



One of the world's leading specialist manufacturers of counting and measuring instrumentation, we have been manufacturing counters, timers, speed and length measuring systems for use across a wide range of industries for over 50 years.

Since launching the world's first miniature electronic self-powered LCD counter with a 10-year operating life in 1984, we have been using horizon technologies in the development and manufacture of electronic OEM systems for both industrial and commercial applications.

Trumeter prides itself on working in close partnership with its customers, building a reliable and sustainable association, by establishing open and constructive relationships Trumeter is able to deliver the best possible service.

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Distributor:



INTRODUCING THE NEW APM & DPM RANGE OF MULTICOLOURED DIGITAL PANEL METERS



TrumeterInstrumentation a division of Trumeter Company Limited

| Backlight Options | DPM812 DPM822 DPM652 DPM752 DPM951 DPM952 DPM961 DPM962 | APMDCV APMACV APMDCA APMACA APMDCUA APMACUA APMDCMA APMACMA | DPM981 DPM982 |
|---------------------|--|--|---|
| (R) No Backlight | | | |
| (TG) Green | | | |
| (TB) Blue | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |
| (TW) White | | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |
| (NTG) Reverse Green | | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |
| (NTB) Reverse Blue | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |
| (NTW) Reverse White | | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |
| (NTR) Reverse Red | | | AVAILABLE FOR PRIVATE LABEL VOLUME ENQUIRIES CONTACT US |



DPM752
Digital Ammeter range 0-2A with hold function, and low battery indication. Optional backlight



DPM951 | DPM952
With DPMDCA and DPMACA current measurement adaptors.



DPM95X & DPMLP Adaptor
Add the DPMLP adaptor to the DPM951 and DPM952 to create an inexpensive process meter.

Description DPM752

Low cost digital ammeter module operating from a 9 Volt floating supply. Annunciators for common engineering units are selectable as is the decimal point placement. A large easy to read LCD display with optional green backlight, capable of 9VDC or 12VDC operation making it ideal for many applications such as power supply manufacturers, machine builders, indication of current in vehicles, and many other instrumentation applications.

Features DPM752

- Low power consumption
- 9 volt DC operation
- Low battery warning
- Annunciators for common engineering units and decimal point
- Hold function
- Auto-polarity
- Range: 0-200µADC, 0-2mADC, 0-20mADC, 0-200mADC, 0 - 2ADC jumper link selectable

Specifications DPM752

| | MIN | TYP | MAX | UNITS |
|---------------------------|------|-----|------|---------|
| Accuracy (±1 Count) | | | | |
| 200µA-200mA | | 0.5 | 2 | % |
| 2A | | 2 | 5 | % |
| Linearity | | | ±1 | LSD |
| Sample Rate | | 3 | | per sec |
| Temp Stability | | 30 | | ppm/°C |
| Operating Temperature | -10 | | 50 | °C |
| Storage Temperature | -20 | | 70 | °C |
| Supply Voltage | 7 | 9 | 12 | Vdc |
| Supply Current | | 0.5 | 2 | mA |
| Backlight Voltage (9VDC) | 8.5 | 9 | 9.5 | Vdc |
| Backlight Voltage (12VDC) | 11.5 | 12 | 12.5 | Vdc |
| Backlight Current | | | 40 | mA |

Dimensions (DPM Meters)

* See page 8 for product dimensions.

Ordering Information (36mm x 72mm)

Order by type number:
 DPM752-R (NO BACKLIGHT)
 DPM752-TG (GREEN)
 DPM752-TB (BLUE)
 DPM752-TW (WHITE)
 DPM752-NTG (NEGATIVE GREEN)
 DPM752-NTB (NEGATIVE BLUE)
 DPM752-NTW (NEGATIVE WHITE)
 DPM752-NTR (NEGATIVE RED)

When a DPM95X meter is combined with a current adaptor it is possible to measure current up to 1.999 Amps. The adaptors are available in AC and DC versions.

Description DPM951 | DPM952

These meters are available in two bezel sizes (24mm X 48mm, and 36 X 72mm). They are available in backlight or none backlight versions. The details of these units are shown on page 9.

Description DMPDCA (DC Current adaptor)

The adaptor fits onto the rear of any of the meters shown above. It allows the meter to be powered by a supply of 8 to 30VDC, an on board regulator powers the internal meter circuits and the backlight (on DPM units fitted with a backlight - T versions). The adaptor enables the meter to measure up to ± 1.999 Amps DC. Range selection, and decimal point selection is configured using jumper links.

Description DMPACA (AC Current adaptor)

The adaptor fits onto the rear of any of the meters shown above. It allows the meter to be powered by a supply of 8 to 30VDC, and on board regulator powers the internal meter circuits and the backlight (on DPM units fitted with a backlight-T versions). The adaptor enables the meter to measure up to 1.999 Amps AC. Range selection, and decimal point selection is configured using jumper links.

Dimensions (DPM Meters)

* See page 8 for product dimensions.

Ordering Information (24mm x 48mm bezel)

Order by type number:
 DPM951-R DPM951RM-R (NO BACKLIGHT)
 DPM951-TG DPM951RM-TG (GREEN)
 DPM951-NTG DPM951RM-NTG (NEGATIVE GREEN)
 DPM951-NTR DPM951RM-NTR (NEGATIVE RED)

Ordering Information (36mm x 72mm bezel)

Order by type number:
 DPM952-R DPM952RM-R (NO BACKLIGHT)
 DPM952-TG DPM952RM-TG (GREEN)
 DPM952-NTG DPM952RM-NTG (NEGATIVE GREEN)
 DPM952-NTR DPM952RM-NTR (NEGATIVE RED)

Adaptor Ordering Information

DPMDCA DC Current Adaptor
 DPMACA AC Current Adaptor

When a DPM95X or DPM951RM and DPM952RM meter is combined with a 4 to 20mA adaptor it is possible to indicate the value required from a 4 to 20mA signal.

Panel Meter Adaptor

DPMLP - 4 to 20mA Loop powered adaptor - this allows the unit to be connected to a 4 to 20mA signal, the unit derives its power from the signal, allowing the meter to indicate the value which is scalable up to 1999. Provides a low cost process meter solution. The backlight is not powered by the adaptor, and if the backlight is required, a separate DC supply would be required.

