

•Voltmeter  
•Ammeter  
•Frequency Meter

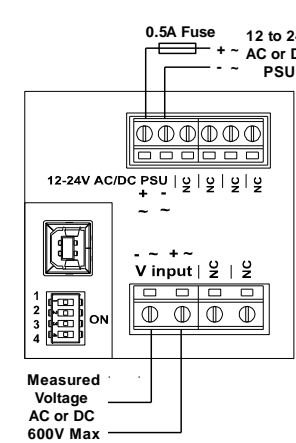
**EN:** Before installation, read the Safety Warnings overleaf.

**DE:** Vor der Installierung, lesen Sie die Sicherheitswarnungen umseitig.

**FR:** Avant l'installation, lisez les Avertissements de Sécurité au verso.

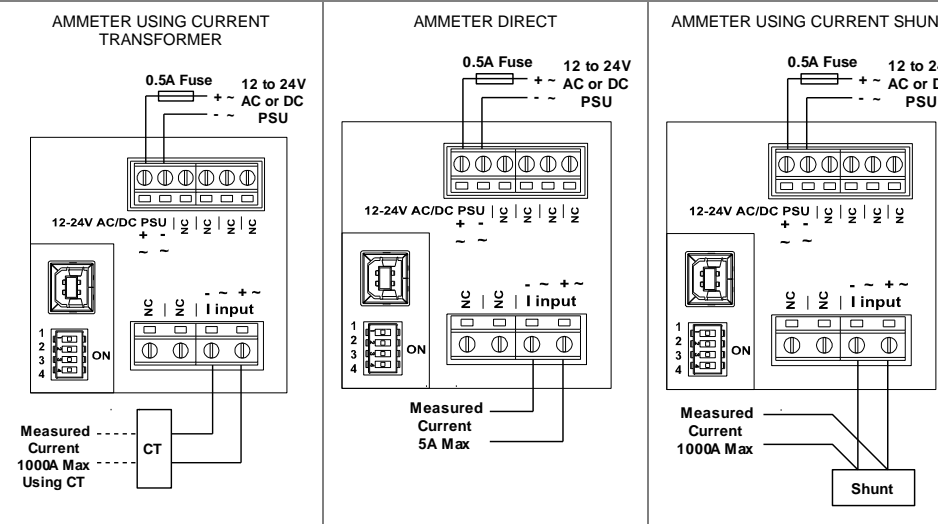
**ES:** Antes de la instalación, lea las advertencias de seguridad al dorso.

**IT:** Prima dell'installazione, leggere le avvertenze di sicurezza sul retro.



|      | Sw Pos | Measured                                 | Bar Graph |     | Display Value |       |
|------|--------|--|-----------|-----|---------------|-------|
| Item | 1234   | Value                                    | Min       | Max | Format        | Max   |
| 1    | 0000   | Custom (Defined in Software Application) |           |     |               |       |
| 2    | 1000   | Auto Ranging                             |           |     |               |       |
| 3    | 0100   | 12 V                                     | 0         | 20  | ###.##        | 99.99 |
| 4    | 1100   | 12 V                                     | 10        | 14  | ###.##        | 99.99 |
| 5    | 0010   | 24 V                                     | 0         | 40  | ###.##        | 99.99 |
| 6    | 1010   | 24 V                                     | 15        | 35  | ###.##        | 99.99 |
| 7    | 0110   | 48 V                                     | 0         | 60  | ####.         | 999.9 |
| 8    | 1110   | 48 V                                     | 40        | 60  | ####.         | 999.9 |
| 9    | 0001   | 100 V                                    | 0         | 100 | ####.         | 999.9 |
| 10   | 1001   | 110 V                                    | 0         | 160 | ####.         | 999.9 |
| 11   | 0101   | 110 V                                    | 90        | 130 | ####.         | 999.9 |
| 12   | 1101   | 230 V                                    | 0         | 300 | ####.         | 999.9 |
| 13   | 0011   | 230 V                                    | 210       | 250 | ####.         | 999.9 |
| 14   | 1011   | 415 V                                    | 0         | 500 | ####          | 9999  |
| 15   | 0111   | 415 V                                    | 360       | 460 | ####          | 9999  |
| 16   | 1111   | 600 V                                    | 0         | 600 | ####          | 9999  |

## Ammeter configuration / Amperemeter Konfiguration / Configuration de l'ampèremètre / Configuración del amperímetro / Configurazione del amperometro

