



APMDC..

(DC V, μ A, mA, A CC)

APMAC..

(AC V, μ A, mA, A CA)

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Specification

Display

- 40 segment bargraph
- Leading zero blanking
- 72mm:**
- LCD 56mm (2.2") x 52mm (2.1")
- 4 x 12mm x 6mm (0.47" x 0.24") characters
- 48mm:**
- LCD 34mm (1.34") x 32mm (1.26")
- 4 x 8mm x 4mm (0.32" x 0.16") characters

Input Ranges (see pages 8, 9)

- **APMDCV:** 6 – 300V DC
- **APMACV:** 12 – 440V AC
- **APMDCUA:** 0 – 3999µA DC
- **APMACUA:** 0 – 3999µA AC
- **APMDCMA:** 0 – 399.9mA DC
- **APMACMA:** 0 – 399.9mA AC
- **APMDCA:** 0 – 39.99A DC
(**APM48:** 0 – 30A)
- **APMACA:** 0 – 39.99A AC
(**APM48:** 0 – 30A)

Maximum current

- 2 x max: 5 secs
- 4 x max: 1 sec

Accuracy

- (±1 least significant digit)
- **DC: V, µA, mA:** ±2%, **A:** ±3%
- **AC: 40–650 Hz:** as above
- **650–2700 Hz:** ±5%

Linearity

- ±0.1% full scale

Sample Rate

- 1 Sec

Input impedance

- **V:** 10MΩ
- **0 – 399.9µA:** 500Ω
- **400µA – 3999µA:** 50Ω
- **0 – 39.9mA:** 5Ω
- **40mA – 399.9mA:** 0.5Ω
- **0 – 30A/39.99A:** 0.0005Ω

Connections

Finger-proof screw connections for wires up to:

- **Input:** 4mm² (**APM72 0–39.99A:** 16mm²)
- **Backlight:** 1.5mm²

Supply

- **DC units:** 6 – 300V DC ± 5%, 5mA max
- **AC units:** 12 – 440V AC ± 5%, 5mA max
- **Backlight:** 12V/24V DC ±1.0V, selectable, (see page 12 and below)

Installation Category (IEC 664)

- Overvoltage Category II
- Pollution Degree 2 (IEC 64)

Operating temperature

- -10°C to +50°C

Storage temperature

- -20°C to +70°C

Environmental protection

- IP65

Altitude

- Up to 3000m

Relative Humidity

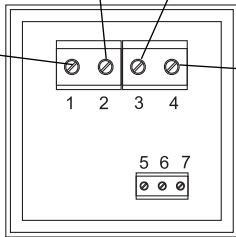
- 85% max non-condensing

Connections (see page 7)

APM48: 0 – 30A

DC: VSS: 0V

AC: N: 0V



DC: Current: 0 – 399.9mA or 3999µA

AC: Current: 0 – 399.9mA or 3999µA

DC: VDD Voltage: 6 – 300V

AC: L Voltage: 12 – 440V

**APMDCV72, APMDCMA72, APMDCUA72,
APMACV72, APMACMA72, APMACUA72,
ALL APM48**

Note:

Voltage units are powered by the input signal. Therefore, the minimum supply voltage for these units is 6V DC or 12V AC.

Note:

Any signal cables connected to this device must not exceed 30 metres in length.

If signal cables are installed that are routed outside the building, it will be necessary to install additional surge protection devices.

Backlight: all units

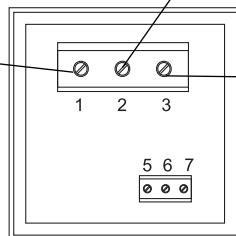
5	0V
6	12V DC ± 1.0V
7	24V DC ± 1.0V

Note:

The backlight requires a separate, stable DC supply.

DC: VSS: 0V

AC: N: 0V



DC: Current: 0 – 39.99A

AC: Current: 0 – 39.99A

DC: VDD Voltage: 6 – 300V

AC: L Voltage: 12 – 440V

**APMDCA72,
APMACA72**



The maximum voltage allowed for any connection to the PCB is 300V DC or 440V AC.

Spezifikation

Anzeige

- 40-Segment-Balkendiagramm
- Vornullenunterdrückung
- 72mm:**
- LCD 56mm x 52mm
- 4 x Zeichenhöhe 12mm x 6mm
- 48mm:**
- LCD 34mm x 32mm
- 4 x Zeichenhöhe 8mm x 4mm

Messbereiche

(siehe Seiten 8, 9)

- **APMDCV:** 6 – 300V DC
- **APMACV:** 12 – 440V AC
- **APMDCUA:** 0 – 3999µA DC
- **APMACUA:** 0 – 3999µA AC
- **APMDCMA:** 0 – 399,9mA DC
- **APMACMA:** 0 – 399,9mA AC
- **APMDCA:** 0 – 39,99A DC
(**APM48:** 0 – 30A)
- **APMACA:** 0 – 39,99A AC
(**APM48:** 0 – 30A)

Maximaler Strom

- 2 x max: 5 sek.
- 4 x max: 1 sek.