Ordering Information (24mm x 48mm bezel)

Order by type number:
 DPM951-R DPM951RM-R (NO BACKLIGHT)
 DPM951-TG DPM951RM-TG (GREEN)
 DPM951-NTG DPM951RM-NTG (NEGATIVE GREEN)
 DPM951-NTR DPM951RM-NTR (NEGATIVE RED)

Ordering Information (36mm x 72mm bezel)

Order by type number:
 DPM952-R DPM952RM-R (NO BACKLIGHT)
 DPM952-TG DPM952RM-TG (GREEN)
 DPM952-NTG DPM952RM-NTG (NEGATIVE GREEN)
 DPM952-NTR DPM952RM-NTR (NEGATIVE RED)

Adaptor Ordering Information

DPMLP 4 to 20mA Loop Powered Adaptor



DPM981 | DPM982

Low cost digital panel meter. Large, easy to read LCD display. Shown with green backlight.



DPM652

Digital DC voltmeter range 0-200VDC with hold function and low battery indication. Optional backlight.



DPM95X & ADAPTOR

Add the DPMDCV or DPMACV adaptor to the DPM panel meter to create an inexpensive AC or DC voltmeter.

Description DPM981 | DPM982

Low cost digital panel meter operating from a 9 Volt floating supply, with a measuring range of -199.9mV to +199.9mV. Features include a hold function, and low battery warning (warning annunciator on screen). Annunciators for common engineering units are selectable, as is decimal point placement. A large easy to read LCD display with optional green backlight makes the unit an ideal instrument for many applications such as power supply manufacturers and machine builders, along with any manufacturer of instrumentation using displays.

Rear Mounting Option

All versions are available in 24mm X 48mm and 36mm X 72mm options. This version allows easy installation into customer equipment. For example behind a custom membrane front panel.

Features

- Low power consumption
- 9V DC supply
- Annunciators and decimal point
- Low battery warning annunciator
- Display hold function
- Auto Polarity
- ±199.9mV full scale reading
- Optional backlight can be powered by 9VDC or 12VDC

Specifications DPM981 | DPM982

| | MIN | TYP | MAX | UNITS |
|---------------------------|------|-----|------|---------|
| Accuracy (±1 LSD) | | 0.1 | 0.5 | % |
| Linearity | | | ±1 | LSD |
| Sample Rate | | 3 | | per sec |
| Temperature Stability | | 30 | | ppm/°C |
| Operating temperature | -10 | | 50 | °C |
| Storage temperature | -20 | | 70 | °C |
| Supply voltage | 7 | 9 | 12 | VDC |
| Supply current | | 0.5 | 2 | mA |
| Backlight voltage (9VDC) | 8.5 | 9 | 9.5 | VDC |
| Backlight voltage (12VDC) | 11.5 | 12 | 12.5 | VDC |
| Backlight current | | | 40 | mA |
| Input Impedance | | | 100 | MΩ |

Dimensions DPM981 | DPM982

* See page 8 for product dimensions.

Ordering Information (24mm x 48mm bezel)

DPM981-R DPM981RM-R (NO BACKLIGHT)
 DPM981-TG DPM981RM-TG (GREEN)

Ordering Information (36mm x 72mm bezel)

DPM982-R DPM982RM-R (NO BACKLIGHT)
 DPM982-TG DPM982RM-TG (GREEN)

Description DPM652

Low cost digital DC voltmeter module operating from a 9 Volt floating supply. Annunciators for common engineering units are selectable as is the decimal point placement. A large easy to read LCD display with backlight options are TG, TB, TW, NTG, NTB, NTW & NTR (see ordering details). capable of 9VDC or 12VDC operation making it ideal for many applications such as power supply manufacturers, machine builders, indication of voltage and current in vehicles, and many other instrumentation applications.

Features DPM652

- Low power consumption
- 9 volt DC operation
- Low battery warning
- Hold function
- Auto-polarity
- Range: 0-200mVDC, 0-2VDC, 0-20VDC-200VDC jumper link selectable

Specifications DPM652

| | MIN | TYP | MAX | UNITS |
|---------------------------|------|-----|------|---------|
| Accuracy (±1 Count) | | 0.5 | 2 | % |
| Linearity | | | ±1 | LSD |
| Sample Rate | | 3 | | per sec |
| Temp Stability | | 30 | | ppm/°C |
| Operating Temperature | -10 | | 50 | °C |
| Storage Temperature | -20 | | 70 | °C |
| Supply Voltage | 7 | 9 | 12 | Vdc |
| Supply Current | | 0.5 | 2 | mA |
| Backlight Voltage (9VDC) | 8.5 | 9 | 9.5 | Vdc |
| Backlight Voltage (12VDC) | 11.5 | 12 | 12.5 | Vdc |
| Backlight Current | | | 40 | mA |
| Input Impedance | | 1 | | MΩ |

Dimensions DPM652

* See page 8 for product dimensions.

Ordering Information

Order by type number:
 DPM652-R (NO BACKLIGHT)
 DPM652-TG (GREEN)
 DPM652-TB (BLUE)
 DPM652-TW (WHITE)
 DPM652-NTG (NEGATIVE GREEN)
 DPM652-NTB (NEGATIVE BLUE)
 DPM652-NTW (NEGATIVE WHITE)
 DPM652-NTR (NEGATIVE RED)

Panel Meter Adaptors

When a DPM95X or DPM951RM and DPM952RM meter is combined with a voltage adaptor it is possible to measure voltage. The adaptors are available in AC and DC versions.

Description DPM951 | DPM952

These meters are available in two bezel sizes (24mm X 48mm, and 36 X 72mm), and rear mount (DPM versions only). They are available in backlit or none backlit versions. The details of these units are shown on page 9.

Description DMPDCV (DC Voltage adaptor)

The adaptor fits onto the rear of any of the meters shown above. It allows the meter to be powered by a supply of 8 to 30VDC, and on board regulator powers the internal meter circuits and the backlight (on DPM units fitted with a backlight - T versions). The adaptor enables the meter to measure up to ± 199.9 Volts DC. Range selection, and decimal point selection is configured using jumper links.