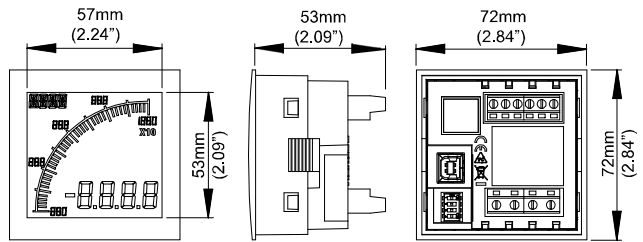


|      | Sw Pos | Measured                                 | Bar Graph |      | Display Value |       |
|------|--------|--|-----------|------|---------------|-------|
| Item | 1234   | Value                                    | Min       | Max  | Format        | Max   |
| 1    | 0000   | Custom (Defined in Software Application) |           |      |               |       |
| 2    | 1000   | Auto Ranging                             |           |      |               |       |
| 3    | 0100   | 4 A                                      | 0         | 4    | ###.###       | 5.000 |
| 4    | 1100   | 5 A                                      | 0         | 5    | ###.###       | 5.000 |
| 5    | 0010   | 10 A                                     | 0         | 10   | ###.###       | 10.00 |
| 6    | 1010   | 20 A                                     | 0         | 20   | ###.###       | 20.00 |
| 7    | 0110   | 40 A                                     | 0         | 40   | ###.###       | 40.00 |
| 8    | 1110   | 50 A                                     | 0         | 50   | ###.###       | 50.00 |
| 9    | 0001   | 60 A                                     | 0         | 60   | ####.         | 60.0  |
| 10   | 1001   | 80 A                                     | 0         | 80   | ####.         | 80.0  |
| 11   | 0101   | 100 A                                    | 0         | 100  | ####.         | 100.0 |
| 12   | 1101   | 200 A                                    | 0         | 200  | ####.         | 200.0 |
| 13   | 0011   | 400 A                                    | 0         | 400  | ####          | 400   |
| 14   | 1011   | 600 A                                    | 0         | 600  | ####          | 600   |
| 15   | 0111   | 800 A                                    | 0         | 800  | ####          | 800   |
| 16   | 1111   | 1000 A                                   | 0         | 1000 | ####          | 1000  |

=5A Secondary Current Transformer

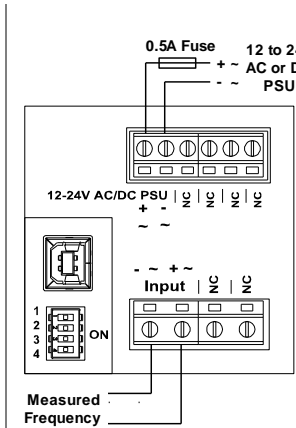
| EN   |  |  | DE                         |  | FR                               |  | ES  |  | IT  |  |
|--|--|--|----------------------------|--|----------------------------------|--|---|--|---|--|
| Use the DIP switch to set the Ammeter bar graph range, and the current transformer (CT) ratio if used. The CT ratio is shown as the target value. Use the software to set other value CTs and when using a DC current shunt. |  |  |                            |  |                                  |  |   |  |   |  |
| Operating specification  |  |  | DE: Betriebs Spezifikation |  | FR: Spécification d'exploitation |  | ES: Especificación de funcionamiento              |  | IT: Specifiche operative                          |  |
|  |  |  | VALUE                      |  | UNIT                             |  |   |  |   |  |
| INPUT  |  |  | EINGANG                    |  | ENTRÉE                           |  | ENTRADA   |  | INGRESSO  |  |
| Input range (direct connection)  |  |  | 0-5 A                      |  | I AC/DC                          |  |   |  |   |  |
| Input range (via current transformer)  |  |  | 0-1000 A                   |  | I AC                             |  | Eingangsbereich (mit Stromwandler)                |  | Plage d'entrée (via transformateur de courant)    |  |
| Input range (via current shunt)  |  |  | 0-1000 A                   |  | I DC                             |  | Rango de entrada (con transformador de corriente) |  | Campo di ingresso (con trasformatore di corrente) |  |
| Impedance  |  |  | 2                          |  | mΩ                               |  |   |  |   |  |
| Accuracy   |  |  | 1                          |  | %                                |  |   |  |   |  |
| Resolution   |  |  | 2.4                        |  | mA                               |  |   |  |   |  |
| Sample rate  |  |  | 40                         |  | KHz                              |  |   |  |   |  |
| Display modes  |  |  | peak or RMS                |  |                                  |  |   |  |   |  |