Genauigkeit

(±1 Digit für niedrigsten Wert)

- **DC: V, µA, mA:** ±2%, **A:** ±3%
- **AC: 40–650 Hz:** wie oben
- **650–2700 Hz:** ±5%

Linearität

- ± 0,1% Vollausschlag

Abtastrate

- 1 Sek.

Eingangsimpedanz

- **V:** 10MΩ
- **0 – 399,9µA:** 500Ω
- **400µA – 3999µA:** 50Ω
- **0 – 39,9mA:** 5Ω
- **40mA – 399,9mA:** 0,5Ω
- **0 – 30A/39,99:** 0,0005Ω

Anschlüsse

sichere Schraubanschlüsse am Eingang für Drähte bis zu 4mm²

- **Ausnahme APM72 0–39,99A:** bis 16mm²
- **Hintergrundbeleuchtung:** 1,5mm²

Versorgungsspannung

- **DC geräten:** 6 – 300V DC ± 5%, max. 5mA
- **AC geräten:** 12 – 440V AC ±5%, max. 5mA
- **Hintergrundbeleuchtung:** 12V/24V DC ±1,0V, wählbar, (siehe Seite 12 und unten)

Installationskategorie (IEC 664)

- Überspannungskategorie II
- Verunreinigungsgrad 2 (IEC 64)

Betriebstemperatur

- -10°C bis +50°C

Lagertemperatur

- -20°C bis +70°C

Umgebungsschutzart

- IP65

Höhe

- bis zu 3000 m

Relative Luftfeuchtigkeit

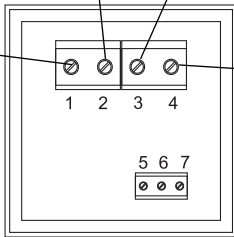
- max. 85% nicht kondensierend

Anschlüsse (siehe Seite 7)

APM48: 0 – 30A

DC: VSS: 0V

AC: N: 0V



DC: Strom: 0 – 399,9mA oder 3999µA

AC: Strom: 0 – 399,9mA oder 3999µA

DC: VDD Spannung: 6 – 300V

AC: L Spannung: 12 – 440V

APMDCV72, APMDCMA72, APMDCUA72, APMACV72, APMACMA72, APMACUA72, ALLE APM48

Hintergrundbeleuchtung: alle Instrumente

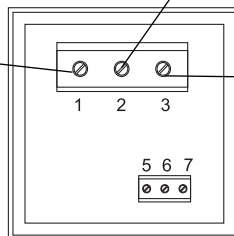
5	0V
6	12V DC ± 1,0V
7	24V DC ± 1,0V

Hinweis:

Die Hintergrundbeleuchtung erfordert eine separate DC-Spannungsversorgung.

DC: VSS: 0V

AC: N: 0V



DC: Strom: 0 – 39,99A

AC: Strom: 0 – 39,99A

DC: VDD Spannung: 6 – 300V

AC: L Spannung: 12 – 440V

APMDC72, APMACA72

Hinweis:

Die Spannungsmessgeräte werden vom Eingangssignal versorgt. Die Mindestspannung für diese Geräte beträgt daher 6V DC oder 12V AC.

Hinweis:

Die Messleitungen, die an dieses Gerät angeschlossen werden, dürfen eine Gesamtlänge von 30m nicht überschreiten.

Werden Messleitungen ausserhalb von Gebäuden verlegt, müssen zusätzliche Schutzmassnahmen gegen Surge Störimpulse vorgesehen werden.



Die maximale Spannung, die an den Eingängen angelegt werden darf, ist 300V DC oder 440V AC.

Caractéristiques

Afficheur

- Vumètre à barres, 40 segments
- Remise à zéro de conduction
- 72mm:**
- LCD 56mm x 52mm
- Caractères de 4 x 12mm x 6mm
- 48mm:**
- LCD 34mm x 32mm
- Caractères de 4 x 8mm x 4mm

Gammes d'entrée (voir pages 8, 9)

- **APMDCV:** 6 – 300V CC
- **APMACV:** 12 – 440V CA
- **APMDCUA:** 0 – 3999 μ A CC
- **APMACUA:** 0 – 3999 μ A CA
- **APMDCMA:** 0 – 399,9mA CC
- **APMACMA:** 0 – 399,9mA CA
- **APMDCA:** 0 – 39,99A CC
(**APM48:** 0 – 30A)
- **APMACA:** 0 – 39,99A CA
(**APM48:** 0 – 30A)

Courant maximum

- 2 x max: 5 secs
- 4 x max: 1 sec

Précision

- (± 1 plus petit chiffre)
- **CC:** V, μ A, mA: $\pm 2\%$, A: $\pm 3\%$
- **CA:** 40–650 Hz: comme ci-dessus **650–2700 Hz:** $\pm 5\%$

Linéarité

- $\pm 0,1\%$ pleine échelle

Fréquence test

- 1 s.

