



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

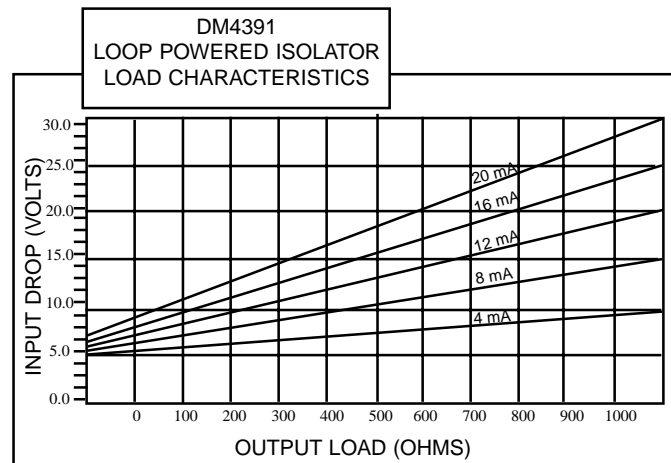
>100 dB, DC to 60 Hz
Voltage Rating
>1000 VAC sinewave

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)

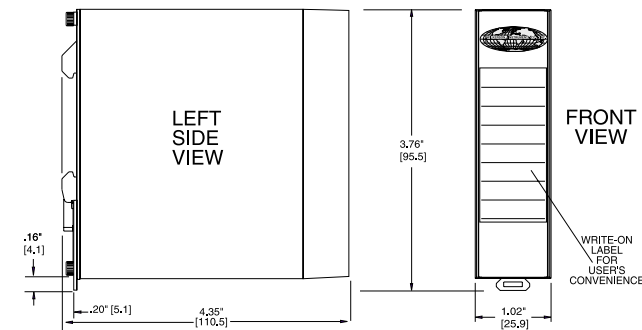
ACCESSORIES

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 -