Monnit
Wireless 0-1 mA Current Meter

General Description

The Wireless 0-1 mA DC Current Meter is designed to work with the Flex-Core MCT5 current transducer that converts 5 Amps AC into a DC signal up to 1 mA. (Additionally a current transformer (CT) can be used to interface the MCT5 to higher amperage systems.)

Features

- Measures current up to 1 mA DC.
- Free iMonnit basic online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email.

Principle of Operation

By connecting the leads of the Monnit wireless 0-1 mA current meter to the output of the Flex-Core MCT5 current transducer, the sensor will wirelessly transmit the data through a Monnit Gateway to the iMonnit Online Sensor Monitoring and Notification System. The sensors data is transformed back to the original current reading and stored in the online system where it can be reviewed and exported as a data sheet or graph. Notifications can be set up through the online system to alert the user when certain thresholds have been met or exceeded.
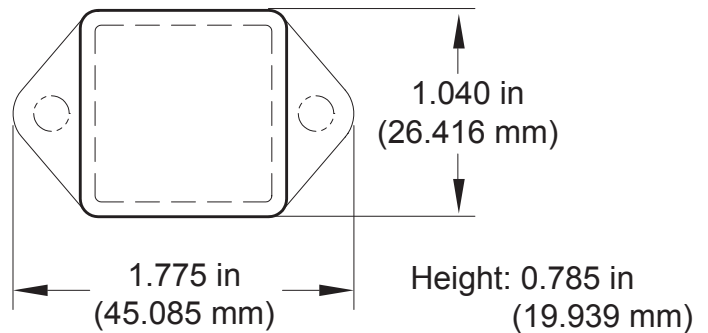
Power Options

Sensors are powered by a replaceable 3.0 V coin cell battery. Optional AA battery powered sensors are available. The AA version of these sensors are larger in size (3" [L] x 2.1" [W] x 1.2" [H]) and include two long-life AA batteries.

It is recommended that unless you are using the AA battery solution, you set heartbeat to no faster than one hour to preserve battery life.

Monnit Sensors
Core Specifications

- Power: Replaceable 3.0 V coin cell battery
- Communication: RF 900, 920, 868 and 433 MHz
- Dimensions: 1.775" x 1.040" x 0.785"
- Antenna: 4" wire antenna
- Operating Temperature: -7° to 60°C (20° to 140°F)
- Device Range: 250 - 300 ft. non-line-of-sight*
- Battery Life: At 1 hour heartbeat setting, coin cell battery will last ~ 1-2 years.**

* Actual range may vary depending on environment.
** Battery life is determined by sensor reporting frequency and other variables.

1.040 in
(26.416 mm)

1.775 in
(45.085 mm)

Height: 0.785 in
(19.939 mm)

The Leader in Low Cost Wireless Sensors

Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC *
Current Consumption	0.7 µA (sleep mode) 2 mA (radio idle/off mode) 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Coin Cell)	-7°C to +60°C (20°F to +140°F)**
Optimal Battery Temperature Range (Coin Cell)	+10°C to +50°C (+50°F to +122°F)
Sensor Resolution 0-1 mA Input 0-5 Amp Input 200 Amp CT Input	11-bit single ended ~ 0.5 µA ~ 2.5 mA ~ 10 mA
Conversion Time	228 µs
Full Scale Current	0 - 1 mA ***
Input Resistance	1.2 kohms
Certifications	FC CE Industry Canada 900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 920 MHz product; ARIB STD-T108 R210-103733. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).

   * Hardware can not withstand negative voltage. Please take care when connecting a power device.

  ** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

 *** If application exceeds 1 mA the sensor will return a maximum reading of 1 mA.
If current applied to measurement port exceeds 2 mA, circuit protection and conditioning is required.

Caution/Notice:

This product is designed for application in an ordinary environment (normal room temperature, humidity and atmospheric pressure). Do not use this sensor under the following conditions as these factors can deteriorate the product characteristics and cause failures and burn-out.

- Corrosive gas or deoxidizing gas - chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxides gas, etc.).
- Volatile or flammable gas.
- Dusty conditions.
- Under low or high pressure.
- Wet or excessively humid locations.
- Places with salt water, oils chemical liquids or organic solvents.
- Where there are excessively strong vibrations.
- Other places where similar hazardous conditions exist.

Use this product within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality of this product.

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For more information about our products or to place an order, please contact our sales department at 801-561-5555.

Visit us on the web at www.monnit.com.

Monnit Corporation
4403 South 500 West
Murray, UT 84123
801-561-5555
www.monnit.com