

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.

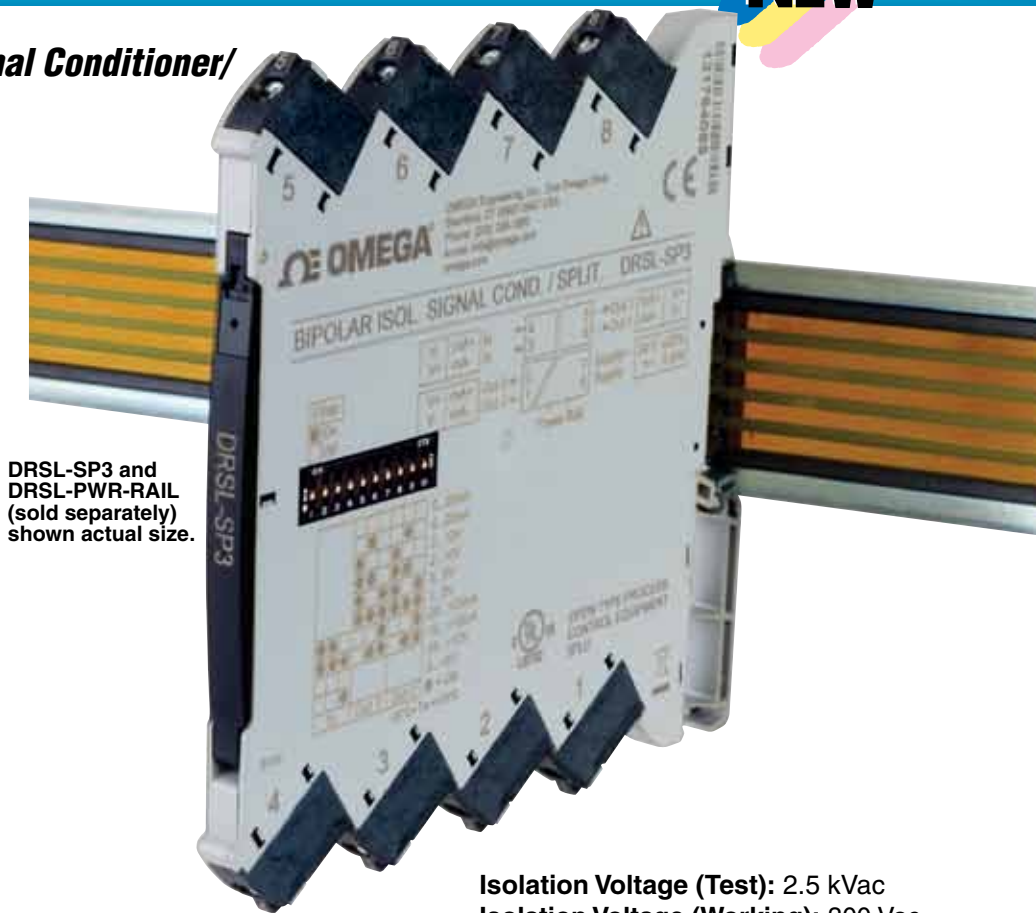
The DRSL-SP3 can be used for signal conversion of standard bipolar analog process signals into two individual unipolar or bipolar analog signals. The unit offers 4-port isolation, provides surge suppression and protects control systems from transients and noise. The DRSL-SP3 also eliminates ground loops 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: ± 5 V, ± 10 V
Functional Range: -11.5 to 11.5V
Input Resistance: ≥ 1 M Ω

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: $\leq 0.002\%$ 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 k Ω 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: $\leq \pm 0.05\%$ of span
Temperature Coefficient: $\leq \pm 0.01\%$ of span/°C
EMC Immunity Influence: $\leq \pm 0.5\%$ of span
Extended EMC Immunity
NAMUR NE 21, A Criterion, Burst: $\leq \pm 1\%$ 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

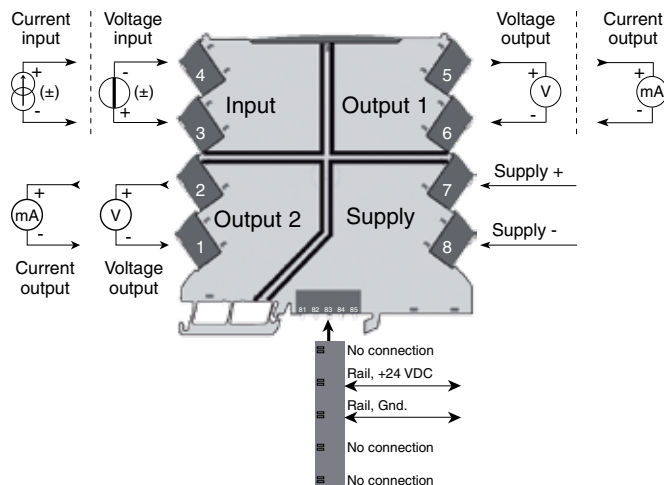
Wire Size: 0.13 x 2.5 mm²/
AWG 26 to 12 stranded wire

Screw Terminal Torque: 0.5 Nm

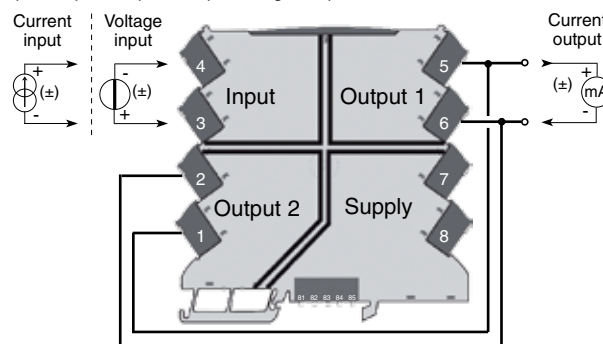


DRSL-SP3 and DRSL-PWR-RAIL
(sold separately) shown smaller
than actual size.

CONNECTIONS



Bipolar Input to bipolar output wiring set-up:



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM 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, OMEGACARESM extends standard 1-year warranty to a total of 2 years.