Impédance d'entrée

- **V:** 10M Ω
- **0 – 399,9 μ A:** 500 Ω
- **400 μ A – 3999 μ A:** 50 Ω
- **0 – 39,9mA:** 5 Ω
- **40mA – 399,9mA:** 0,5 Ω
- **0 – 30A/39,99:** 0,0005 Ω

Raccordements

Connexions à vis protégées-doigts pour fil jusqu'à:

- **Entrée:** 4mm² (**APM72 0–39,99A:** 16mm²)
- **Rétroéclairage:** 1,5mm²

Alimentation

- **Appareil CC:** 6 – 300V CC $\pm 5\%$, 5mA max
- **Appareil CA:** 12 – 440V CA $\pm 5\%$, 5mA max
- **Rétroéclairage:** 12V/24V CC $\pm 1,0V$, sélectionnable, (voir page 12 et ci-dessous)

Catégorie d'installation (IEC664)

- Catégorie surtension II
- Degré de pollution 2 (IEC 64)

Température de fonctionnement

- -10°C à +50°C

Température de stockage

- -20°C à +70°C

Protection environnementale

- IP65

Altitude

- Jusqu'à 3 000 m

Humidité relative

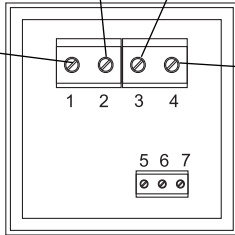
- 85 % max., sans condensation

Raccordements (voir page 7)

APM48: 0 – 30A

CC: VSS: 0V

CA: N: 0V



CC: Courant: 0 – 399,9mA ou 3999 μ A

CA: Courant: 0 – 399,9mA ou 3999 μ A

CC: VDD Tension: 6 – 300V

CA: L Tension: 12 – 440V

APMDCV72, APMDCMA72, APMDCUA72, APMACV72, APMACMA72, APMACUA72, TOUT LES APM48

Remarque:

Les unités de tension sont alimentées par le signal d'entrée. Par conséquent, la tension d'alimentation minimale de ces unités est de 6 V CC ou 12 V CA.

Remarque :

La longueur de tout câble mesure (signal) raccordé à cet appareil ne doit pas excéder 30 mètres.

Si les câbles « mesure » passent à l'extérieur du bâtiment, il est nécessaire d'installer des dispositifs additionnels de protections de surtensions.

Rétroéclairage: tous les appareils

5	0V
6	12V CC $\pm 1,0V$
7	24V CC $\pm 1,0V$

Note:

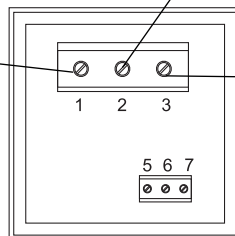
Le rétroéclairage nécessite une alimentation CC stable séparée.

CC: Courant: 0 – 39,99A

CA: Courant: 0 – 39,99A

CC: VSS: 0V

CA: N: 0V



CC: Courant: 0 – 39,99A

CA: Courant: 0 – 39,99A

CC: VDD Tension: 6 – 300V

CA: L Tension: 12 – 440V

APMDCA72, APMACA72



La tension maximale admissible pour tout raccordement sur ce circuit imprimé est de 300V CC ou 440V CA.

Especificación

Pantalla

- Gráfico de barras de 40 segmentos
- Se borran los ceros a la izquierda
- 72mm:**
- LCD 56mm x 52mm
- 4 caracteres de 12mm x 6mm
- 48mm:**
- LCD 34mm x 32mm
- 4 caracteres de 8mm x 4mm

Gamas de entrada

- (ver páginas 8, 9)
- APMDCV:** 6 – 300V CC
 - APMACV:** 12 – 440V CA
 - APMDCUA:** 0 – 3999 μ A CC
 - APMACUA:** 0 – 3999 μ A CA
 - APMDCMA:** 0 – 399,9mA CC
 - APMACMA:** 0 – 399,9mA CA
 - APMDCA:** 0 – 39,99A CC
(APM48: 0 – 30A)
 - APMACA:** 0 – 39,99A CA
(APM48: 0 – 30A)

Corriente máximo

- 2 x max: 5 seg.
- 4 x max: 1 seg.

Precisión

- (± 1 del dígito menos significativo)
- CC: V, μ A, mA:** $\pm 2\%$, **A:** $\pm 3\%$
 - CA: 40–650 Hz:** como anterior
 - 650–2700 Hz:** $\pm 5\%$

Linealidad

- $\pm 0,1\%$ escala completa

Velocidad de muestreo

- 1 seg.

