

MODEL AIMI - 0 (4) TO 20 MA PASSIVE LOOP POWERED ISOLATOR



SPECIFICATIONS

1. **INPUT RANGE:** 0(4) to 20 mA
2. **MAXIMUM INPUT CURRENT/VOLTAGE:** 40 mA/18 VDC
3. **VOLTAGE DROP AT INPUT:** 1.7 V + (20 mA * RLOAD)
4. **MAXIMUM INPUT FREQUENCY:** <75 Hz
5. **RESPONSE TIME:** 5 msec. max.
6. **OUTPUT SIGNAL:** 0(4) to 20 mA
Max. Load Resistance: ≤ 600 Ω
7. **ISOLATION VOLTAGE:** 1.5 KV, 50 Hz, for 1 minute
8. **ACCURACY:** ≤0.1% of full scale
9. **OPERATING TEMPERATURE RANGE:** -20 to +65 °C
10. **TEMPERATURE COEFFICIENT:** ≤0.002%/K of the measured value
11. **CONSTRUCTION:** Case body is black, Polyester PBT
12. **MOUNTING:** Standard DIN style rail, including top hat (T) profile rail according to EN50022 - 35 × 7.5.
13. **WEIGHT:** 2 oz (56 g)

DESCRIPTION

The AIMI0202 passive isolator is used for the electrical isolation and processing of analog 0(4) to 20 mA standard current signals. The AIMI0202 provides electrical isolation between the control electronics and process I/O. In addition, interference signals above 75 Hz are effectively suppressed.

Input and output circuit do not require separate auxiliary power. The AIMI0202 obtains power from the input signal. The modules are snapped onto symmetrical DIN rails in accordance with EN 50022.

VOLTAGE DROP AT INPUT

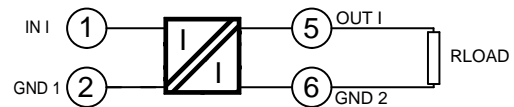
When using the AIMI0202, ensure the voltage supply is sufficient for handling both the voltage drop of the input and the output load voltage drop. The AIMI0202 input resistance will create around a 1.7 V drop.

The following formula calculates the total voltage drop (input and output). Total voltage drop = (1.7 V + (20 mA * RLOAD))

Where:

1.7 V = Input voltage drop

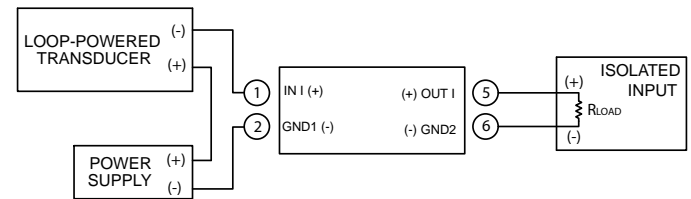
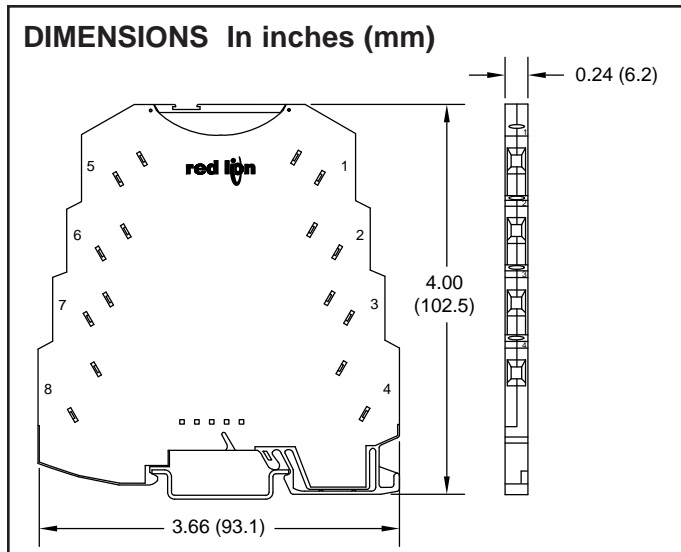
20 mA * RLOAD = Output load voltage drop



WIRING CONNECTIONS

Connect transducer to input (Terminals 1 & 2), observing polarity. A power supply may be required for loop powered transducers.

The energy for the supply on the input side is taken from the analog input signal. Due to the dynamic input resistance, a power loss of approximately 1.7 V drops at the module input. The module's output is self-powered (active), which is also derived from the input signal.



ORDERING INFORMATION

MODEL NO.	INPUT	OUTPUT	PART NUMBER
AIMI	0 (4)-20 mA	0 (4)-20 mA	AIMI0202