Description DMPACA (AC Voltage adaptor)

The adaptor fits onto the rear of any of the meters shown above. It allows the meter to be powered by a supply of 8 to 30VDC, an on board regulator powers the internal meter circuits and the backlight (on DPM units fitted with a backlight-T versions). The adaptor enables the meter to measure up to 300 voltsAC. Range selection, and decimal point selection is configured using jumper links.

Ordering Information (24mm x 48mm bezel)

Order by type number:
 DPM951-R DPM951RM-R (NO BACKLIGHT)
 DPM951-TG DPM951RM-TG (GREEN)
 DPM951-NTG DPM951RM-NTG (NEGATIVE GREEN)
 DPM951-NTR DPM951RM-NTR (NEGATIVE RED)

Ordering Information (36mm x 72mm bezel)

Order by type number:
 DPM952-R DPM952RM-R (NO BACKLIGHT)
 DPM952-TG DPM952RM-TG (GREEN)
 DPM952-NTG DPM952RM-NTG (NEGATIVE GREEN)
 DPM952-NTR DPM952RM-NTR (NEGATIVE RED)

Adaptor Ordering Information

DPMDCV DC Voltage Adaptor 0 to 200VDC
 DPMACV AC Voltage Adaptor 0 to 300VDC

Traditional Moving Coil Meter



First Invented In The 19th Century.

The New APM Analogue Effect Digital Panel Meters From Trumeter...



APMACV72-R



APMDCA72-TG



APMACV72-TW

are both unique and flexible, with a wide range of back light colour options available and a custom curved 40 segment analogue display making it as easy to read as any analogue moving coil or moving iron instrument with the added precision of a 3^{3/4} digit display making precise measurement simple and reliable.



APMACMA72-NTG



APMACUA72-NTW



APMACA72-NTR

Welcome To The 21st Century.



◀ **APMDCV72 | APMDCV48**
40 segment analogue DC voltmeter with 3³/₄ digit display and units of measurement annunciators. The meter is fully auto ranging.

▶ **APMACV72 | APMACV48**
40 segment analogue AC voltmeter with 3³/₄ digit display and units of measurement annunciators. The meter is fully auto ranging.



• Version shown (DPM962NTR)
DPM961 | DPM962
Digital Panel meters with Hold function and low battery indication. Panel and rear mount versions available.



• Rear mount version shown (DPM952RM-NTR)
DPM951 | DPM952
Digital Panel meters. Panel and rear mount versions available.



DPMLP Adaptors
A range of adaptors for the digital panel meters. For the following modules: DPM951, DPM952, DPM951RM and DPM952RM.

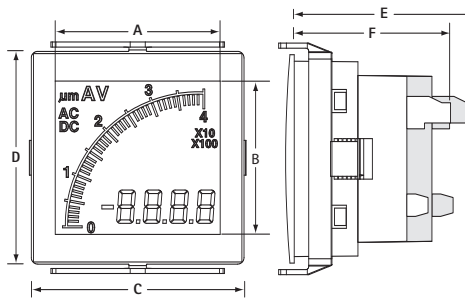
APM Range Features

- Digital and analogue readout for precise reading. Available in 48mm and 72mm bezel options.
- Linear scale even on the AC versions. AC analogue meters do not have a linear scale.
- Same panel cutout as the analogue meters. Will directly replace the analogue type meter.
- Screw terminals for easy connection of wires. Analogue meters have clamps or threaded bolts which are more difficult to connect to.
- Fully insulated connection terminals. Analogue connections are not usually insulated.
- The meters are fully readable even in the dark (backlit version). It's difficult to read analogue meters in the dark.
- Single easy fit ratchet style fixing clip. 72 size analogue meters usually have 2 screw clamps which are awkward to fit in tight spaces.
- Available in positive mode or negative mode LCD style.
- Available in various colours. Analogue only available in white and sometimes black.
- More robust against vibrations. There is no pointer to damage.
- Auto zero. The analogue meters have to be manually adjusted to zero.
- IP65 Sealed smooth front face for easy cleaning. Analogue units have a protruding bezel and an adjustment screw which can trap dirt.

APMDCV72 & APMDCV48 Features

- Powered from measured voltage between 6-300VDC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, DCV accuracy +/- 2%. Measures to 2 decimal places.
- DC Volts: APMDCV72, APMDCV48
- Measured VOLTAGE input from 6-300VDC. A minimum voltage of 6VDC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Product Dimensions APM72 & APM48



| | DPM48 | DPM72 | DPM48 | DPM72 |
|---|---------|---------|-------|-------|
| A | 35mm | 57mm | 1.37" | 2.24" |
| B | 30mm | 53mm | 1.18" | 2.1" |
| C | 48mm | 72mm | 1.89" | 2.83" |
| D | 48mm | 72mm | 1.89" | 2.83" |
| E | 61.60mm | n/a | 2.42" | n/a |
| F | n/a | 49.77mm | n/a | 1.59" |

* 72mm x 72mm DIN with 68mm x 68mm panel cut out.
* 48mm x 48mm DIN with 45mm x 45mm panel cut out.

Ordering Information *Available Autumn 2008

- Order by type number: 48 = 48mm bezel | 72 = 72mm bezel
- *APMDCV48-R APMDCV72-R (NO BACKLIGHT)
 - *APMDCV48-TG APMDCV72-TG (GREEN)
 - *APMDCV48-TW APMDCV72-TW (WHITE)
 - *APMDCV48-NTG APMDCV72-NTG (NEGATIVE GREEN)
 - *APMDCV48-NTW APMDCV72-NTW (NEGATIVE WHITE)
 - *APMDCV48-NTR APMDCV72-NTR (NEGATIVE RED)
- *APMACV48-R APMACV72-R (NO BACKLIGHT)
 - *APMACV48-TG APMACV72-TG (GREEN)
 - *APMACV48-TW APMACV72-TW (WHITE)
 - *APMACV48-NTG APMACV72-NTG (NEGATIVE GREEN)
 - *APMACV48-NTW APMACV72-NTW (NEGATIVE WHITE)
 - *APMACV48-NTR APMACV72-NTR (NEGATIVE RED)

APMACV72 & APMACV48 Features

- Powered from measured voltage between 12-440VAC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, ACV accuracy +/- 2%. Measures to 2 decimal places.
- AC Volts: APMACV72, APMACV48
- Measured VOLTAGE input from 12-440VAC. A minimum voltage of 12VAC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Specifications