Impedancia de entrada

- V:** 10M Ω
- 0 – 399,9 μ A:** 500 Ω
- 400 μ A – 3999 μ A:** 50 Ω
- 0 – 39,9mA:** 5 Ω
- 40mA – 399,9mA:** 0,5 Ω
- 0 – 30A/39,99:** 0,0005 Ω

Conexiones

- Conexiones tornillo a prueba de dedos para cables de hasta:
- Entrada:** 4mm² (**APM72 0–39,99A:** 16mm²)
 - Luz de fondo:** 1,5mm²

Alimentación

- Unidades de la CC:** 6 – 300V CC $\pm 5\%$, 5mA máx
- Unidades de la CA:** 12 – 440V CA $\pm 5\%$, 5mA máx
- Luz de fondo:** 12V/24V CC $\pm 1,0V$, seleccionable, (ver página 12 y abajo)

Categoría de instalación (IEC664)

- Categoría II de sobrevoltaje
- Grado de contaminación 2 (IEC64)

Temperatura de Funcionamiento

- 10° C a 50° C

Temperatura de almacenaje

- 20° C a 70° C

Protección ambiental

- IP65

Altitud

- Hasta 3.000 m

Humedad relativa

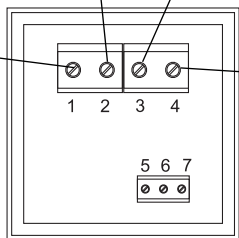
- 85% máx. sin condensado

Conexiones (ver página 7)

APM48: 0 – 30A

CC: VSS: 0V

CA: N: 0V



CC: Corriente: 0 – 399,9mA o 3999 μ A

CA: Corriente: 0 – 399,9mA o 3999 μ A

CC: VDD Tensión: 6 – 300V

CA: L Tensión: 12 – 440V

**APMDCV72, APMDCMA72, APMDCUA72,
APMACV72, APMACMA72, APMACUA72,
TODOS LOS APM48**

Luz de fondo: todos los unidades

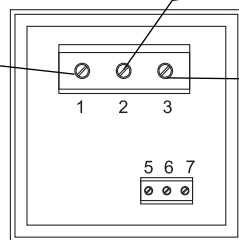
5	0V
6	12V CC $\pm 1,0V$
7	24V CC $\pm 1,0V$

Nota:

La luz de fondo requiere una alimentación CC independiente y estable.

CC: VSS: 0V

CA: N: 0V



CC: Corriente: 0 – 39,99A

CA: Corriente: 0 – 39,99A

CC: VDD Tensión: 6 – 300V

CA: L Tensión: 12 – 440V

**APMDCA72,
APMACA72**

Nota:

Las unidades de tensión se alimentan por la señal de entrada. Por tanto, la tensión mínima para estas unidades es de 6V CC o 12V CA.

Nota :

Cualquier cable de señal conectado a esta unidad no debe de exceder de 30 metros.

Si se instalan cables de señal que sean llevados fuera del edificio, sera necesario instalar unidades adicionales de protección de onda.



El voltaje máximo permitido para cualquier conexión al circuito impreso es 300V CC o 440V CA.

Specifiche

Display

- Grafico a barre con 40 segmenti
- Zeri non significativi soppressi
- 72mm:**
- LCD 56mm x 52mm
- Altezza cifre 4 x 12mm x 6mm
- 48mm:**
- LCD 34mm x 32mm
- Altezza cifre 4 x 8mm x 4mm

Gamme di ingresso

- (vedi pagine 8, 9)
- **APMDCV:** 6 – 300V CC
 - **APMACV:** 12 – 440V CA
 - **APMDCUA:** 0 – 3999 μ A CC
 - **APMACUA:** 0 – 3999 μ A CA
 - **APMDCMA:** 0 – 399,9mA CC
 - **APMACMA:** 0 – 399,9mA CA
 - **APMDCA:** 0 – 39,99A CC
(**APM48:** 0 – 30A)
 - **APMACA:** 0 – 39,99A CA
(**APM48:** 0 – 30A)

Corrente massimo

- 2 x max: 5 sec.
- 4 x max: 1 sec.

Accuratezza

- (± 1 la cifra significativa minima)
- **CC:** V, μ A, mA: $\pm 2\%$, A: $\pm 3\%$
- **CA:** 40–650 Hz: come sopra
650–2700 Hz: $\pm 5\%$

Linearità

- $\pm 0,1\%$ della scala completa

Frequenza di campionamento

- 1 sec.

Impedenza d'ingresso

- **V:** 10M Ω
- **0 – 399,9 μ A:** 500 Ω
- **400 μ A – 3999 μ A:** 50 Ω
- **0 – 39,9mA:** 5 Ω
- **40mA – 399,9mA:** 0,5 Ω
- **0 – 30A/39,99:** 0,0005 Ω

Collegamenti

- collegamenti con viti di protezione per cavi fino a:
- **Ingresso:** 4mm² (**APM72 0–39,99A:** 16mm²)
 - **Retroilluminazione:** 1,5mm²

Alimentazione

- **Unità di CC:** 6 – 300V CC $\pm 5\%$, 5mA max
- **Unità di CA:** 12 – 440V CA $\pm 5\%$, 5mA max
- **Retroilluminazione:** 12V/24V CC $\pm 1,0V$, selezionabile, (vedi pagina 12 e sotto)

