

## Bipolar Isolated DIN Rail Signal Conditioner/ Splitter for Process Signals

### DRSL-SP3



- ✓ Isolation and Conversion of Bipolar Process Voltage and Current Signals to Unipolar/Bipolar Signals
- ✓ Splitter Function: 1 Process Input, 2 Process Outputs
- ✓ Slimline Housing—Only 6 mm (0.24") Wide
- ✓ Multiple Signal Ranges (DIP-Switch Selectable)
- ✓ High Accuracy, <0.05% of Selected Range
- ✓ Fast Response Time <7 ms
- ✓ Excellent Output Load Stability

The DRSL-SP3 bipolar isolated signal conditioner/splitter provides a competitive choice in terms of both price and technology for galvanic isolation of process voltage or current signals to SCADA systems or PLC equipment. Two process outputs are provided which mirror the single process input.

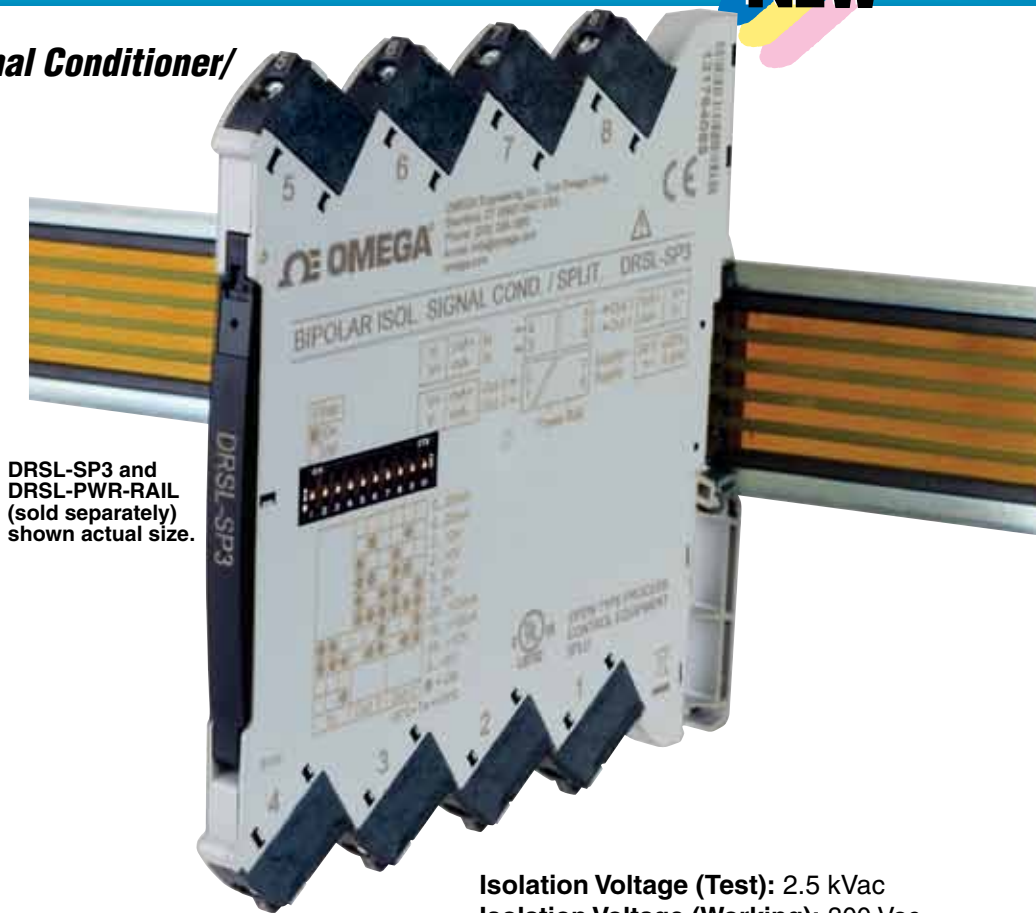
The DRSL-SP3 can be used for signal conversion of standard bipolar analog process signals into two individual unipolar or bipolar analog signals. The unit offers 4-port isolation, provides surge suppression and protects control systems from transients and noise. The DRSL-SP3 also eliminates ground loops and can be used for measuring floating signals. Low power consumption facilitates DIN rail mounting without the need for any air gap. Factory calibrated measurement ranges are easily configured via DIP switches. The unit operates over a wide temperature range from -25 to 70°C (-13 to 158°F).

## SPECIFICATIONS

### INPUT

#### Current Input

- Programmable Measurement Ranges:** ±10 mA, ±20 mA
- Functional Range,**
- Current Input:** -23 to 23 mA
- Input Voltage Drop:** <1V @ 23 mA



DRSL-SP3 and DRSL-PWR-RAIL (sold separately) shown actual size.

