Passive Loop Powered Isolator
MCR Series

1 YEAR WARRANTY

OMEGACARE Extended Warranty Program

A/OUT A/IN

Model MCR-CP
$206

- 3 kV Isolation
- Loop Powered
- DIN Rail Mountable

MCR's compact passive loop powered isolator provides ground potential isolation of analog control circuits, 0 to 20 mA and 4 to 20 mA. The MCR-CP ensures safe decoupling of the sensor signal from the control electronics.

No external power supply is required for the input or output circuit. The module is powered from the input signal side. The input side loop current is converted to an alternating current signal using a chopper circuit, isolated by a transformer, rectified, and filtered at the output loop.

If the output loop resistance is less than 170 ohms, the input voltage drop is 6.5 V. If the output loop resistance is between 170 ohms and 1000 ohms, the input voltage drop increases linearly from 6.5 to 23.1 V at a loop current of 20 mA.

The output signal is a current source, for a load connected between the (+) and (-) terminals.

Specifications

INPUT

Input Range: 4 to 20 mA

Power Supply: LOOP

Maximum Input Current/Voltage: 50 mA/25 V dc

Minimum Input Current: 0 mA

Input Resistance @ 20 mA: 325-1155 Ohms (depends on load)

Voltage Drop at Input: Voltage drop across the input is calculated by determining the load resistance of the output loop.

A load resistance of less than 170 Ohms results in a 6.5 V drop. For loads from 170 to 1000 Ohms, the formula is:

$$V_{drop} = 6.5 + 0.02 (R_{load} - 170)$$

OUTPUT

Lead/Line Resistance or Burden: ≤1000 Ohms

General Specifications

Isolation Voltage (Common Mode): 3 KV

Operating Ambient: 0 to 70°C (32 to 158°F)

Load Influence: -0.0004%/Ohm

Sum of Errors, % of FS: ≤0.3% F.S.

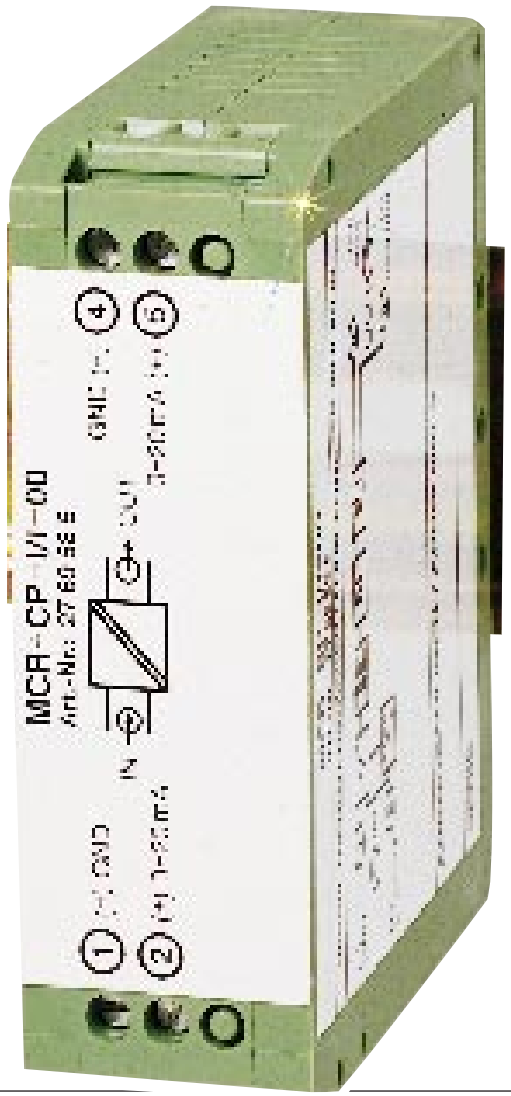
Temperature Coefficient: ≤0.005%/K

Sinusoidal Input Frequency Limit: 35 Hz

Maximum Wire Size: 14 AWG

Dimensions: 0.985" W x 3.11" H x 3.66" D (25 mm x 79 mm x 93 mm)

Mounting: 35 mm DIN Rail



Shown larger than actual size



The MCR series is a complete family of DIN rail signal conditioners for thermocouples, RTDs, frequency, current, as well as setpoint alarm, isolation and threshold switch modules

U.S. AND CANADA

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For technical assistance, call:

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1-800-DAS-IEEE

To Order *(Specify Model Number)*		
Model Number	**Price**	**Description**
MCR-CP-I-I-00	**$206**	0 or 4 to 20 mA passive loop powered isolator

Ordering Example: *MCR-CP-I-I-00 passive loop powered isolator,* ***$206****.*

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