The APD 4930 IsoSplitter accepts a DC voltage or current input and provides two optically isolated DC voltage or current outputs that are linearly related to the input. The input range and each output range are independent and can be specified as required. This provides an economical solution when one signal must be sent to two different devices.

Typical applications include isolation, output splitting, output device separation and redundancy (i.e. to prevent failure of the entire loop if one device fails), or a combination of these. The input signal is filtered, amplified, split, and then passed through an opto-coupler to the output stages. Full 4-way isolation (input, output 1, output 2, power) makes this module useful for ground loop elimination, common mode signal rejection or noise pickup reduction.

**Independent Outputs**
Each output channel is factory ranged to your specifications and provides an optically isolated DC voltage or current output that is linearly related to the input. Sourcing mA outputs are standard. Sinking milliamp or high voltage outputs are optional.

**Isolation**
The full 4-way (input, output 1, output 2, power) isolation makes this module useful for ground loop elimination, common mode signal rejection or noise pickup reduction.

**LoopTracker**
API exclusive features include two LoopTracker LEDs (one for each output channel) that vary in intensity with changes in the process output signals. These provide a quick visual picture of your process loop at all times and can greatly aid in saving time during initial startup and/or troubleshooting.

**Specifications**
- **Input:**
  - 0-100 mV to 0-300 V, ±100 mV to ±10 V, 0-1 mA to 0-1000 mA, 4-20 mA
- **Output:**
  - 0-1 V to 0-10 V, optional up to 20 V, ±1 V to ±10 V, 0-1 mA to 20 mA, 4-20 mA

**Applications**
- **Split, Convert, Boost, and Rescale Process Signals**
- **Split Process Signals for Control and Validation**
- **Interface a Process Signal with Multiple Panel Meters, PLCs, Recorders, Data Aq., DCS, & SCADA Systems**

**DC Input Range**
- Factory configured, please specify input range or consult factory for special ranges
- Voltage: 0-100 mVDC to 0-300 VDC
- Bipolar voltage: ±100 mVDC to ±10 VDC
- Current: 0-1 mA DC to 0-1000 mA DC

**Input Impedance and Burden**
- Voltage: 200 kΩ to 1 MΩ typical
- Current: 0-1 mA DC to 0-1000 mA DC
- Voltage burden: 1.25 VDC max. at 20 mA current input

**Input Loop Power Supply**
- 15 VDC ±10%, regulated, 25 mA DC
- May be selectively wired for sinking or sourcing mA input

**LoopTracker**
- Variable brightness LEDs indicate output loop level and status
- One red LED for each output

**Channel 1 and Channel 2 DC Output Ranges**
- Factory configured, please specify for each output channel
- Outputs are independent and do not need to be the same
- Voltage: 0-1 VDC to 0-10 VDC, 10 mA max
- Bipolar voltage: ±1 VDC to ±10 VDC
- Current: 0-1 mA DC to 0-20 mA DC, 4-20 mA DC
- Power: 20 V compliance, 1000 Ω at 20 mA

**Output Calibration**
- Multi-turn zero and span potentiometers for each output channel
- ±15% of span adjustment range typical

**Output Loop Power Supplies**
- 20 VDC nominal, regulated, 25 mA DC for each output channel
- May be selectively ordered for sinking mA output

**Output Test/Manual Override**
- Terminals for customer-supplied external contacts to manually set output levels for each channel
- Output test level factory set to 50 % of span

**Output Ripple and Noise**
- Less than 10 mVDC ripple and noise

**Linearity**
- Better than ±0.1% of span

**Ambient Temperature Range and Stability**
- −10°C to +60°C operating ambient
- Better than ±0.04% of span per °C stability

**Response Time**
- 70 milliseconds nominal

**Isolation**
- Full 4-way, 1200 VDC minimum

**Installation Environment**
- IP 40, requires installation in panel or enclosure with adequate ventilation
- For use in Pollution Degree 2 Environment
- Mount vertically (as shown in picture) to a 35 mm DIN rail allowing minimum 1” (25 mm) above and below housing vents for air circulation