Categoria di installazione (IEC664)

- Categoria di sovratensione II
- Grado di inquinamento 2 (IEC 64)

Temperatura di funzionamento

- da -10°C a +50°C

Temperatura di immagazzinaggio

- -da 20°C a +70°C

Protezione ambientale

- IP65

Altitudine

- Fino a 3000 m

Umidità relativa

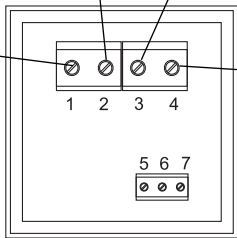
- 85% max (senza condensa)

Collegamenti (vedi pagina 7)

APM48: 0 – 30A

CC: VSS: 0V

CA: N: 0V



CC: Corrente: 0 – 399,9mA o 3999 μ A

CA: Corrente: 0 – 399,9mA o 3999 μ A

CC: VDD Tensione: 6 – 300V

CA: L Tensione: 12 – 440V

**APMDCV72, APMDCMA72, APMDCUA72,
APMACV72, APMACMA72, APMACUA72,
TUTTI I APM48**

Retroilluminazione: tutti i unità

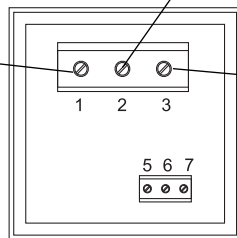
5	0V
6	12V CC $\pm 1,0V$
7	24V CC $\pm 1,0V$

Note:

La retroilluminazione richiede un'alimentazione CC separata e stabile.

CC: VSS: 0V

CA: N: 0V



CC: Corrente: 0 – 39,99A

CA: Corrente: 0 – 39,99A

CC: VDD Tensione: 6 – 300V

CA: L Tensione: 12 – 440V

**APMDCA72,
APMACA72**

Note:

Le unità di tensione sono alimentate dal segnale di input. Pertanto, la tensione minima richiesta per queste unità è 6 V CC o 12 V CA

Note:

Ogni cavo di segnale collegato a questo dispositivo non può essere più lungo di 30 metri.

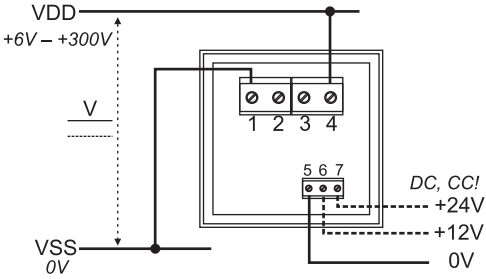
Se i cavi di segnale sono installati su un percorso esterno all'edificio, è necessario installare dispositivi di protezione di rete aggiuntivi.



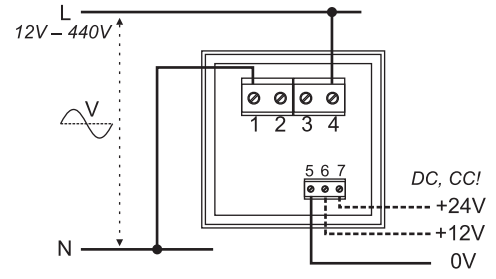
La tensione massima consentita per una connessione su PCB è di 300V CC o 440V CA.

