

Isolated DIN Rail Signal Conditioner

DRSL-DC3



- ✓ Isolation and Conversion of Process Voltage or Current Signals
- ✓ Slimline Housing— Only 6 mm (0.24") Wide
- ✓ Multiple Signal Ranges (DIP-Switch Selectable)
- ✓ High Accuracy, <0.2% of Span
- ✓ Fast Response Time <7 ms

The DRSL-DC3 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-DC3 can be used for signal conversion of standard process voltage or current signals. The unit offers isolation between input, output and supply, provides surge suppression and protects control systems from transients and noise.

The DRSL-DC3 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

- Measurement Range:** 0 to 20.5 mA
- Functional Range:** 0 to 23 mA
- Programmable Measurement Ranges:** 0 to 20 mA and 4 to 20 mA
- Input Voltage Drop:** < 1.5V



DRSL-DC3 DIN rail signal conditioner and DRSL-PWR-RAIL, power rail (sold separately), shown smaller than actual size.

Voltage Input

- Measurement Range:** 0 to 10.25V
- Functional Range:** 0 to 11.5V/ 0 to 5.75V
- Programmable Measurement Ranges:** 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V
- Input Resistance:** $\geq 500 \text{ k}\Omega$

OUTPUT

Current Output

- Signal Range:** 0 to 20.5 mA (span)
- Programmable Signal Ranges:** 0 to 20 mA and 4 to 20 mA
- Load:** 23 mA/600 Ω max
- Load Stability:** $\leq 0.01\%$ of span/ 100 Ω
- Current Limit:** $\leq 28 \text{ mA}$

Voltage Output

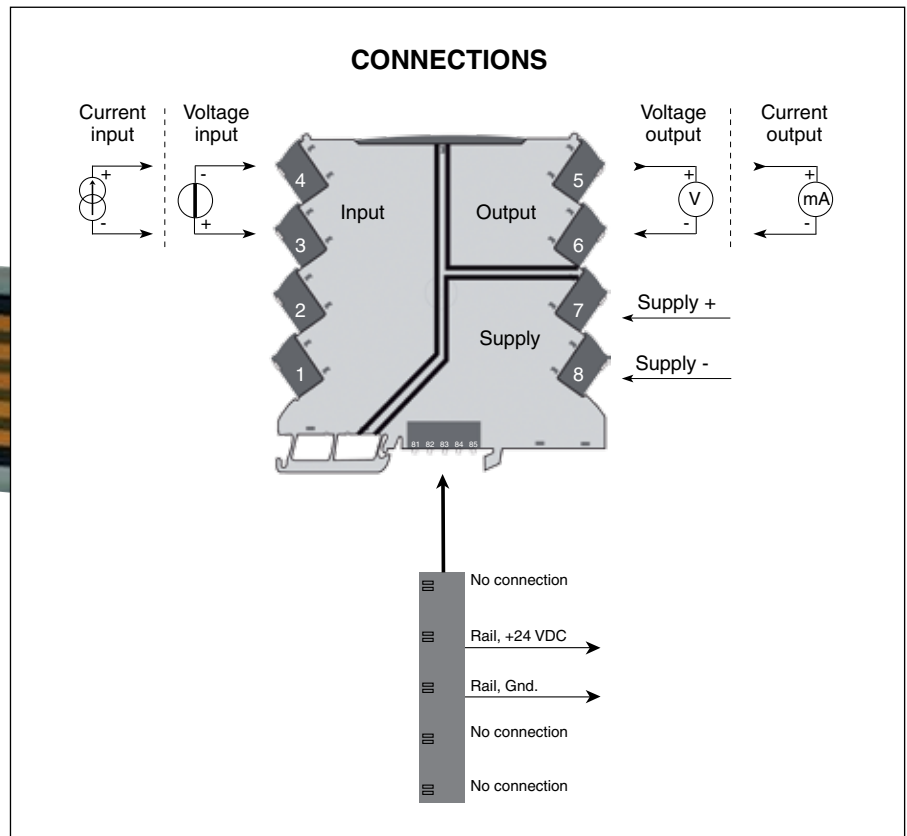
- Signal Range:** 0 to 10V
- Programmable Signal Ranges:** 0 to 10, 2 to 10, 0 to 5 and 1 to 5V
- Load:** >10 k Ω min

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/Supply
- Isolation Voltage (Test):** 2.5 kVac
- Isolation Voltage (Working):** 300 Vac
- MTBF:** >249 years, according to IEC 61709 (SN29500)
- Signal/Noise Ratio:** >60 dB
- Response Time (0 to 90%, 100 to 10%):** <7 ms
- Span:** Corresponds to the presently selected DIP switch output range
- Accuracy:** $\leq \pm 0.2\%$ of span
- Temperature Coefficient:** $\leq \pm 0.015\%$ 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



DRSL-DC3 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-DC3	Isolated DIN rail signal conditioner

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-DC3 isolated DIN rail signal conditioner, 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.