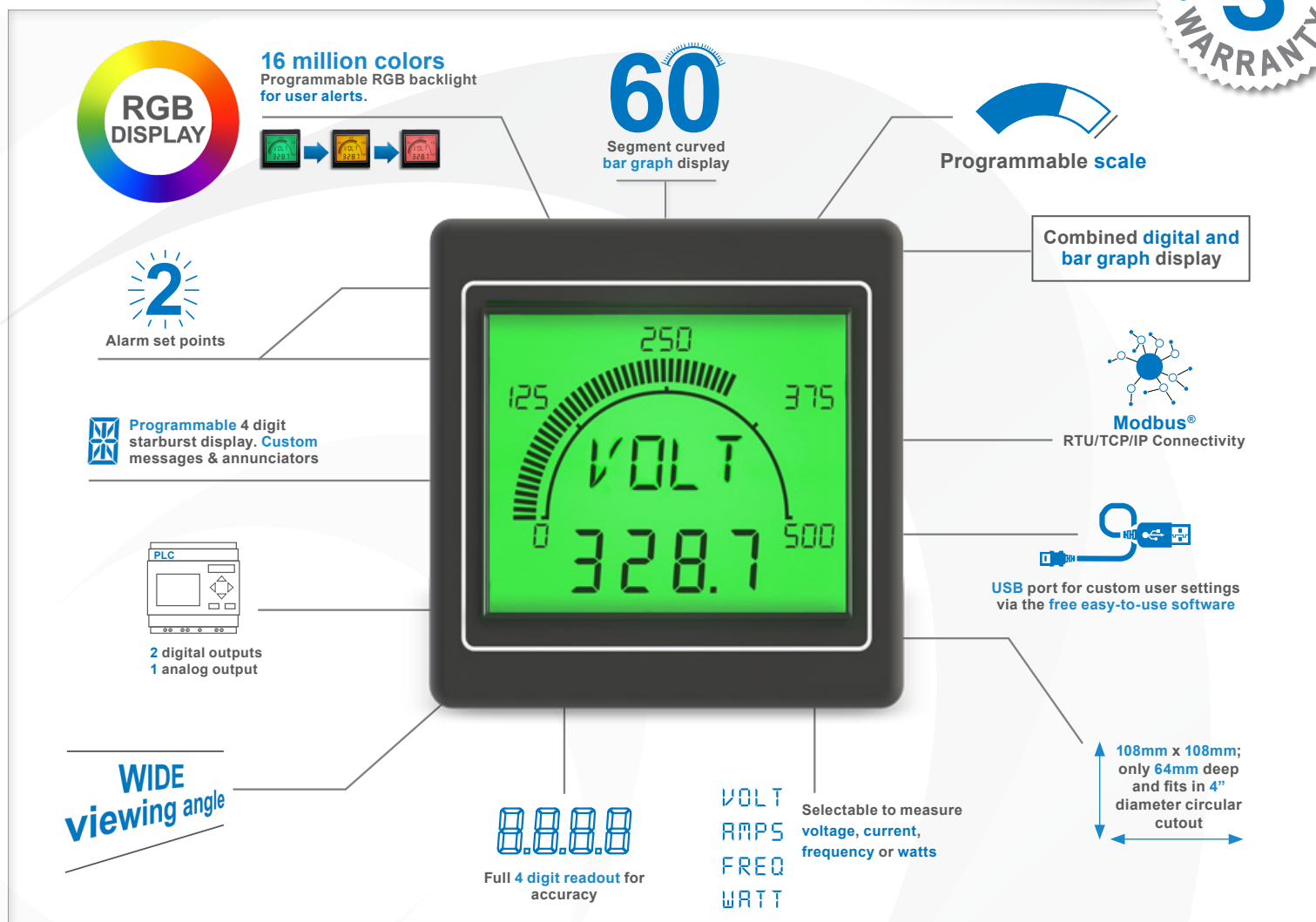


# APM-MAX

## M21 and M23



Designed for a wide range of power monitoring applications, the APM-MAX combines the instant visual representation of an analog meter with the speed and accuracy of a digital meter for instant recognition and precision measurement. The large 81.5mm x 66mm display features a two-line display, programmable scale, alarm set-points and color-changing, full color RGB backlight for instant alerts.

**APM-MAX-M21:** for high voltage applications; configurable as an ammeter, volt meter, frequency meter or power monitor (Watts, VA & Power Factor).

**APM-MAX-M23:** for low voltage applications; configurable as a process meter or to be used in conjunction with a shunt.

Both models feature digital and analog outputs and serial MODBUS® RTU as standard (ethernet MODBUS® also available) for communication with other components in a system, IP65 and NEMA type 4 & 12 ratings, as well as our industry leading three-year warranty.