## Size / Größe / Taille / El Tamaño / La dimensione



EN: Size of the cutout in the panel:  
DE: Größe der Ausnehmung in der Platte:  
FR: Taille de la découpe dans le panneau:  
ES: Tamaño de la abertura en el panel:  
IT: Dimensioni del ritaglio nel pannello:

68 x 68mm (2.68in) +0.7 -0mm



|      | Sw Pos | Measured                                 | Bar Graph |      | Display Value |       |
|------|--------|--|-----------|------|---------------|-------|
| Item | 1234   | Value                                    | Min       | Max  | Format        | Max   |
| 1    | 0000   | Custom (Defined in Software Application) |           |      |               |       |
| 2    | 1000   | Auto Ranging                             |           |      |               |       |
| 3    | 0100   | 50 Hz                                    | 40        | 60   | ###.#         | 99.99 |
| 4    | 1100   | 50 Hz                                    | 48        | 52   | ###.#         | 99.99 |
| 5    | 0010   | 55 Hz                                    | 45        | 65   | ###.#         | 99.99 |
| 6    | 1010   | 60 Hz                                    | 50        | 70   | ###.#         | 99.99 |
| 7    | 0110   | 60 Hz                                    | 58        | 62   | ###.#         | 99.99 |
| 8    | 1110   | 400 Hz                                   | 350       | 450  | ###.#         | 999.9 |
| 9    | 0001   | 400 Hz                                   | 390       | 410  | ###.#         | 999.9 |
| 10   | 1001   | 100 Hz                                   | 0         | 100  | ###.#         | 999.9 |
| 11   | 0101   | 200 Hz                                   | 0         | 200  | ###.#         | 999.9 |
| 12   | 1101   | 300 Hz                                   | 0         | 300  | ###.#         | 999.9 |
| 13   | 0011   | 400 Hz                                   | 0         | 400  | ###.#         | 999.9 |
| 14   | 1011   | 500 Hz                                   | 0         | 500  | ###.#         | 999.9 |
| 15   | 0111   | 600 Hz                                   | 0         | 600  | ###.#         | 999.9 |
| 16   | 1111   | 1000 Hz                                  | 0         | 1000 | ####          | 1000  |

Measured Frequency

## Frequency Meter configuration / Frequenzmesser Konfiguration / Configuración del metro de frecuencia / Frequenzimetro configurazione

| EN  |  |  | DE                         |  | FR                               |  | ES   |  | IT                       |  |
|---|--|--|----------------------------|--|----------------------------------|--|--|--|--------------------------|--|
| Use the DIP switch to set the Frequency Meter bar graph range and target values. The digital readout will still show the actual measured frequency even if the bar graph is out of range. |  |  |                            |  |                                  |  |  |  |                          |  |
| EN: Operating specification   |  |  | DE: Betriebs Spezifikation |  | FR: Spécification d'exploitation |  | ES: Especificación de funcionamiento           |  | IT: Specifiche operative |  |
|   |  |  | VALUE                      |  | UNIT                             |  |  |  |                          |  |
| INPUT   |  |  |                            |  |                                  |  |  |  |                          |  |
| Input range   |  |  | 0-400                      |  | Hz                               |  |  |  |                          |  |
| Impedance   |  |  | 1.5                        |  | MΩ                               |  |  |  |                          |  |
| Accuracy  |  |  | 0.1                        |  | %                                |  |  |  |                          |  |
| Resolution  |  |  | 0.1                        |  | Hz                               |  |  |  |                          |  |
| Sample rate   |  |  | 40                         |  | KHz                              |  |  |  |                          |  |
| Measurement mode  |  |  | frequency                  |  |                                  |  |  |  |                          |  |
| Signal Level – Min – Max  |  |  | 10 528                     |  | V V                              |  | Minimalen Signalpegel Niveau de signal minimum |  |                          |  |

