



AMCI Rectifier Monitor

Wireless Mesh Networking
Web Interface
SCADA Accessible
Low-Power, Solar Energy

Product Highlights

The **AMCI Rectifier Monitor (RMU)** is a cost effective solution to a variety of CP monitoring needs – rectifiers, critical bonds, test points. Its unique mesh design establishes a local communication network consisting of a base station (gateway) and compact CP nodes. When a line-of-sight exists between the base station and a node, the system is easily capable of transmission distances of several thousand feet. In addition, “hopping”, or relaying data packets, from one node to the next can extend coverage (maximum of 3 hops). No need to replicate costly cellular or satellite communications hardware to monitor nearby rectifiers, test points or critical bonds; just add the appropriate node. The **AMCI RMU** is designed to stand up to tough CP environments – the cellular or satellite communication gateway and node are physically separated. In addition, relays in the nodes, which provide 12 KV of surge protection, disconnect from the CP structure between measurements.



Base Station

Power for Real Time Operation

An inconspicuous 3 sq. in. solar panel provides a reliable power source to recharge the gateway and CP node's battery. Ample power allows the system to operate real time to receive commands, update configuration data (i.e. alarm trip points), reporting frequencies, upgrade software and upload data files. The solar panel and battery pack have a design life of 8-10 years under normal operating conditions.



Node

Batteries are low-cost and not classified as hazardous, eliminating the need for special handling during shipping and disposal.

Telemetry

The **AMCI RMU** is available with GSM/GPRS, CDMA, or satellite telemetry. The satellite LEO telemetry is small and compact; no need for extra power supplies (i.e. many satellite geostationary transceivers have power consumption requirements that can be 50 times greater); does not require special installation procedures often require with geostationary satellites.

Website

The **AMCI RMU** is completely configurable on the AMCI website; define input parameters, alarm trip points, alarm notification (email, voice, SMS), reporting frequency, etc. All data is delivered to the AMCI website where it can be downloaded in a number of file formats to facilitate importing into an existing record keeping database. A SCADA interface option is also available.

Technical Specifications

Specifications			
Cellular	GSM /GPRS Quad Band – Part # MSH 4301		
Cellular	CDMA – Part # MSH4302		
Satellite	Satellite (Iridium)– Part # MSH4310		
Operating Environment	Temp: -35°C to +80°C Humidity: 0-95% non-condensing		
Power	Solar panel. Internal battery pack rechargeable; 8-10 year life under normal operating conditions. Reserve power: 4-6 months of standby power.		
Size	Gateway - 2" D x 15" L: CP Node - 6½"L x 3"W x 1H" .		
Inputs	Reading	Resolution	Range
	Rectifier Voltage Channel (DC)	0.1V	0-100 V
	Rectifier Current Channel (DC)	0.1 mV	-50/50 mV
	Ref Cell Channel (DC)	0.005 V	0-3 V
Website	Monitoring	Features	
	Configure/define inputs	On/Off AC rectifier power	
	Set reporting frequency	Voltage Channel 200 V	
	Set alarm thresholds	Current Channel -100/100 mV	
	Select notification method	Ref Channel – 0-5 V	