- Supply Voltage** 12-440VAC RMS
- Display** 3³/₄ digit LCD, 12mm characters
- Display response time** 40 segment curved display
- Supply current** 3mA typical
- Sample rate** 3 per second
- Measuring Range** 12-440VAC
- Backlight current** 80mA max red, white 120mA max green

- Accuracy** Typical 2%
- Operating Temp.** -10°C to +50°C
- Storage Temp.** -20°C to +70°C.
- AC Measurement** True RMS
- Op. Freq. Range** 40 to 650Hz ±2% 650 to 2700Hz ±5%

Description DPM961 | DPM962
Description DPM951 | DPM952

These modules are low profile LCD digital panel meters conforming to DIN standard panel sizes (24mm X 48mm and 36mm X 72mm). They use advanced components and construction techniques to provide performance combined with elegant appearance at a cost previously unattainable. The LED backlight provides a clear, easy to read display under all lighting conditions. Backlight options are TG, TB, TW, NTG, NTB, NTW & NTR (see ordering details). A large character height enables the LCD display to be easily read (DPM 9X1 =11mm, DPM 9X2 =14mm). Low power ideal for battery powered applications.

Features

- ±200mV full scale reading (Auto-polarity)
- Configurable annunciators and decimal point
- Operation from 5V or 9V supplies.
- Hold function with annunciator (DPM96X)
- Low battery indication (DPM96X)

Connections and PCB pads are brought out to enable the module to operate in various modes. An on board voltage reference source is included allowing the units to accurately measure external voltages from -200 to +200mV, a potentiometer allows the installer to adjust the indicated value.

Typical applications

Indication of DC voltage or current in vehicles, boats etc (requires additional external components, or an adaptor module from our range). Indication of industrial process parameters such as temperature, humidity, speed etc (external linear voltage required)

Rear Mount Dimensions Size 1 | Size 2

| | Size 1 Dimensions | Size 2 Dimensions |
|---|-------------------|-------------------|
| A | 28mm (1.10") | 36mm (1.42") |
| B | 13mm (0.51") | 18mm (0.71") |
| C | 10mm (0.39") | 14mm (0.55") |
| D | 58mm (2.28") | 82mm (3.23") |
| E | 44mm (1.73") | 69mm (2.72") |
| F | 21mm (0.83") | 29mm (1.14") |
| G | 23mm (0.90") | 31mm (1.22") |
| H | 51mm (2.01") | 75mm (2.95") |
| I | 37mm (1.46") | 61mm (2.40") |
| J | 3.2mm (0.12") | 3.2mm (0.12") |
| K | 20.87mm (0.83") | 21mm (1.42") |
| L | 2.54 (0.10") | 2.54 (0.10") |
| M | 8.13mm (0.32") | 8.13mm (0.32") |

Rear Mounting Option (RM)

DPM951, DPM952, DPM961, DPM962 versions are available in 24mm X 48mm and 36mm X 72mm options. Available in all backlight colours.

Dimensions DPM951 | DPM952 | DPM961 | DPM962
* See page 8 for product dimensions.

Ordering Information *Available Summer 2008

Order by type number: (24mm x 48mm bezel)

- DPM961-R *DPM961RM-R (NO BACKLIGHT)
- DPM961-TG *DPM961RM-TG (GREEN)
- DPM961-TB *DPM961RM-TB (BLUE)
- DPM961-TW *DPM961RM-TW (WHITE)
- DPM961-NTG *DPM961RM-NTG (NEGATIVE GREEN)
- DPM961-NTB *DPM961RM-NTB (NEGATIVE BLUE)
- DPM961-NTW *DPM961RM-NTW (NEGATIVE WHITE)
- DPM951-R *DPM951RM-R (NO BACKLIGHT)
- DPM951-TG *DPM951RM-TG (GREEN)
- DPM951-TB *DPM951RM-TB (BLUE)
- DPM951-TW *DPM951RM-TW (WHITE)
- DPM951-NTG *DPM951RM-NTG (NEGATIVE GREEN)
- DPM951-NTB *DPM951RM-NTB (NEGATIVE BLUE)
- DPM951-NTW *DPM951RM-NTW (NEGATIVE WHITE)
- DPM951-NTR *DPM951RM-NTR (NEGATIVE RED)

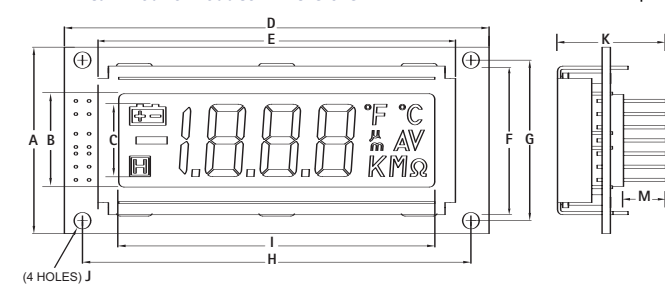
Example: DPM951-NTG = 24 x 48 bezel mount negative green.
Example: DPM951RM-NTR = 24 x 48 rear mount negative red.

Order by type number: (36mm x 72mm bezel)

- DPM962-R DPM962RM-R (NO BACKLIGHT)
- DPM962-TG DPM962RM-TG (GREEN)
- DPM962-TB DPM962RM-TB (BLUE)
- DPM962-TW DPM962RM-TW (WHITE)
- DPM962-NTG DPM962RM-NTG (NEGATIVE GREEN)
- DPM962-NTB DPM962RM-NTB (NEGATIVE BLUE)
- DPM962-NTW DPM962RM-NTW (NEGATIVE WHITE)
- DPM952-R DPM952RM-R (NO BACKLIGHT)
- DPM952-TG DPM952RM-TG (GREEN)
- DPM952-TB DPM952RM-TB (BLUE)
- DPM952-TW DPM952RM-TW (WHITE)
- DPM952-NTG DPM952RM-NTG (NEGATIVE GREEN)
- DPM952-NTB DPM952RM-NTB (NEGATIVE BLUE)
- DPM952-NTW DPM952RM-NTW (NEGATIVE WHITE)
- DPM952-NTR DPM952RM-NTR (NEGATIVE RED)

Example: DPM952-NTG = 36 x 72 bezel mount negative green.
Example: DPM952RM-NTR = 36 x 72 rear mount negative red.