Examples, Beispiele, Exemples, Ejemplos, Esempi

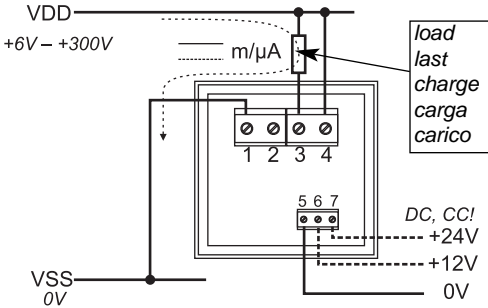
APMDCV: V



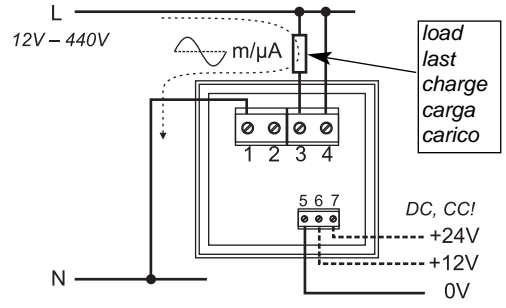
APMACV: V



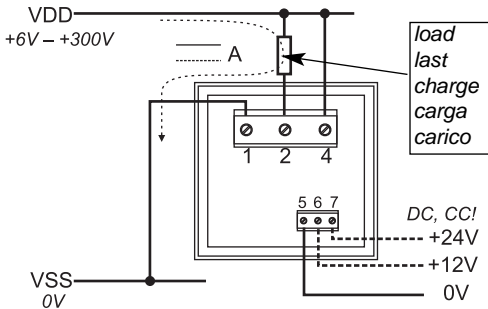
APMDCUA: μ A, APMDCMA: mA



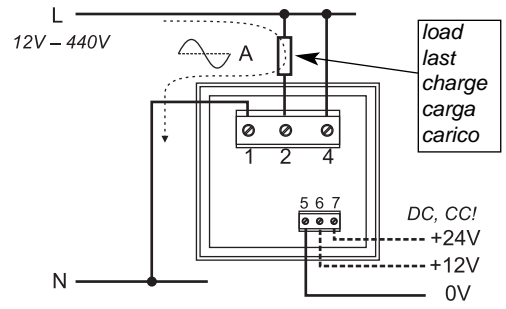
APMACUA: μ A, APMACMA: mA



APMDCA: A



APMACA: A



- Connect **ONLY** as shown in these diagrams.
- Der Anschluss darf **NUR** wie in diesen Diagrammen dargestellt erfolgen.
- Raccorder **IMPÉRATIVEMENT** conformément à ces illustrations.
- Conecte el aparato **SÓLO** como se indica en estos diagramas.
- Collegare **SOLO** nel modo illustrato in questi diagrammi.

Ranges, Messbereiche, Gammes, Gammas, Gamme

APMDCV

DC +6.00V — +300.0V CC

MIN

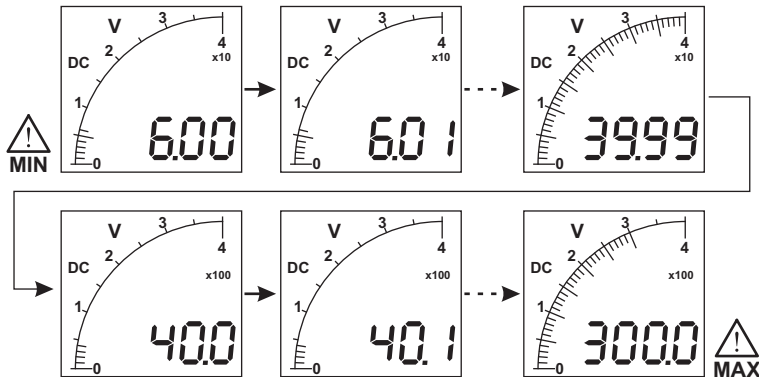
See note on page 2.

Siehe Hinweis auf Seite 3

Voir la Remarque en page 4

Consulte la nota de la página 5

Vedere nota a pagina 6



APMACV

AC 12.00V — 440.0V CA

MIN

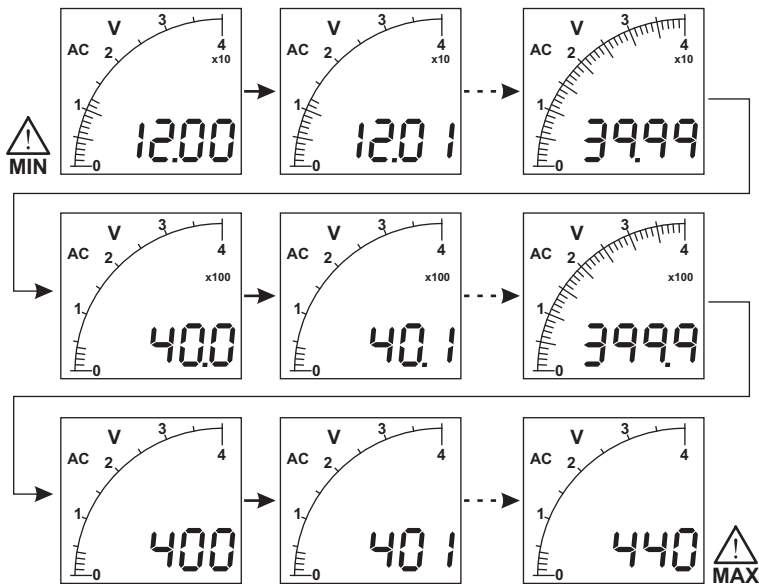
See note on page 2.

Siehe Hinweis auf Seite 3

Voir la Remarque en page 4

Consulte la nota de la página 5

Vedere nota a pagina 6



APMDCA

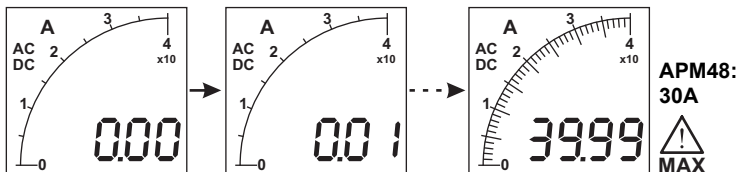
APMACA

DC +0.01A — +39.99A CC

(48mm: +0.01A — 30A)

