

The RMU5 is a scalable remote monitoring and control device designed specifically for cathodic applications. Optional precise and accurate rectifier interruption timing is attained with GPS and microprocessor technology. A small physical size and wide operating temperature range make this device ideally suited for installation within field rectifiers.

### Features:

- Four galvanically isolated bi-polar analog input channels configurable for +/-158mV, +/-7.5V, and +/-175VDC ranges. Both DC and AC readings. High impedance inputs capable of directly measuring reference cells. All analog inputs capable of accepting 4-20mA transducer measurements
- High-performance 200MHz ARM9-based processing platform
- 64MB RAM
- 32MB Flash storage for OS and applications
- Microsoft Windows Embedded CE 6.0 OS
- Integral health monitoring of internal voltages and temperature
- 20 x 4 character wide-temperature range LCD screen for local status monitoring with no additional equipment
- USB peripheral with RNDIS function characteristics for unit configuration from a PC
- USB host for additional USB flash drive or communications expansion
- One digital input capable of dry contact or voltage input (optically isolated)
- One ground switched digital output with 750mA sinking capability and 12VDC power. Primarily used for rectifier interruption relay drive
- 24VAC/DC main power input, used with external Class 2 power transformer or external DC-DC converter
- Integral battery backup allowing up to 8 hours of operation during main power fail conditions
- Easy configuration through a PC-based graphical user interface
- Scheduler for future rectifier interruption cycles
- Scheduler for input datalogging
- Programmable alarm window capability on all input channels
- NEMA 4X, IEC529 Type IP65 enclosure for harsh environments
- Unit with standard backup battery operates in -35° to +60°C (-31° to +140°F) ambient temperatures



The base product can be augmented through the following optional components:

- GPS time synchronized rectifier interruption control board
- Internal large capacity Flash drive for datalogging storage (1GB to 8GB, factory installed)
- Compact ISAT satellite transceiver with operation from -40° to +70°C (-40° to +158°F)
- Extended temperature backup battery to allow operation from -40° to +80°C (-40° to +176°F)

## Specifications:

### Environmental:

Operating temperature:	
Standard battery	-35 to +60C (-31 to +140F)
Extended battery	-40 to +80C (-40 to +176F)
Storage temperature:	-40 to +80C (-40 to +176F)
Humidity:	0 to 100% RH non-condensing

### Physical:

Enclosure:	Fiberglass waterproof case (IP65, NEMA 4X rated), versatile aluminum mounting plate
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Size:	165 x 254 x 114 mm (6.5" x 10" x 4.5")
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Weight:	3.2 kgs (7 lbs)
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### Power:

Operating voltage range:	18 to 26 volts AC (50/60Hz) or 18 to 39 volts DC
Power (less accessories):	5 watts maximum

### Processing Core:

CPU:	200MHz ARM9 processor
Memory:	32MB flash/64MB SDRAM
Operating System:	MS Windows CE 6.0
Display:	4 line by 20 character backlit LCD
Hard Keys:	1 reset/power down, 2 for up/down control

Ethernet Interface:	10/100 Base-T
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### PC Configuration Connection:

Electrical Connection:	USB 2.0 Peripheral
USB Function:	RNDIS
PC OS requirements:	Windows XP SP2 or higher
PC application S/W:	Supplied by Mobiltex

### Interruption Output:

Relay drive voltage:	12 volts DC
Relay drive current:	0.75 Amps maximum
Relay open/close dwell:	0-100 ms
Relay contact type:	NO or NC
Relay type:	External solid state or mechanical
Off Time:	100 – 60,000ms in 1ms steps
Cycle Time:	200 – 60,000ms in 1ms steps
Schedules (date and time):	1

### Analog Inputs:

Ranges:	+/-0.158V, +/-7.5V, +/-175Vpeak
Input Impedance:	20MOhm minimum
ADC Resolution:	16-bit
Maximum sampling rate:	20 sps per channel

### Digital Input:

Optically isolated (3 to 30VAC/DC activation)

### Sensor Bus:

RS-485 plus 1PPS, interrupt synch, and +12V power

### Serial Communications:

1 RS-232, 1 RS-485

### USB Host:

1 non-dedicated, user accessible port

### GPS-Synchronized Interruption Option Board:

Operating temperature range:	-40 to +80C (-40 to +176F)
Installation:	Factory or qualified field technician
UTC Reference offset adjustment:	-2000 to +3000ms
Timing accuracy (AC sync off):	+/-0.5 ms
Timing accuracy (AC sync on):	+8.8/-0.5 ms
Off Time:	1 – 60,000ms in 1ms steps
Cycle Time:	2 – 60,000ms in 1ms steps
GPS Receiver:	Internal 20 channel
GPS Antenna:	External through-hole mount with SMA

### Datalog Storage Option Board:

Storage Memory Type:	USB 2.0 embedded drive
Storage Memory Size:	Available in 1GB, 8GB

## Ordering:

### A20A03RMU50 Standard ISAT RMU5 package:

- RMU5 with standard temperature backup battery
- GPS-synchronized interruption option board
- GPS antenna c/w 6 mtr (20 ft) coax cable kit
- 1GB datalog storage option board

### A20A03ISAT1: ISAT Transceiver kit:

- Compact DMR-800 ISAT transceiver
- DRI1 adapter board for RMU5
- antenna mounting bracket with hardware

W16400ISAT1: 1 meter (3.2') Interconnection Cable

W16400ISAT2: 10 meter (32.8') Interconnection Cable

An external Class II power transformer and external interrupter relay are required for most typical installations.

