Specifications

Input:
- Range: 4-20 mA
- Impedance: ±10 ohms (current inputs)
- Protection: withstands up to 24VDC (current input)

Output:
- Range: 4-10 mA
- Current Output Compliance: 15V (750 ohms, max.)

Adjustability:
- Hysteresis: < 0.2%
- Output Accuracy: ±0.2% maximum @ 23°C including linearity, repeatability and hysteresis

Stability:
- ±0.025%/°C of full-scale maximum for full-scale and zero

EMC Compliance (CE Mark):
- UL recognized per standard UL508 (File No E99775).
- CE compliance per EMC directive 89/336/ECC and low voltage 73/23/EEC.

Temperature:
- Operating: 6 to 60°C (23 to 140°F)
- Storage: -40 to 80°C (40 to 176°F)

Humidity (non-condensing):
- Operating: 15 to 90°C
- Iso: 90% for 24 hours /60°C

Agency Approvals:
- UL recognized per standard UL508 (File No E99775).
- CE compliance per EMC directive 89/336/ECC and low voltage 73/23/EEC.

General Specifications

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Dimensions

- 72mm x 20mm x 25mm (2.83" x 0.79" x 0.99"")

DRI-SP-DC

DC Powered 4 to 20 mA Input Signal Splitter

Provides 2 Fully Isolated 4-20 mA Output Signals in Proportion to a single 4-20 mA Input

- Multi-Channel Design
- 2000VAC Isolation
- High Density DIN Rail Mounting

Description

The model DRI-SP-DC is a DIN rail mount, DC input signal conditioner, with 2000VAC isolation between input and output power. It provides 2 fully isolated 4-20 mA output signals in proportion to a single 4-20 mA input.

Factory configured input and output ranges support standard 4-20 mA industrial control signals. Front accessed zero and span potentiometers allow 50% adjustment of offset and gain to compensate for sensor errors or signal losses.

The DRI-SP-DC features plug-in screw terminals for easy installation. Two or more modules can slide together and interlock for solid, high density mounting (remove either the DIN rail foot or the adjacent unit’s faceplate, for right side or left side mounting, respectively). The module to be attached will easily slide onto the side of the mounted unit.

Application

DC input transmitters are used to isolate and convert DC voltage or current signals into proportional, standard industrial control signals such as 4-20mA or 0-15V. Typically an industrial control system such as a PLC or PLC requires standard industrial control signals with full isolation to ensure reliable, strong signals.

In most industrial process control or data acquisition applications, several different input sources, including voltages and currents from various field instruments (e.g. level, flow, pressure and position sensors), are common. Four-wire transmitters accept these field inputs and provide the controller (DCS & PLC) with the standard industrial signal it requires. The four-wire transmitter will increase the signal drive to high impedance loads and may improve resolution of the process variable.

Operation

The DRI-SP-DC operates as a four-wire transmitter; each channel derives its power from an independent, transformer isolated DC power source (10.8 to 26.4VDC).

Calibration

Note: For best results, calibration should be performed with the intended output load, in the operating environment, mounted on a DIN rail, allowing at least one hour for thermal equilibrium of the system.

1) To check calibration, connect the input to a calibrated DC source. Connect the output to a DC current meter and the input power to a DC source (10.8 to 26.4VDC capable of providing up to 0.5 Amps).

2) Set the calibrator to the specified minimum DC input value and adjust the zero potentiometer for minimum (e.g. 4mA) output.

3) Set the calibrator to the specified maximum DC input value and adjust the span potentiometer for maximum (e.g. 20mA) output.

4) Repeat steps 2 and 3 to validate calibration to the output load.