DPM Rear Mount Product Dimensions



Specifications DPM951 | 952 | 961 | 962 | RM

| | MIN | TYP | MAX | UNITS |
|-----------------------|-----|-----|-----|---------|
| Accuracy (±1 Count) | | 0.1 | 0.1 | % |
| Linearity | | | ±1 | count |
| Sample Rate | | 3 | | per sec |
| Temp Stability | | 30 | | ppm/ °C |
| Opt Temp Range | -10 | | 50 | °C |
| Storage Temp Range | -20 | | 70 | °C |
| Supply Volt (5V mode) | 3 | 5 | 7 | Vdc |
| Supply Volt (9V mode) | 7 | 9 | 12 | Vdc |
| Supply Current | | 2 | | mA |
| Backlight Current | | | 40 | mA |
| Backlight Current | | | 80 | mA |
| Input Impedance | 100 | | | MΩ |

DPM Panel Meter Adaptors

Allows the meter to be powered by 8 to 30VDC, and an on board regulator powers the internal meter circuits, and the backlight (on DPM units with backlight: TG, NTB & NTG versions), this applies to all models except the 4 to 20mA adaptor. Range selection and decimal point selection are configured using JUMPER links.

- DPMACA** AC Current Adaptor 0 to 2 AAC
- DPMDCA** DC Current Adaptor 0 to 2 ADC
- DPMACV** AC Voltage Adaptor 0 to 300 VAC
- DPMDCV** DC Voltage Adaptor 0 to 200VDC
- DPMLP** Loop Powered Adaptor (4 to 20mA)

DPMLP - 4 to 20mA Loop powered adaptor - this allows the unit to be connected to a 4 to 20mA signal, the unit derives its power from the signal, allowing the meter to indicate the value which is scalable up to 1999. Provides a low cost process meter solution. The backlight is not powered by the adaptor, and if the backlight is required, a separate DC supply would be required.

Ordering Information Adaptors

- DPMACA AC Current Adaptor
- DPMDCA DC Current Adaptor
- DPMACV AC Voltage Adaptor
- DPMDCV DC Voltage Adaptor
- DPMLP Loop Powered Adaptor (4 to 20mA)



DPM812 | DPM822

3 3/4 digit panel meter with a 40 segment bargraph indication. The unit has a fully auto ranging voltage input to 300V and a selectable 4 scale ammeter upto 10A. Available in AC and DC versions.



APMDCA72 | APMDCA48

40 segment analogue DC ammeter with 3 3/4 digit display and units of measurement annunciators (upto 40A).

APMACA72 | APMACA48

40 segment analogue AC ammeter with 3 3/4 digit display and units of measurement annunciators (upto 40A).



DPM812 | DPM822

3 3/4 digit panel meter with a 40 segment bargraph indication. The unit has a fully auto ranging DC/AC voltage input to 300V and a selectable 3 scale DC/AC ammeter upto 10A.

DPM range of digital panel meter with DC/AC V and DC/AC A input ranges and a wide range of backlight options. Powered by 5VDC to 16VDC and annunciators for units of display which include min max functions. RS232 communications is standard allowing data from the units to be transmitted into a computer.

Features

- DC Powered 5V-16VDC.
- Green (-TG), Blue (-TB) and White (-TW) LCD Backlight.
- Reverse Polarised versions -NTG (Green), -NTR (Red), -NTW (White) and NTB (Blue)
- Backlight supply 9V or 12V selectable with a jumper link. (TW, NTW, TB, NTB, 12V only)
- 4 digit display and bargraph display.
- Full auto ranging DC/AC voltmeter and semi auto ranging DC/AC ammeter.
- MIN and MAX values can be displayed.
- Reading DCV, DCI, ACV & ACI, accuracy +/- 2%. 3 decimal places.
- The module will satisfy two requirements - DPM812 DC Volts and Current - DPM822 AC Volts and Current (all units with RS232 output).
- Measurement by 3 way 5mm pitch screw terminal. Max voltage input 300V AC or DC.
- Designed for 9V battery powered operation.

DPM812:

- 5VDC to 16VDC externally powered 15mA max
- Green LCD Backlight on DPM812-TG
- Blue LCD Backlight on DPM812-TB
- White LCD Backlight on DPM812-TW
- Reverse Polarised Versions DPM812-NTG (Green), DPM812-NTR (Red) and DPM812-NTW (White)
- DC VOLTAGE input from 1mV to 300V.
- Auto range scales at 400.0mV, 4.000V, 40.00V, 300.0V max.
- Current selectable ranges 1uA-4000uA, 0.1mA-400.0mA & 0.1A-10.00A.
- Display of MIN and MAX values.
- RS232 communications for transmitting data.
- Size 72mm x 36mm DIN with 68mm x 33mm panel cut out.

Specifications DPM812 | DPM822

| | |
|--------------------------|--|
| Supply Voltage | 9VDC (min 5V max 16V) |
| Display | 3 3/4 digit black LCD, 11mm characters |
| Supply current | 15mA typical |
| Sample rate | 3 per second |
| Backlight current | 40mA |
| Accuracy | Typical 2% |
| Operating Temp. | -10°C to +50°C |
| Storage Temp. | -20°C to +70°C. |

DPM822:

- 5VDC to 16VDC external powered
- Green LCD Backlight on DPM822-TG
- Blue LCD Backlight on DPM822-TB
- White LCD Backlight on DPM822-TW
- Reverse Polarised Versions DPM822-NTG (Green), DPM822-NTR (Red) and DPM822-NTW (White)
- AC VOLTAGE input from 1mV to 300V.
- Auto range scales at 400.0mV, 4.000V, 40.00V, 300.0V max.
- Current selectable ranges 1uA-4000uA, 0.1mA-400.0mA & 0.1A-10.00A.
- Display of MIN and MAX values.
- RS232 communications for transmitting data.
- Size 72mm x 36mm DIN with 68mm x 33mm panel cut out.

