SIG CON Signal Conditioners

Research and Development

Acromag THE LEADER IN INDUSTRIAL I/O

Application Note:

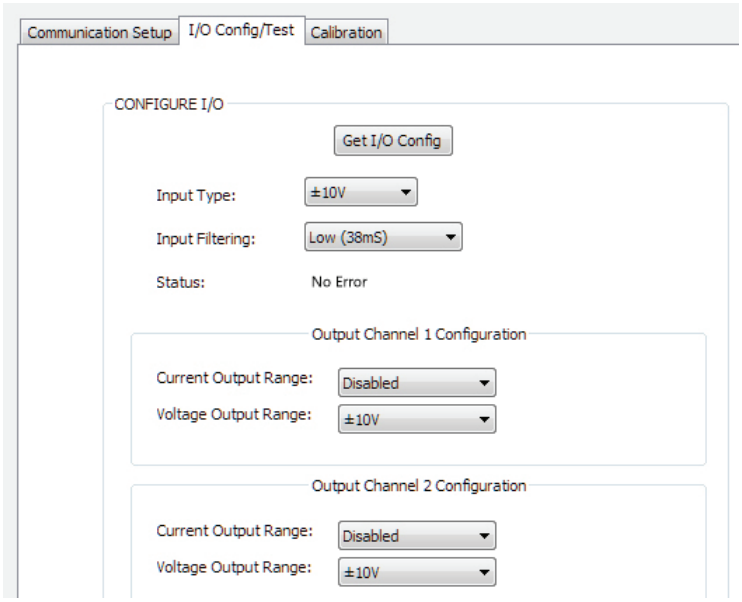
Process Transmitters Provide A High Voltage Output Up To ±20V DC

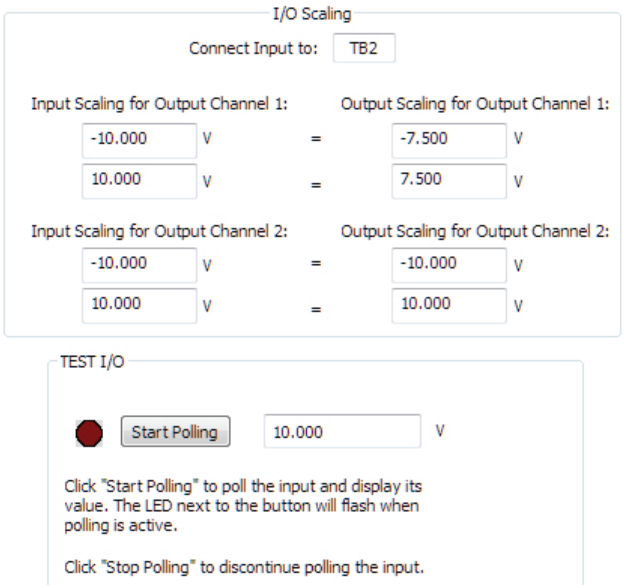
Defining the Problem:

We are developing a 12VDC battery simulator that reaches 14.4V when charging. Our controller output cards are limited to 10V and we need a device that can step up the output to 15V. Typical process signal conditioners have standard ranges of 10V maximum. We require a device with a higher output voltage. For reverse polarity simulations, a bipolar output is preferred.

System Requirements:

The SP330 Splitters have two independent and isolated outputs. For voltage outputs, the maximum output range is 10V. With two floating outputs connected in series, the total output voltage can be as high as 20V. Configuration can be performed via the Acromag Agility™ mobile application for Android® devices or with a Windows® PC.





Implementing the Solution:

1. Using the Agility mobile application or Windows software, scale the two outputs to sum to the output voltage required. See screen captures above for a ±15V output.
2. The two independent outputs can be the same or different voltages. For example, +10 and +5 = 15V output.
3. At the right is the output wiring. Complete the input, power and earth ground wiring as detailed in the user manual.
4. Validate the I/O before connection to the test simulator.

Notes:

Did this App Note help you today? Tell us what you think with these 4 quick questions.

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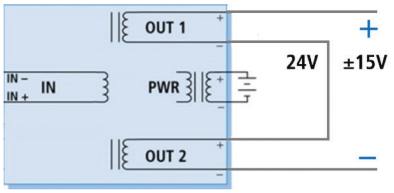
Featured Products:

SP337-0700 — 4-Wire Process Voltage Input Signal Splitter

Highlighted portion pertains to App Note.



Why Acromag:

The SP330 Series is a cost effective, high performance family of four-wire signal splitters. Using a Windows® or Android® device, set up can be done with a PC, phone or tablet. With many innovative features, these standard off-the-shelf products can be customized for a wide variety of applications.

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