**Power**
- 85-265 VAC, 50/60 Hz or 60-300 VDC, 6 W maximum
- D versions: 9-30 VDC or 10-32 VAC 50/60 Hz, 6 W maximum

**Dimensions and Connectors**
- 22.5 mm W x 117 mm H x 122 mm D
- Four 4-terminal removable connectors, 14 AWG max wire size

**Applications Link**
- API-usa.com/apps

**Accessories**
- API BP4: Spare 4-terminal plug, black
**Precautions**

- **WARNING!** All wiring must be performed by a qualified electrician or instrumentation engineer. See diagram for terminal designations and wiring examples. Consult factory for assistance.
- **WARNING!** Avoid shock hazards! Turn signal input, output, and power off before connecting or disconnecting wiring, or removing or installing module.

**Précautions**

- ATTENTION! Tout le câblage doit être effectué par un électricien ou ingénieur en instrumentation qualifié. Voir le diagramme pour désignations des bornes et des exemples de câblage. Consulter l’usine pour assistance.
- ATTENTION! Éviter les risques de choc! Fermez le signal d’entrée, le signal de sortie et l’alimentation électrique avant de connecter ou de déconnecter le câblage, ou de retirer ou d’installer le module.

**Electrical Connections**

- Do not make any connections to unused terminals or use them as wiring junctions for external devices. This may cause permanent damage to the module!

**Signal Input Terminals**

- Polarity must be observed when connecting the signal input.
- Terminal 3 provides 20 VDC to power a passive mA transmitter if required.

**Module Power Terminals**

- Check model/serial number label for information, options, and I/O range information. The voltage and/or milliamp I/O ranges are factory set for each channel to your exact specifications.

**Calibration**

- Input and output ranges are pre-configured at the factory (at 24°C ±1°C) as specified on your order. Front-mounted, Zero and Span potentiometers for each channel can be used to calibrate the output to compensate for load and lead variations.

1. Apply power to the module and allow a minimum 20 minute warm up time.
2. Using an accurate calibration source, provide an input to the module equal to the minimum input required for the application.
3. Using an accurate measurement device for the output, adjust the Zero potentiometer for the exact minimum output desired. The Zero control should only be adjusted when the input signal is at its minimum. This will produce the corresponding minimum output signal. For example: 4 mA for a 4-20 mA output or –10 V for a ±10V output.
4. Next, set the input at maximum, then adjust the Span pot for the exact maximum output desired. The Span control should only be adjusted when the input signal is at its maximum. This will produce the corresponding maximum output signal. Example: for 4-20 mA output, the Span control will provide adjustment for the 20 mA or high end of the signal.
5. Repeat adjustments for maximum accuracy.

**Operation**

- The APD 4930 is factory configured to your exact input and output requirements. The voltage or milliamp input is filtered, either amplified or attenuated as required, then passed through an optical coupler to the output stage. A red LoopTracker output LED provides a visual indication that the output signal is functioning for each channel. It becomes brighter as the input and the corresponding output change from minimum to maximum.

- For current outputs, the red LED will only light if the output loop current path is complete. For either current or voltage outputs, failure to illuminate or a failure to change in intensity as the process changes may indicate a problem with the module power or signal output wiring.

**Module mA Input**

- Module mA input is 0 to 0.6 Nm or 13 14

**Mounting to a DIN Rail**

- Install module vertically on a 35 mm DIN rail in a protective enclosure away from heat sources. Do not block air flow. Allow 1” (25 mm) above and below housing vents for air circulation.

1. Tilt front of module downward and position against DIN rail.
2. Clip lower mount to bottom edge of DIN rail.
3. Push front of module upward until upper mount snaps into place.

**Removal**

1. Push up on the bottom back of the module.
2. Tilt front of module downward to release upper mount from top edge of DIN rail.
3. The module can now be removed from the DIN rail.

**WARNING!** Avoid shock hazards! Turn signal input, output, and power off before connecting or disconnecting wiring, or removing or installing module.

**Electrical Connections**

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**Signal Input Terminals**

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**Signal Output Terminals**

- Polarity must be observed when connecting the signal outputs.
- See the module label for the voltage or milliamp output range.

**Input and Output Ranges**

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