Ordering Information DPM812 | DPM822

| | |
|-----------------------|------------------|
| Order by type number: | |
| DPM812-R | (NO BACKLIGHT) |
| DPM812-TG | (GREEN) |
| DPM812-TB | (BLUE) |
| DPM812-TW | (WHITE) |
| DPM812-NTG | (NEGATIVE GREEN) |
| DPM812-NTB | (NEGATIVE BLUE) |
| DPM812-NTW | (NEGATIVE WHITE) |
| DPM812-NTR | (NEGATIVE RED) |
| | |
| DPM822-R | (NO BACKLIGHT) |
| DPM822-TG | (GREEN) |
| DPM822-TB | (BLUE) |
| DPM822-TW | (WHITE) |
| DPM822-NTG | (NEGATIVE GREEN) |
| DPM822-NTB | (NEGATIVE BLUE) |
| DPM822-NTW | (NEGATIVE WHITE) |
| DPM822-NTR | (NEGATIVE RED) |

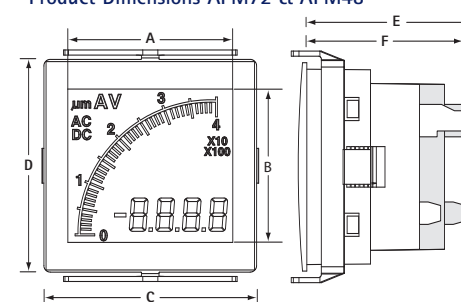
APM Range Features

- Digital and analogue readout for precise reading. Available in 48mm and 72mm bezel options.
- Linear scale even on the AC versions. AC analogue meters do not have a linear scale.
- Same panel cutout as the analogue meters. Will directly replace the analogue type meter.
- Screw terminals for easy connection of wires. Analogue meters have clamps or threaded bolts which are more difficult to connect to.
- Fully insulated connection terminals. Analogue connections are not usually insulated.
- The meters are fully readable even in the dark (backlit version). It's difficult to read analogue meters in the dark.
- Single easy fit ratchet style fixing clip. 72 size analogue meters usually have 2 screw clamps which are awkward to fit in tight spaces.
- Available in positive mode or negative mode LCD style.
- Available in various colours. Analogue only available in white and sometimes black.
- More robust against vibrations. There is no pointer to damage.
- Auto zero. The analogue meters have to be manually adjusted to zero.
- IP65 Sealed smooth front face for easy cleaning. Analogue units have a protruding bezel and an adjustment screw which can trap dirt.

APMDCA72 & APMDCA48 Features

- Powered from measured current with voltage of 6-300VDC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, DCA accuracy +/- 2%. Measures to 2 decimal places.
- DC Amps: APMDCA72, APMDCA48
- Measured CURRENT input from 0.1A-40.0A. A minimum voltage of 6VDC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 3 way 10.1mm pitch screw terminal block.

Product Dimensions APM72 & APM48



| | DPM48 | DPM72 | DPM48 | DPM72 |
|---|---------|---------|-------|-------|
| A | 35mm | 57mm | 1.37" | 2.24" |
| B | 30mm | 53mm | 1.18" | 2.1" |
| C | 48mm | 72mm | 1.89" | 2.83" |
| D | 48mm | 72mm | 1.89" | 2.83" |
| E | 61.60mm | n/a | 2.42" | n/a |
| F | n/a | 49.77mm | n/a | 1.59" |

* 72mm x 72mm DIN with 68mm x 68mm panel cut out.
* 48mm x 48mm DIN with 45mm x 45mm panel cut out.

Ordering Information *Available Autumn 2008

| | | |
|---|--------------|------------------|
| Order by type number: 48 = 48mm bezel 72 = 72mm bezel | | |
| *APMDCA48-R | APMDCA72-R | (NO BACKLIGHT) |
| *APMDCA48-TG | APMDCA72-TG | (GREEN) |
| *APMDCA48-TW | APMDCA72-TW | (WHITE) |
| *APMDCA48-NTG | APMDCA72-NTG | (NEGATIVE GREEN) |
| *APMDCA48-NTW | APMDCA72-NTW | (NEGATIVE WHITE) |
| *APMDCA48-NTR | APMDCA72-NTR | (NEGATIVE RED) |
| | | |
| *APMACA48-R | APMACA72-R | (NO BACKLIGHT) |
| *APMACA48-TG | APMACA72-TG | (GREEN) |
| *APMACA48-TW | APMACA72-TW | (WHITE) |
| *APMACA48-NTG | APMACA72-NTG | (NEGATIVE GREEN) |
| *APMACA48-NTW | APMACA72-NTW | (NEGATIVE WHITE) |
| *APMACA48-NTR | APMACA72-NTR | (NEGATIVE RED) |

APMACA72 & APMACA48 Features

- Powered from measured current with voltage of 12-440VAC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, ACA accuracy +/- 2%. Measures to 2 decimal places.
- AC Amps: APMACA72, APMACA48
- Measured CURRENT input from 0.1A-40.0A. A minimum voltage of 12VAC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 3 way 10.1mm pitch screw terminal block.

Specifications

| | |
|------------------------------|----------------------------------|
| Supply Voltage | 12-440VAC RMS |
| Display | 3 3/4 digit LCD, 12mm characters |
| Display response time | 40 segment curved display |
| Supply current | 15mSec |
| Sample rate | 3 per second |
| Measuring Range | 3mA typical |
| Measuring Range | 0.1A-40.0A (APMDCA72) |
| Backlight current | 0.1A-30.0A (APMDCA48) |
| | 80mA max red, white |
| | 120mA max green |
| Accuracy | Typical 2% |
| Operating Temp. | -10°C to +50°C |
| Storage Temp. | -20°C to +70°C. |
| Op. Freq. Range | 40 to 650Hz ±2% |
| | 650 to 2700Hz ±5% |