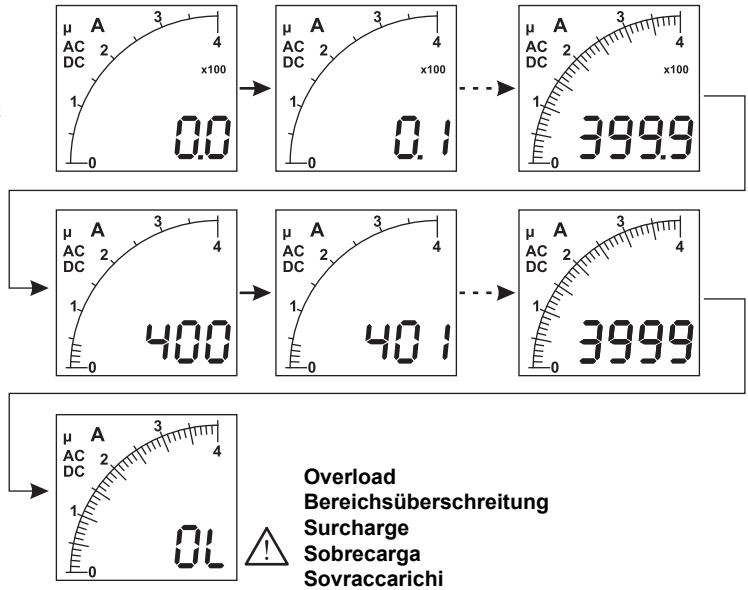
AC 0.01A — 39.99A CA

(48mm: 0.01A — 30A)



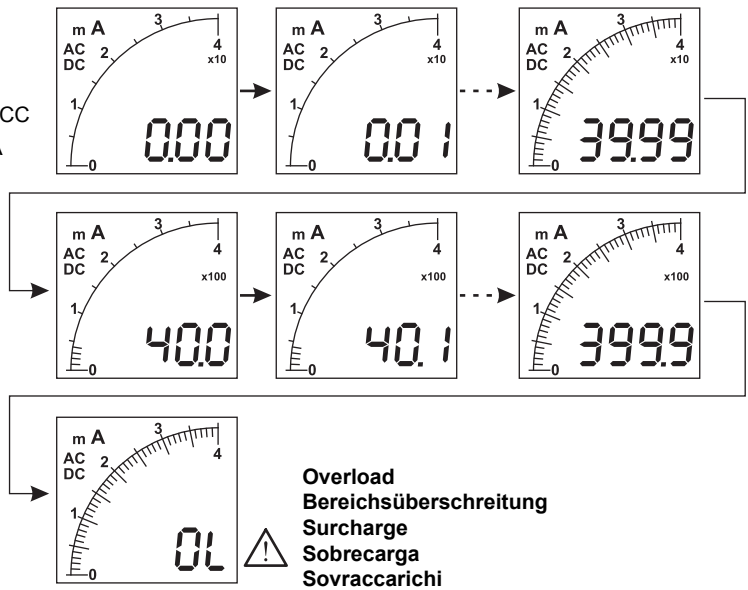
APMDCUA
APMACUA

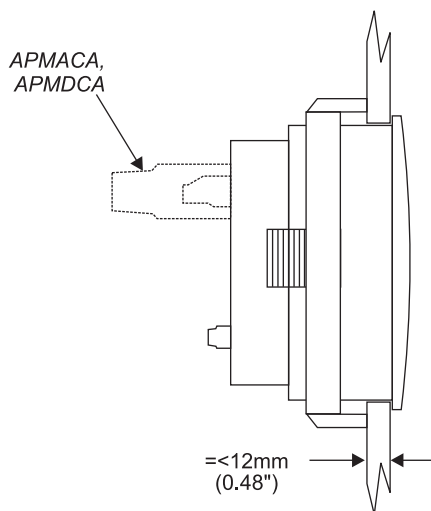
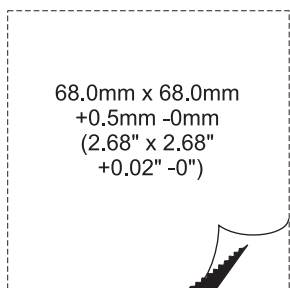
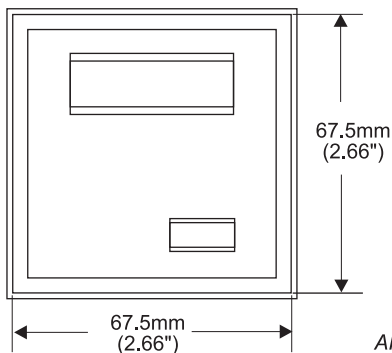
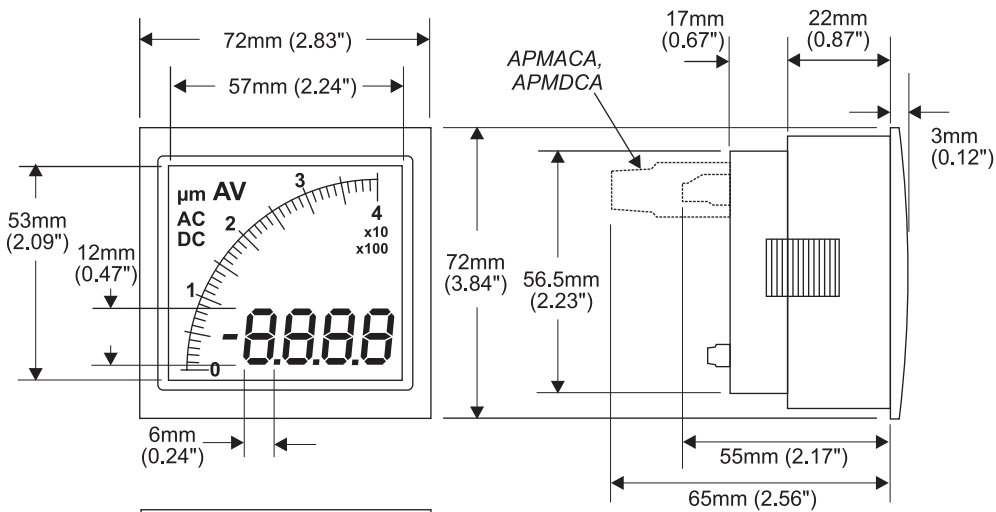
DC +0.1 μ A — +3999 μ A CC
AC 0.1 μ A — 3999 μ A CA