## Key Features

### Large multi-format display that incorporates:

- 60 segment bar graph display
- Large 4 digit display
- Separate Starburst display area for annunciators, custom messages and alarm information
- Full color RGB dynamic backlight for user alerts

## Specifications

### MEASUREMENT

|                               | M21                      | M23        |
|-------------------------------|--------------------------|------------|
| Input range (V1)              | 0-600V DC/AC 47-63Hz     | 0-10V DC   |
| Input range (V2)              | -                        | 0-5A DC    |
| Current Input range (Direct)  | 0-5A DC/AC 45-65Hz       | 0-50mA DC  |
| Current Input range (w/shunt) | 0-500mV DC               | 0-500mV DC |
| Frequency (AC)                | 0-400Hz                  | 0-400Hz    |
| Power Measurement             | Watts, VA & Power Factor | -          |

|                           |      |
|---------------------------|------|
| Accuracy (DC & Frequency) | 0.1% |
| Accuracy (AC)             | 0.5% |
| Display modes             | RMS  |

### ENVIRONMENTAL

|                            |                      |
|----------------------------|----------------------|
| Temperature - operating    | -10 to +60°C         |
| Temperature - storage      | -40 to +70°C         |
| IP rating (from the front) | IP65 and Nema 4 & 12 |

### POWER SUPPLY

|                  |                             |
|------------------|-----------------------------|
| Universal (AC)   | 100-240 V AC (50-60Hz)      |
| Low Voltage (DC) | 12-24V AC/DC (50-400Hz AC)^ |

### DISPLAY

|                              |                              |
|------------------------------|------------------------------|
| Number of digits             | 4                            |
| Digit height                 | 14.5mm [0.57"]               |
| Digit height of annunciator  | 6.8mm [0.27"]                |
| Number of message characters | 4                            |
| Backlight colors             | Full RGB backlight and White |
| LCD display                  | Positive or Negative         |

### OUTPUTS

|               |                 |
|---------------|-----------------|
| Max voltage   | 34V             |
| Max current   | 500mA           |
| Analog output | 4-20mA or 0-10V |

### COMMUNICATION

|         |                   |
|---------|-------------------|
| Modbus® | RTU and/or TCP/IP |
|---------|-------------------|

### CERTIFICATION

|  |                 |
|--|-----------------|
|  | UL and cUL^, CE |
|--|-----------------|

^ Units with Low Voltage power supplies are not UL compliant

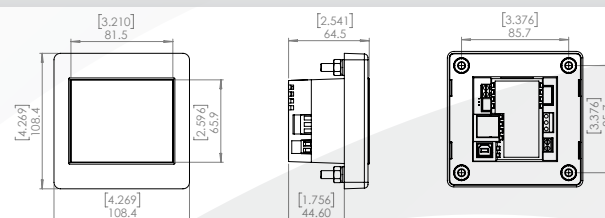
### Programmable:

- Scaling and Range (min and max)
- Custom annunciators
- User selectable backlight color and intensity
- Two independent alarm set-points
- Two independent outputs
- 4-20mA analog monitor output

### Visibility:

- The largest display of any APM
- User adjustable RGB backlight provides an almost infinite range of colors for different requirements or environmental conditions.
- Wide viewing angle (both horizontal and vertical)
- Custom annunciators

### Dimensions:



Panel cutout: Square: 68mm x 68mm [2.7" x 2.7"] Circle Diameter: 96mm [3.8"]

### Part Numbers

#### Standard Models - Modbus RTU

- APM-MAX-M21-PU-4R** Positive LCD, volt, amp, freq or power monitor, RTU  
**APM-MAX-M23-PU-4R** Positive LCD, process or shunt meter, RTU  
**APM-MAX-M21-NU-4R** Negative LCD, volt, amp, freq or power monitor, RTU  
**APM-MAX-M23-NU-4R** Negative LCD, process or shunt meter, RTU

#### Standard Models - Modbus TCP/IP and RTU

- APM-MAX-M21-PU-4B** Positive LCD, volt, amp, freq or power monitor, TCP/IP and RTU  
**APM-MAX-M23-PU-4B** Positive LCD, process or shunt meter, TCP/IP and RTU  
**APM-MAX-M21-NU-4B** Negative LCD, volt, amp, freq or power monitor, TCP/IP and RTU  
**APM-MAX-M23-NU-4B** Negative LCD, process or shunt meter, TCP/IP and RTU

### Options

| DESCRIPTOR | DEFINITION     | OPTIONS                                                                                      |
|------------|----------------|----------------------------------------------------------------------------------------------|
| -?X-XX     | LCD Type       | P - Positive<br>N - Negative LCD also available*                                             |
| -X?-XX     | PSU Type       | U - Universal 100-240V AC 45-65 Hz<br>L - Low Voltage 12-24V DC / AC 45-65Hz also available* |
| -XX-?X     | Analog Output  | 4 - 4 to 20mA / 0 - 20mA switchable<br>1 - 0 to 10V DC also available*                       |
| -XX-X?     | Communications | R - Modbus® RTU<br>B - Modbus® TCP/IP and Modbus® RTU                                        |

\*MOQ dependant