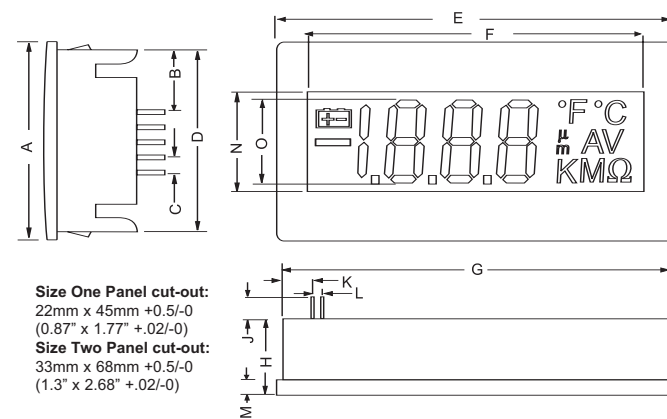
DPM Dimensions Size 1 | Size 2

| | Size 1 Dimensions | Size 2 Dimensions |
|----|-------------------|-------------------|
| A | 24mm (0.94") | 36mm (1.42") |
| B | N/A | N/A |
| C | 2.54mm (0.1") | 2.54mm (0.1") |
| D | 22mm (0.87") | 33mm (1.3") |
| E | 48mm (1.89") | 72mm (2.83") |
| F | 37mm (1.46") | 61mm (2.4") |
| G | 45mm (1.77") | 68mm (2.68") |
| H | 14mm (0.55") | 14mm (0.55") |
| J* | 6mm (0.24") | 6mm (0.24") |
| K | 5mm (0.2") | 6mm (0.24") |
| L | 2.54mm (0.1") | 2.54mm (0.1") |
| M | 3mm (0.12") | 3mm (0.12") |
| N | 13mm (0.51") | 18mm (0.7") |

* = 8mm (0.31") DPM952, DPM962, DPM951, DPM961

Product DPM Range

- Size 1: DPM951
DPM961
DPM981
- Size 2: DPM952
DPM962
DPM982
DPM812
DPM822
DPM652
DPM752



Size One Panel cut-out:
22mm x 45mm +0.5/-0
(0.87" x 1.77" +.02/-0)

Size Two Panel cut-out:
33mm x 68mm +0.5/-0
(1.3" x 2.68" +.02/-0)



◀ APMDCUA72 | APMDCUA48

40 segment analogue DC micro ammeter with 3 3/4 digit display and units of measurement annunciators.

▶ APMACUA72 | APMACUA48

40 segment analogue AC micro ammeter with 3 3/4 digit display and units of measurement annunciators.



◀ APMDCMA72 | APMDCMA48

40 segment analogue DC milli ammeter with 3 3/4 digit display and units of measurement annunciators.

▶ APMACMA72 | APMACMA48

40 segment analogue AC milli ammeter with 3 3/4 digit display and units of measurement annunciators.



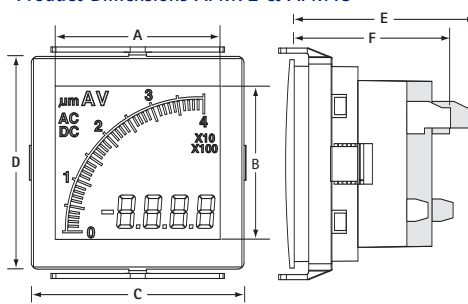
APM Range Features

- Digital and analogue readout for precise reading. Available in 48mm and 72mm bezel options.
- Linear scale even on the AC versions. AC analogue meters do not have a linear scale.
- Same panel cutout as the analogue meters. Will directly replace the analogue type meter.
- Screw terminals for easy connection of wires. Analogue meters have clamps or threaded bolts which are more difficult to connect to.
- Fully insulated connection terminals. Analogue connections are not usually insulated.
- The meters are fully readable even in the dark (backlit version). It's difficult to read analogue meters in the dark.
- Single easy fit ratchet style fixing clip. 72 size analogue meters usually have 2 screw clamps which are awkward to fit in tight spaces.
- Available in positive mode or negative mode LCD style.
- Available in various colours. Analogue only available in white and sometimes black.
- More robust against vibrations. There is no pointer to damage.
- Auto zero. The analogue meters have to be manually adjusted to zero.
- IP65 Sealed smooth front face for easy cleaning. Analogue units have a protruding bezel and an adjustment screw which can trap dirt.

APMDCUA72 & APMDCUA48 Features

- Powered from measured current with voltage of 6-300VDC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, DCUA accuracy +/- 2%. Measures to 1 decimal places.
- DC Microamps: APMDCUA72, APMDCUA48
- Measured CURRENT input from 1uA-4000uA. A minimum voltage of 6VDC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Product Dimensions APM72 & APM48



| | DPM48 | DPM72 | DPM48 | DPM72 |
|---|---------|---------|-------|-------|
| A | 35mm | 57mm | 1.37" | 2.24" |
| B | 30mm | 53mm | 1.18" | 2.1" |
| C | 48mm | 72mm | 1.89" | 2.83" |
| D | 48mm | 72mm | 1.89" | 2.83" |
| E | 61.60mm | n/a | 2.42" | n/a |
| F | n/a | 49.77mm | n/a | 1.59" |

* 72mm x 72mm DIN with 68mm x 68mm panel cut out.
* 48mm x 48mm DIN with 45mm x 45mm panel cut out.

Ordering Information *Available Autumn 2008

- Order by type number: 48 = 48mm bezel | 72 = 72mm bezel
- *APMDCUA48-R APMDCUA72-R (NO BACKLIGHT)
 - *APMDCUA48-TG APMDCUA72-TG (GREEN)
 - *APMDCUA48-TW APMDCUA72-TW (WHITE)
 - *APMDCUA48-NTG APMDCUA72-NTG (NEGATIVE GREEN)
 - *APMDCUA48-NTW APMDCUA72-NTW (NEGATIVE WHITE)
 - *APMDCUA48-NTR APMDCUA72-NTR (NEGATIVE RED)
 - *APMACUA48-R APMACUA72-R (NO BACKLIGHT)
 - *APMACUA48-TG APMACUA72-TG (GREEN)
 - *APMACUA48-TW APMACUA72-TW (WHITE)
 - *APMACUA48-NTG APMACUA72-NTG (NEGATIVE GREEN)
 - *APMACUA48-NTW APMACUA72-NTW (NEGATIVE WHITE)
 - *APMACUA48-NTR APMACUA72-NTR (NEGATIVE RED)

Specifications

Supply Voltage 6-300VDC
Display 3 3/4 digit LCD, 12mm characters
 40 segment curved display
 IP 65 front panel only
Environ Protection IP 65 front panel only
Display response time 15mSec
Supply current 3mA typical
Sample rate 3 per second
Measuring Range 1uA-4000uA
Backlight current 80mA max red, white
 120mA max green
Accuracy Typical 2%
Operating Temp. -10°C to +50°C
Storage Temp. -20°C to +70°C.

