

Specifications

Input:

- Range: 4-20 mA
- Impedance:
 - ≤ 20 ohms (current inputs)
- Protection:
 - withstands up to 24VDC (current input)
 - 120VAC (voltage input) without damage
- Common Mode: 2000VAC, input to ground

Output:

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

LED Indication:

- Green LED indicates power on

Output Accuracy:

- ≤ ±0.1% of full-scale input typical
- ≤ ±0.2% maximum @ 23°C including linearity, repeatability and hysteresis

Adjustability:

- Front accessed 10 turn pot., ± 50% of range for zero and span

Stability:

- ≤ 0.025%/C of full-scale maximum for full-scale and zero

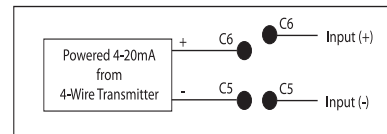


Figure 1. Input Connections

EMC Compliance (CE Mark):

- Emissions: EN50081-1
- Immunity: EN50082-2
- Safety: EN50178

Isolation:

- ≥ 2000VAC between input and output and channel to channel

Response Time:

- 25mSec typical (10 to 90%)

Power:

- 10.8 to 26.4VDC, 2W per channel max.

Temperature:

- Operating: -5 to 60°C (23 to 140°F)
- Storage: -40 to 80°C (-40 to 176°F)

Humidity (non-condensing):

- Operating: 15 to 90% @45°C
- Soak: 90% for 24 hours @60°C

Wire Terminal:

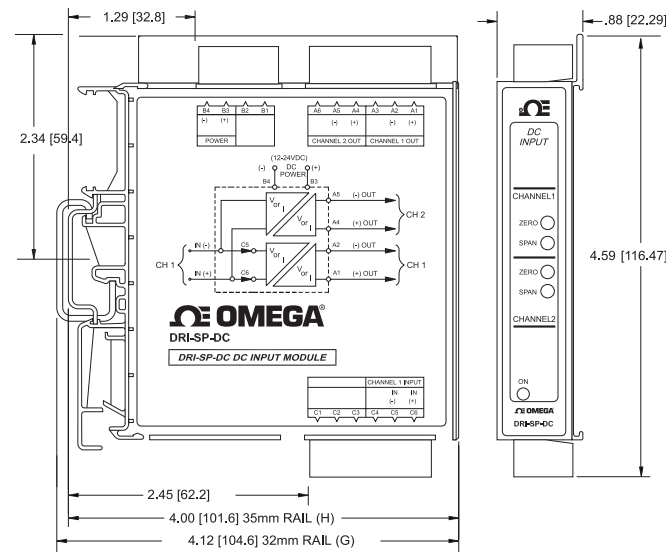
- Socketed screw terminals for 12-22 AWG

Agency Approvals:

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

Terminal	Connection	Terminal	Connection
A1	Channel 1, Output (+)		
A2	Channel 1, Output (-)		
A3	Not Connected	C5	Channel 1, DC Input (-)
A4	Channel 2, Output (+)	C6	Channel 1, DC Input (+)
A5	Channel 2, Output (-)	B1	Not Connected
A6	Not Connected	B2	Not Connected
C1	Not Connected	B3	DC Power (+)
		B4	DC Power (-)

Dimensions



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WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC., warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence. The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY RETURNS**, please have the following information available BEFORE contacting OMEGA.

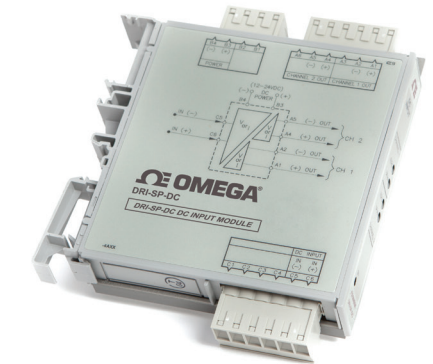
1. Purchase order number which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords customers the latest technology and engineering. OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

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FOR **NON-WARRANTY RETURNS**, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA.

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product and
3. Repair instructions and/or specific problems relative to the product.



DRI-SP-DC

DC Powered 4 to 20 mA Input Signal Splitter

INSTRUCTION
SHEET

M5478/0815

Shop online at omega.com e-mail: info@omega.com
For latest product manuals: www.omegamanual.info

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

- Universal DC Power 10.8 to 26.4VDC
- Plug-in Terminals

Description

The model DRI-SP-DC is a DIN rail mount, DC input signal conditioner, with 2000VAC isolation between input output and 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 four-wire transmitters are used to isolate and convert DC voltage or current signals into proportional, standard industrial control signals such as 4-20mA or 0-10V. Typically an industrial control system such as a DCS 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.

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