



DM4391

4/20 mA DC INPUT / OUTPUT LOOP POWERED ISOLATOR

FEATURES

- Provides a Fully Isolated 4/20 mAdc Output Proportional to 4/20 mAdc Input
- Operating Power Derived from the Input Current
- Single or Dual Channel
- Plug-In Terminal Blocks
- Standard DIN-Rail Mount with Easy Snap-On Snap-Off
- User Write-On Label
- Connections Readily Accessible from the Front
- Permanent Warranty

DESCRIPTION

The DM4391 is a loop powered isolator that provides an isolated 4/20mA output proportional to a 4/20 mA input.

All operating power for the circuit is derived from the 4/20 mA input current.

The product is useful for breaking ground loops and for creating a 4/20 mA output in locations where primary power is not available.

A unique feedback system allows the DM4391 to achieve the same linearity as

powered isolators and to drive loads from 0 ohms to 1000 ohms without affecting linearity.

The product is available as a single channel or a dual channel unit. The dual channel unit has two totally separate circuits that are fully isolated from each other.

Connections are made via two 4-pin plug-in terminal blocks. These terminal blocks allow the product to be removed without unwiring the connections.

TYPICAL APPLICATIONS

Eliminates ground loops and common mode signals in 4/20 mA current loops for isolation, buffering, noise reduction, especially where line power is NOT available.

SPECIFICATIONS

INPUT

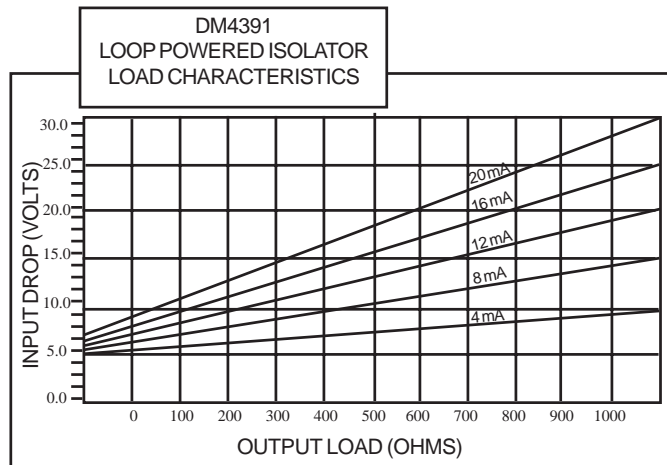
4/20 mA

INPUT VOLTAGE DROP

$$5 + (I(\text{mA}) * (\text{Load} + 7.65) / 850)$$

Typical Drop

Drop (V)	Load(ohms) at 20 mA
6.8	0
9.2	100
12.7	250
18.6	500
24.5	750
30.3	1000



OUTPUT CURRENT

4/20 mA

DRIVE CAPABILITY

0 to 1000 ohms

OUTPUT RIPPLE (Peak-to-Peak)

<0.1% of span

ISOLATION

Breakdown, Output / Input
>1000 VAC rms sinewave
Resistance
>500 megohms

LINEARITY

± 0.02% of span

COMMON MODE REJECTION

>100 dB, DC to 60 Hz
Voltage Rating
>1000 VAC sinewave

OPERATING TEMPERATURE

14 to 140 °F/-10 to +60 °C

TEMPERATURE STABILITY

± (0.02% of span)/°C

ORDERING INFORMATION

MODEL

Specify Model

- Single Channel Dual Channel

OPTIONS

- Conformal Coating

TAGS

Specify Tag Numbers

Tag number is typed on product label at no charge.

Enter Tag Number(s)

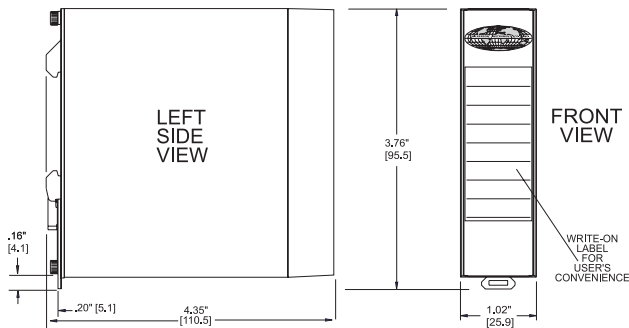
ACCESSORIES

DM4391

DR1 DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter) Qty _____

DIMENSIONS

Inches [mm]



CONNECTIONS

	<u>SINGLE</u>	<u>DUAL</u>
TERM 1	Input +	Input 1 +
TERM 2	Input -	Input 1 -
TERM 3	No Connection	Input 2 +
TERM 4	No Connection	Input 2 -
TERM 5	Output +	Output 1 +
TERM 6	Output -	Output 1 -
TERM 7	No Connection	Output 2 +
TERM 8	No Connection	Output 2 -