APMACUA72 & APMACUA48 Features

- Powered from measured current with voltage of 12-440VAC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, ACUA accuracy +/- 2%. Measures to 1 decimal places.
- AC Microamps: APMACUA72, APMACUA48
- Measured CURRENT input from 1uA-4000uA. A minimum voltage of 12VAC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Specifications

Supply Voltage 12-440VAC RMS
Display 3 3/4 digit LCD, 12mm characters
 40 segment curved display
 IP 65 front panel only
Environ Protection IP 65 front panel only
Display response time 15mSec
Supply current 3mA typical
Sample rate 3 per second
Measuring Range 1uA-4000uA
Backlight current 80mA max red, white
 120mA max green
Accuracy Typical 2%
Operating Temp. -10°C to +50°C
Storage Temp. -20°C to +70°C.
Op. Freq. Range 40 to 650Hz ±2%
 650 to 2700Hz ±5%

APM Range Features

- Digital and analogue readout for precise reading. Available in 48mm and 72mm bezel options.
- Linear scale even on the AC versions. AC analogue meters do not have a linear scale.
- Same panel cutout as the analogue meters. Will directly replace the analogue type meter.
- Screw terminals for easy connection of wires. Analogue meters have clamps or threaded bolts which are more difficult to connect to.
- Fully insulated connection terminals. Analogue connections are not usually insulated.
- The meters are fully readable even in the dark (backlit version). It's difficult to read analogue meters in the dark.
- Single easy fit ratchet style fixing clip. 72 size analogue meters usually have 2 screw clamps which are awkward to fit in tight spaces.
- Available in positive mode or negative mode LCD style.
- Available in various colours. Analogue only available in white and sometimes black.
- More robust against vibrations. There is no pointer to damage.
- Auto zero. The analogue meters have to be manually adjusted to zero.
- IP65 Sealed smooth front face for easy cleaning. Analogue units have a protruding bezel and an adjustment screw which can trap dirt.

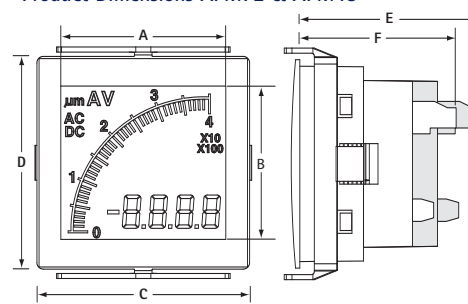
APMDCMA72 & APMDCMA48 Features

- Powered from measured current with voltage of 6-300VDC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, DCMA accuracy +/- 2%. Measures to 2 decimal places.
- DC Milliamps: APMDCMA72, APMDCMA48
- Measured CURRENT input from 0.1mA-400.0mA. A minimum voltage of 6VDC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Specifications

Supply Voltage 6-300VDC
Display 3 3/4 digit LCD, 12mm characters
 40 segment curved display
 IP 65 front panel only
Environ Protection IP 65 front panel only
Display response time 15mSec
Supply current 3mA typical
Sample rate 3 per second
Measuring Range 0.1mA-400.0mA
Backlight current 80mA max red, white
 120mA max green
Accuracy Typical 2%
Operating Temp. -10°C to +50°C
Storage Temp. -20°C to +70°C.

Product Dimensions APM72 & APM48



| | DPM48 | DPM72 | DPM48 | DPM72 |
|---|---------|---------|-------|-------|
| A | 35mm | 57mm | 1.37" | 2.24" |
| B | 30mm | 53mm | 1.18" | 2.1" |
| C | 48mm | 72mm | 1.89" | 2.83" |
| D | 48mm | 72mm | 1.89" | 2.83" |
| E | 61.60mm | n/a | 2.42" | n/a |
| F | n/a | 49.77mm | n/a | 1.59" |

* 72mm x 72mm DIN with 68mm x 68mm panel cut out.
* 48mm x 48mm DIN with 45mm x 45mm panel cut out.

Ordering Information *Available Autumn 2008

- Order by type number: 48 = 48mm bezel | 72 = 72mm bezel
- *APMDCMA48-R APMDCMA72-R (NO BACKLIGHT)
 - *APMDCMA48-TG APMDCMA72-TG (GREEN)
 - *APMDCMA48-TW APMDCMA72-TW (WHITE)
 - *APMDCMA48-NTG APMDCMA72-NTG (NEGATIVE GREEN)
 - *APMDCMA48-NTW APMDCMA72-NTW (NEGATIVE WHITE)
 - *APMDCMA48-NTR APMDCMA72-NTR (NEGATIVE RED)
 - *APMACMA48-R APMACMA72-R (NO BACKLIGHT)
 - *APMACMA48-TG APMACMA72-TG (GREEN)
 - *APMACMA48-TW APMACMA72-TW (WHITE)
 - *APMACMA48-NTG APMACMA72-NTG (NEGATIVE GREEN)
 - *APMACMA48-NTW APMACMA72-NTW (NEGATIVE WHITE)
 - *APMACMA48-NTR APMACMA72-NTR (NEGATIVE RED)

APMACMA72 & APMACMA48 Features

- Powered from measured current with voltage of 12-440VAC.
- Green (-TG) or White (-TW) LCD backlight.
- Reverse Polarised versions in Green, White and Red.
- 4 digit display and curved bargraph display.
- Reading, DCMA accuracy +/- 2%. Measures to 2 decimal places.
- AC Milliamps: APMACMA72, APMACMA48
- Measured CURRENT input from 0.1mA-400.0mA. A minimum voltage of 12VAC is required.
- Externally powered optional backlight in White, Green and Red. Separate 12 or 24VDC power required.
- Measurement connection using a 4 way 7.5mm pitch screw terminal block.

Specifications

Supply Voltage 12-440VAC RMS
Display 3 3/4 digit LCD, 12mm characters
 40 segment curved display
 IP 65 front panel only
Environ Protection IP 65 front panel only
Display response time 15mSec
Supply current 3mA typical
Sample rate 3 per second
Measuring Range 0.1mA-400.0mA
Backlight current 80mA max red, white
 120mA max green
Accuracy Typical 2%
Operating Temp. -10°C to +50°C
Storage Temp. -20°C to +70°C.
Op. Freq. Range 40 to 650Hz ±2%
 650 to 2700Hz ±5%