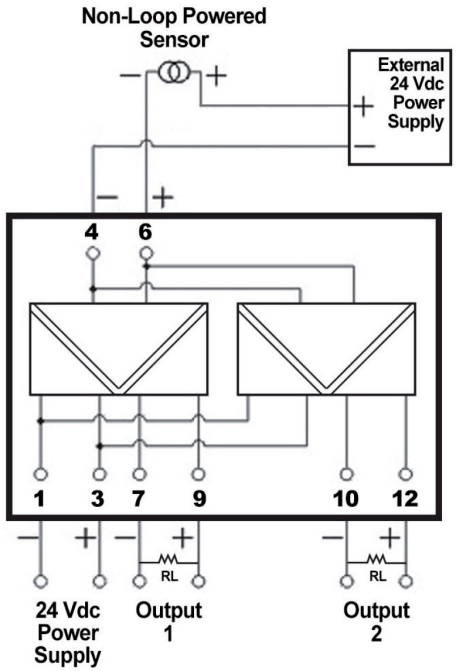




Diagrams


Surge Protector
Sensor
250 ohm
(Optional)
250 ohm
(Optional)
24V Power Supply
Device #1
Device #2


Loop Powered
Sensor
4
6
1
3
7
9
10
12
RL
RL
24 Vdc
Power
Supply
Output
1
Output
2


Non-Loop Powered
Sensor
External
24 Vdc
Power
Supply
4
6
1
3
7
9
10
12
RL
RL
24 Vdc
Power
Supply
Output
1
Output
2

Please Note:

Output 1: Calibration and Setup Adjustments are made via the potentiometers on top of the module.

Output 2: The module must be opened to access to the potentiometers located on the printed circuit board.

Calibration and Setup Procedure:

1.) This module has been calibrated at the factory, do NOT attempt to recalibrate this module unless absolutely required.

2.) After connecting the power wires allow the module to warm up a few minutes prior to calibration.

3.) Use a grounded screwdriver for adjustments to avoid ESD damage to the circuit.

4.) Outputs 1 and 2 are separate from each other; calibrate them one by one.

5.) Always start by calibrating ZERO, then SPAN.

6.) For both ZERO and SPAN, turn the potentiometer clockwise to increase and counterclockwise to reduce the output.

7.) An accurate multimeter is always required to get good measurement results.

Calibration and Setup Procedure Steps:
Step 1: Connect the input signal and the output load as required for the output to be calibrated.

Step 2: Adjust the input signal to precisely 4.00 mA DC (ZERO); then adjust the output zero pot until the output reads precisely 4.000 mA ± 0.08mA DC.

Step 3: Adjust the input signal to precisely 20.00 mA DC (SPAN); then adjust the output span pot until the output reads precisely 20.000 mA ± 0.08mA DC.

Step 4: Repeat steps 2 & 3 until the readings converge.

Step 5: Repeat steps 1-4 for the second output's calibration.

Step 6: As a confirmation step for the calibration and setup results, adjust the input current signal to 12.00mA.

Step 7: Confirm that the output value is within the range of 11.94mA and 12.06mA.