

Bipolar Isolated DIN Rail Signal Conditioner for Process Signals

DRSL-DC4



- ✓ Isolation and Conversion of Bipolar Process Voltage and Current Signals to Unipolar Signals
- ✓ 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-DC4 bipolar isolated DIN rail signal conditioner 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. The DRSL-DC4 can be used for signal conversion of standard bipolar analog process signals into unipolar analog signals. The unit offers isolation between input, output and supply, provides surge suppression and protects control systems from transients and noise. The DRSL-DC4 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

Voltage Input

Programmable Ranges: ±5V, ±10V

Functional Range: -11.5 to 11.5V

Input Resistance: ≥1 MΩ



DRSL-DC4 DIN rail signal conditioner and DRSL-PWR-RAIL power rail (sold separately), shown smaller than actual size.

OUTPUT

Current Output

Programmable Signal Ranges:

0 to 20 mA, 4 to 20 mA

Functional Range: 0 to 23 mA

Load: 23 mA/600 Ω max (per channel)

Load Stability: ≤0.002% of span/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/supply

Isolation Voltage (Test): 2.5 kVac

Isolation Voltage (Working): 300 Vac

MTBF: >241 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 presently selected DIP switch output range

Accuracy: <±0.05% of span

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

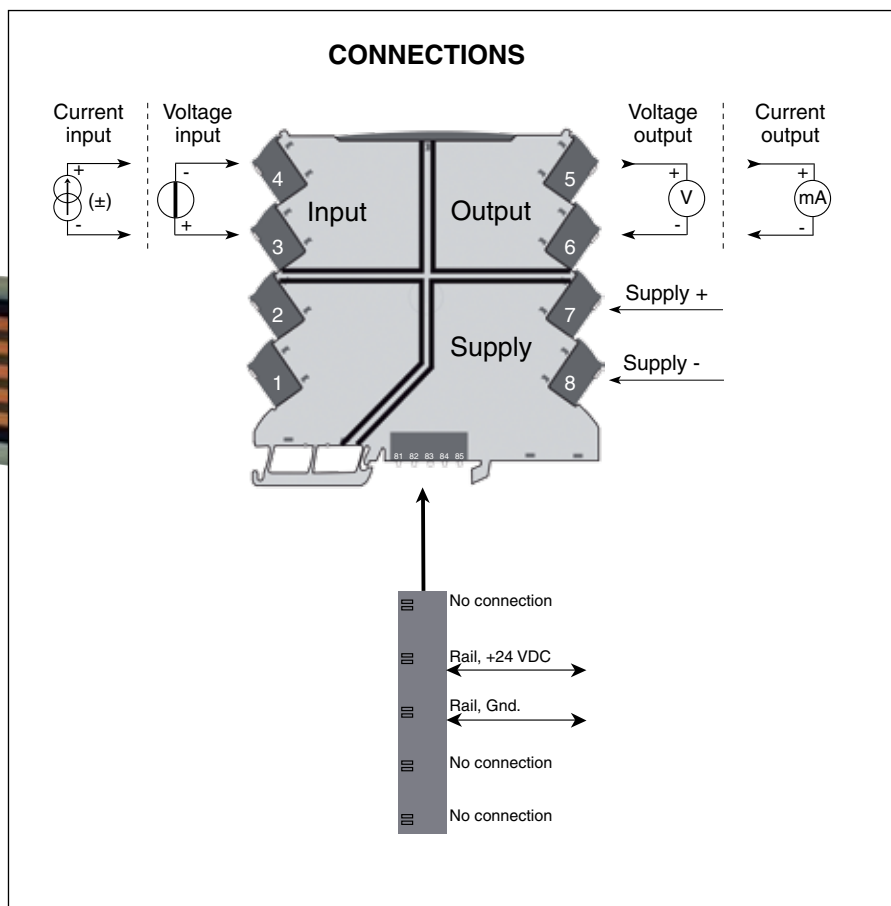
EMC Immunity Influence: <±0.5% of span

Extended EMC Immunity

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



DRSL-DC4 and DRSL-PWR-RAIL shown smaller than actual size.



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



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-DC4	Bipolar isolated DIN rail signal conditioner 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-DC4 bipolar isolated DIN rail signal conditioner 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.