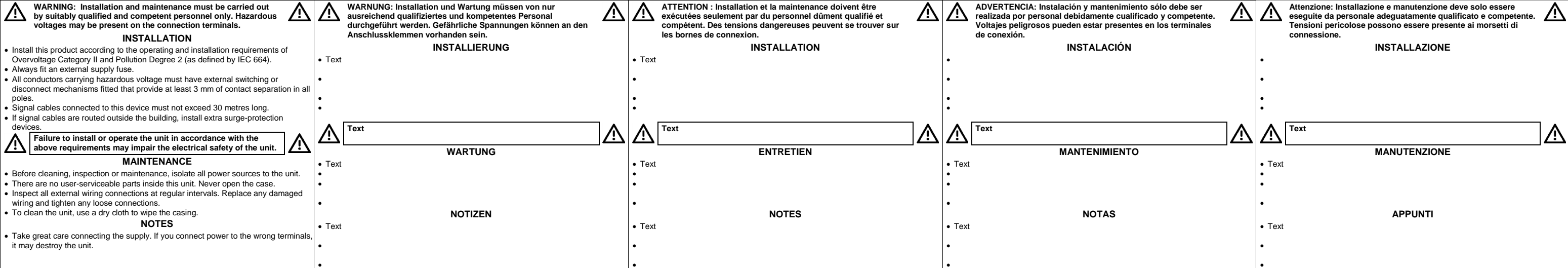
## EN: Safety Warnings

## DE: Sicherheitswarnungen

## FR: Avertissements de Sécurité

## ES: Advertencias de Seguridad

## IT: Avvertenze di Sicurezza



## Specification

## Spezifizierung

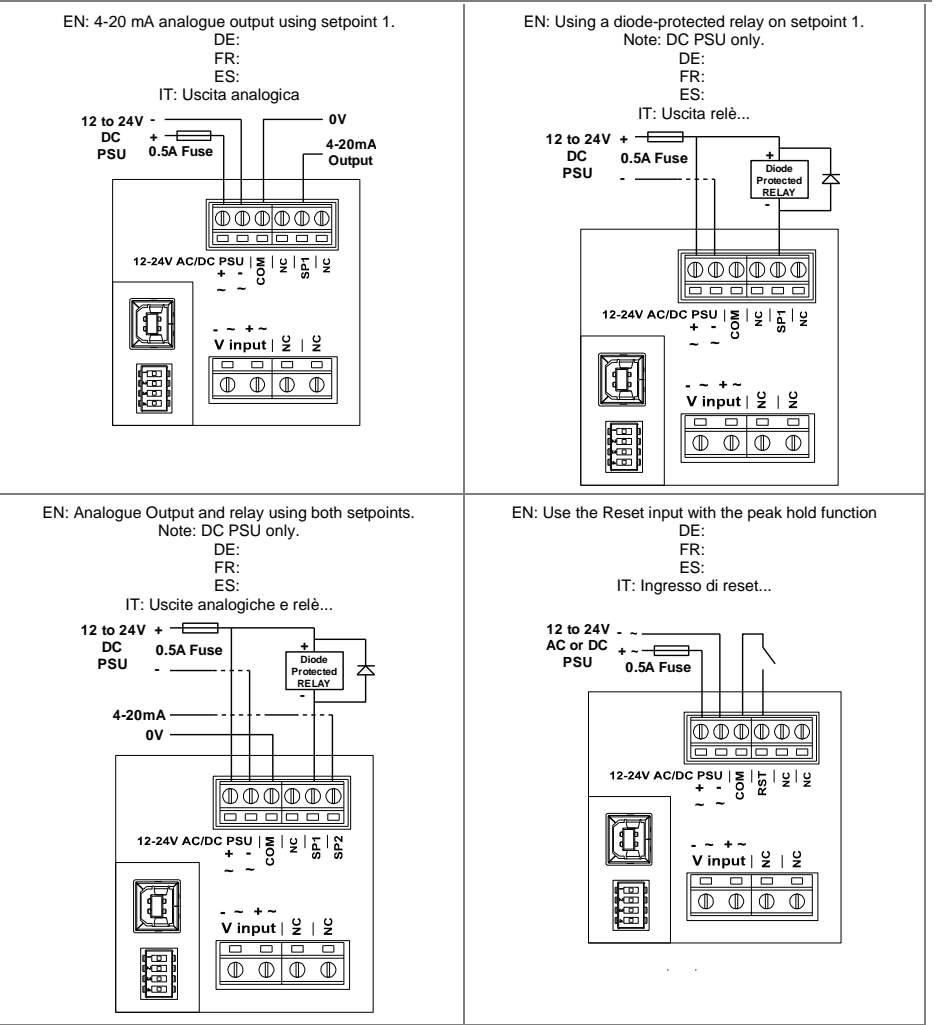
## Spécification

## Especificación

## Specificazione

**Output versions only / Ausgangsvarianten nur / Seules les versions de sortie /  
Versiones de salida solo / Solo versioni di uscita**

