

Passive Loop Powered Isolator

MCR Series

\$232

Basic Unit

- Loop Powered
- Models Available with Current or Voltage Output
- Ultra Thin Profile
- Model Available with Adjustable Zero and Span
- Manual Disconnect with the URELG2-PMTK Base for Easy Troubleshooting

MCR-CP series consists of compact, terminal block mounted, passive loop powered isolators which provide ground potential isolation of 0 to 20 mA and 4 to 20 mA analog control circuits. The MCR-CP series 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 circuit.

Current output modules function with loads connected between the (+) and (-) terminals, and are compatible with load resistances between 0 ohms and 500 ohms. The input voltage drop increases linearly with and increase in loop resistance, from 2.0 to 12.0 V at a loop current of 20 mA. The MCR-CP-I/I-00-ST2-ZS module provides zero/span adjustments.

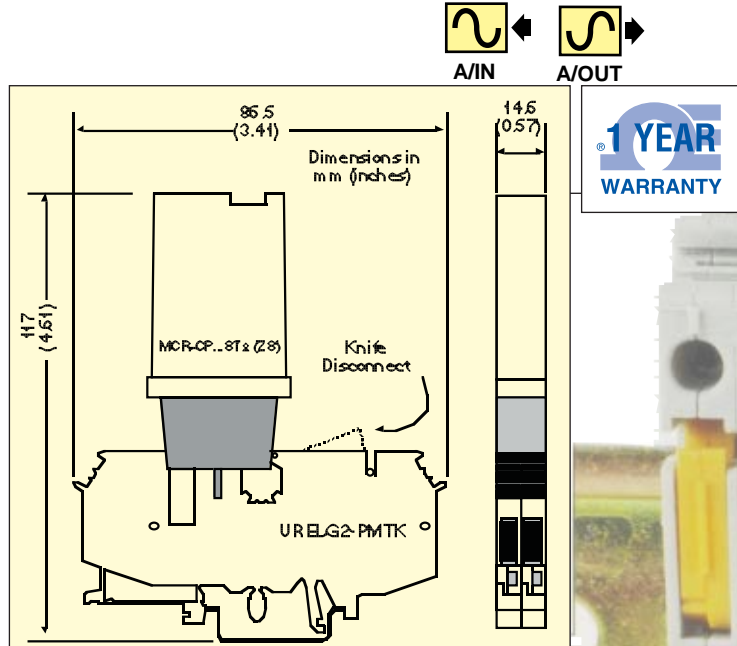
Voltage output signals function optimally with loads less than 2 MOhms, connected between the (+) and (-) terminals.

The DIN-rail mounted base provides flexibility in bridging of inputs and outputs, test point connection and installation wiring.

Specifications

INPUT

Input Range: 0 to 20 mA; 4 to 20 mA
Power Supply: Loop
Maximum Input Current/Voltage: 50



mA/30 V dc

Input Resistance @ 20 mA:
 Non-Adjustable: 100-600 Ohms;
 Zero/Span Adjustable: 180-680 Ohms

Voltage Drop at Input:
 Non-Adjustable: $V_{IN} = 2.0 + (R_L * 0.02)$;
 Adjustable: $V_{IN} = 3.6 + (R_{Load} * 0.02)$

OUTPUT

Lead/Line Resistance or Burden:
 Current output: ≤ 500 ohms; voltage output: ≤ 2 Mohms

Adjustment Range (-ZS only): Zero: $\pm 1.5\%$; span: $\pm 5\%$

General Specifications

Isolation Voltage (Common Mode): 1.5 KV

Operating Ambient: -20 to 65°C

Load Influence, Voltage Output: $< 0.1\%$

Load Influence, Current Output: $RL < 500\Omega: < 0.2\%/500\Omega$

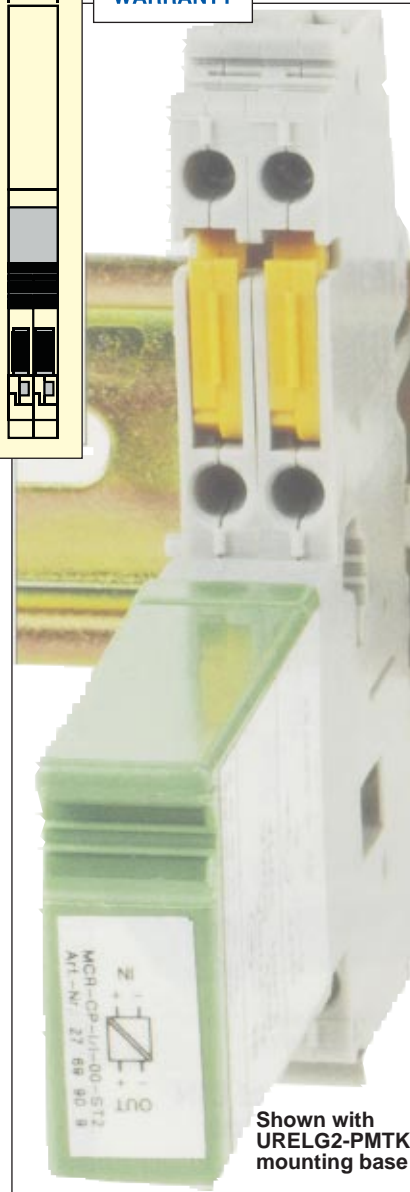
Sum of Errors, % of FS: $\leq 0.1\%$

Temperature Coefficient: $\leq 0.005\%/K$

Sinusoidal Input Frequency Limit: 30 Hz

Maximum Wire Size: 14 AWG

Mounting: 32 or 35 mm DIN rail



Shown with URELG2-PMTK mounting base

To Order (<i>Specify Model Number</i>)			
Model Number	Price	Input	Output
MCR-CP-I/I-00-ST-2	\$232	0(4)-20 mA	0(4)-20 mA
MCR-CP-I/U-0-ST-2	232	0-20 mA	0-10 V
MCR-CP-I/I-00-ST-2ZS	242	0-20 mA	0-20 mA

Ordering Example: MCR-CP-I/I-00-ST-2 loop powered isolator, and URELG2-PMTK 232 + 22 = \$254.

Accessories

Model Number	Price	Description
URELG2-PMTK	\$22	Mounting base