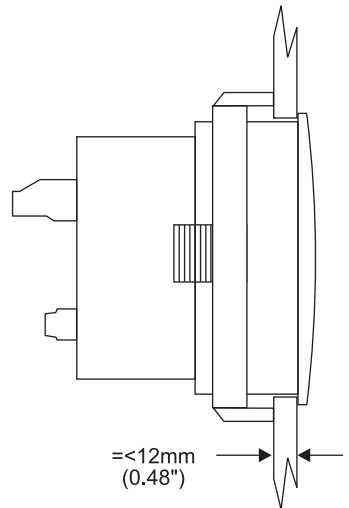
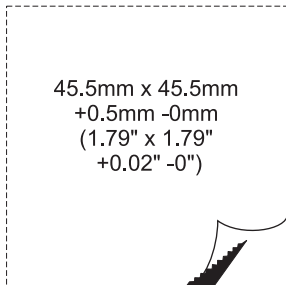
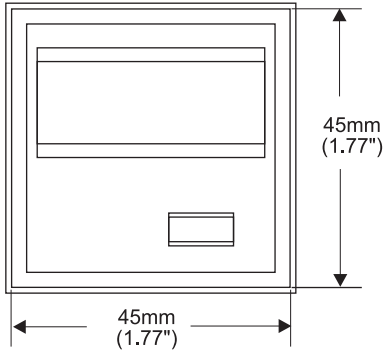
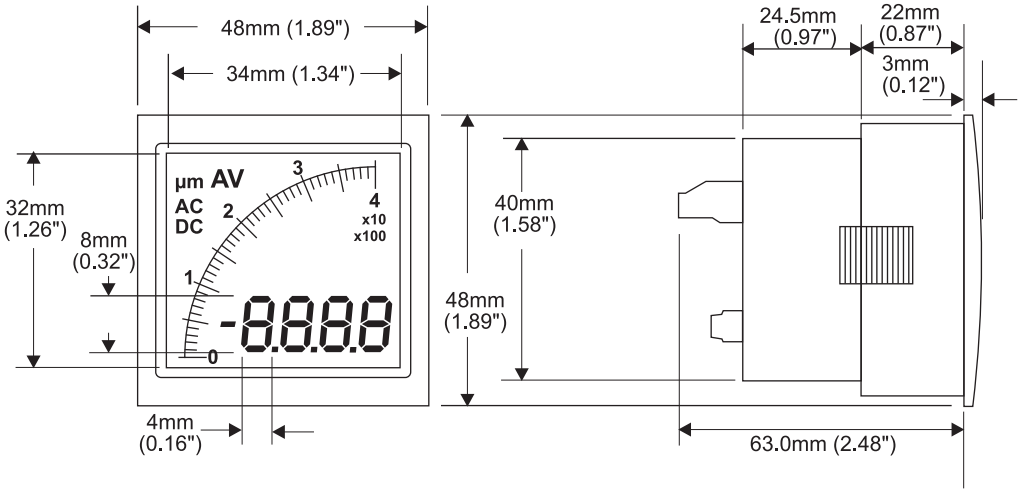


APMDCMA
APMACMA

DC +0.01mA — +399.9mA CC
AC 0.01mA — 399.9mA CA







Backlight, Hintergrundbeleuchtung, Rétroéclairage, Luz de fondo, Retroilluminazione

Current Consumption, Stromaufnahme, Consommation de courant, Consumo de corriente, Corrente assorbita

	APM72	APM48
red, rot, rouge, rojo, rosso	80mA max	80mA max
white, weiss, blanc, blanco, bianco	80mA max	20mA max
green, grün, vert, verde, verde	120mA max	80mA max

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