### Voltage Input

- Programmable Ranges:** ±5V, ±10V
- Functional Range:** -11.5 to 11.5V
- Input Resistance:** ≥1 MΩ

### OUTPUT

**No. of Outputs:** 2

#### Current Output

- Programmable Signal Ranges:** 0 to 20 mA, 4 to 20 mA, ±10 mA, ±20 mA
- Functional Range:** 0 to 23 mA
- Load:** 23 mA/300 Ω max (per channel)
- Load Stability:** ≤0.002% of span (presently selected range)/100 Ω
- Current Limit:** ≤28 mA

#### Voltage Output

- Programmable Signal Ranges:** 0 to 10V, 2 to 10V, 0 to 5V, 1 to 5V
- Functional Range:** 0 to 11.5V
- Load:** >10 kΩ min

### GENERAL

- Supply Voltage (via Power Rail or Connectors):** 16.8 to 31.2 Vdc
- Power Consumption:** 0.8 W max
- Internal Consumption:** 0.4 W typical/0.65 W max
- Isolation:** Input/output 1/ output 2/supply

**Isolation Voltage (Test):** 2.5 kVac

**Isolation Voltage (Working):** 300 Vac  
**MTBF:** >187 years, according to IEC 61709 (SN29500)

**Signal/Noise Ratio:** >60 dB

**Cut-Off Frequency (3 dB):** >100 Hz or 10 Hz (selectable via DIP-switch)

**Response Time (0 to 90%, 100 to 10%):** <7 ms or <44 ms

**Span:** Corresponds to the presently selected DIP switch output range

**Accuracy:** <±0.05% of span

**Temperature Coefficient:** <±0.01% of span/°C

**EMC Immunity Influence:** <±0.5% of span

**Extended EMC Immunity**

**NAMUR NE 21, A Criterion, Burst:** <±1% of span

### ENVIRONMENTAL

**Operating Temperature:** -25 to 70°C (-13 to 158°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Calibration Temperature:** 20 to 28°C (68 to 82°F)

**Relative Humidity:** 0 to 95% RH non-condensing

**Protection Degree:** IP20

**Installation Area:** Pollution degree 2 and measurement/overvoltage category II

## MECHANICAL

**Dimensions:** 113 H x 6.1 W x 115 mm D  
(4.4 x 0.24 x 4.5")

**Weight:** 70 g (0.15 lb) approx

**DIN Rail Type:** DIN EN 60715 - 35 mm

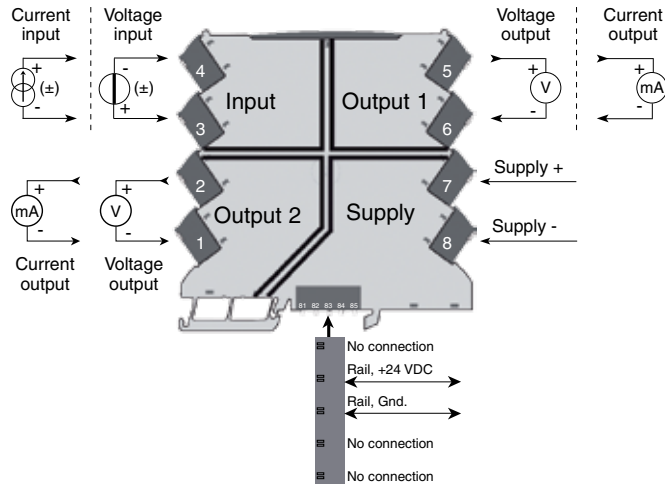
**Wire Size:** 0.13 x 2.5 mm<sup>2</sup>/  
AWG 26 to 12 stranded wire

**Screw Terminal Torque:** 0.5 Nm

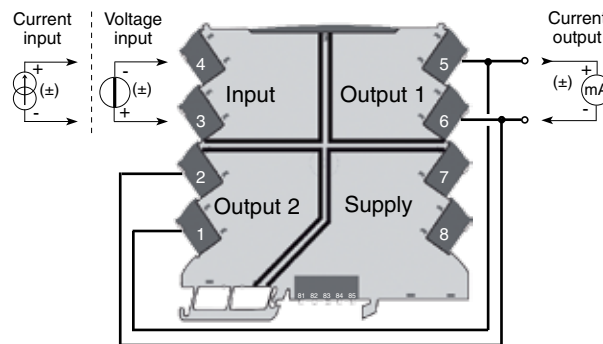


DRSL-SP3 and DRSL-PWR-RAIL (sold separately) shown smaller than actual size.

## CONNECTIONS



Bipolar Input to bipolar output wiring set-up:



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

## To Order

Model No.	Description
DRSL-SP3	Bipolar isolated signal conditioner/splitter for process signals

## Accessories

Model No.	Description
DRSL-PWR-RAIL	Power rail (with cover and two end covers, one right hand and one left hand), 1 m (3.3') length
DRSL-PCU	Power connector unit, 24 Vdc/2.5 A output to power rail
DRSL-MOD-STOP	Module stop (screwed onto power rail to support and hold mounted devices)

**Ordering Example:** DRSL-SP3 bipolar isolated signal conditioner/splitter for process signals, DRSL-PWR-RAIL power rail, DRSL-PCU power connector unit, DRSL-MOD-STOP module stop and OCW-1, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 2 years.