| EN: ENGLISH                                    | DE: DEUTSCHE  | FR: Français                                      | ES: Español   | IT: Italiano  | VALUE                                |
|--|---|---|---|---|--------------------------------------|
| <b>Environment</b>                             | <b>Umwelt</b>   | <b>Environnement</b>                              | <b>Medio ambiente</b>                               | <b>Ambiente</b>                                     |                                      |
| Temperature - operating                        | Temperatur – Betriebs                                     |   |   |   | –10 to +60 deg C                     |
| Temperature - storage                          | Temperatur - Lagerung                                     |   |   |   | –40 to +70 deg C                     |
| Altitude                                       | Höhenlage   |   |   |   | 2000 metres                          |
| Relative Humidity (non-condensing)             | Relative Luftfeuchtigkeit (nicht kondensierend)           | Humidité relative (non-condensante)               | Humedad relativa (sin condensación)                 | Umidità relativa (senza condensa)                   | 0 – 85 %                             |
| Overvoltage category (IEC664)                  | Überspannungskategorie (IEC664)                           |   |   |   | II                                   |
| Pollution Degree (IEC664)                      | Verschmutzungsgrad (IEC664)                               |   |   |   | 2                                    |
| IP rating (from the front)                     | IP-Bewertung (von vorne)                                  |   |   |   | IP65                                 |
| Vibration                                      | Vibrierung  |   |   |   |                                      |
| Shock  | Mechanischer Schock                                       |   |   |   |                                      |
| <b>Power supply</b>                            | <b>Netzanschluss</b>                                      |   |   |   |                                      |
| Nominal Input (AC or DC)                       | Nenneingangs (AC oder DC)                                 |   |   |   | 12-24 VAC / VDC                      |
| Max Current (backlight off)                    | Max Strom (ohne Hintergrundbeleuchtung)                   |   |   |   | 80 mA                                |
| Max Current (backlight on)                     | Max Strom (mit Hintergrundbeleuchtung)                    |   |   |   | 160 mA                               |
| Isolation between power supply & voltage input | Isolierung zwischen das Netzteil und die Eingang Spannung | Isolation entre alimentation et entrée de tension | Aislamiento entre alimentación y entrada de tension | Isolamento tra alimentazione e tensione di ingresso | 600 VAC / VDC                        |
| Isolation between power supply & current input | Isolierung zwischen das Netzteil und dem Stromeingangs    |   |   |   | 2 KV VAC / VDC                       |
| <b>Display</b>                                 |   |   |   |   |                                      |
| Number of digits                               |   |   |   |   | 4                                    |
| Digit height                                   |   |   |   |   | 12 mm                                |
| Number of bar-graph segments                   |   |   |   |   | 40                                   |
| Number of starburst message characters         |   |   |   |   | 4                                    |
| Backlight colours                              |   |   |   |   | Red, Green, White                    |
| LCD display                                    |   |   |   |   | Positive or negative                 |
| Digit update frequency                         |   |   |   |   | 0.08 – 1.8 sec                       |
| Bar-graph update frequency                     |   |   |   |   | 0.08 – 1.8 sec                       |
| Viewing angle                                  |   |   |   |   | +/-70° Horizontal<br>+/-70° Vertical |
| <b>Open Collector Outputs</b>                  |   |   |   |   |                                      |
| Max voltage (open collector outputs)           |   |   |   |   | 24 V                                 |
| Max current (open collector outputs)           |   |   |   |   | 500 mA                               |
| Max power (open collector outputs)             |   |   |   |   | 0.6 W                                |
| <b>Analogue Output</b>                         |   |   |   |   |                                      |
| Output   |   |   |   |   | 4-20 mA                              |
| Accuracy                                       |   |   |   |   | 0.50 %                               |
| Resolution                                     |   |   |   |   | 0.02 mA                              |



**EN:** You need the software to configure the setpoints and outputs.  
For more details, output configurations and the software, [www.iseinc.com](http://www.iseinc.com)

|                                |  |  |  |  |  |
|--------------------------------|--|--|--|--|--|
| <b>Certification</b>           | UL   |  |  |  |  |
|                                | CE   |  |  |  |  |
|                                | IEC 61010-1  |  |  |  |  |
| <b>In the Box</b>              | APM  |  |  |  |  |
|                                | Getting started & safety guide   |  |  |  |  |
|                                | IP65 gasket  |  |  |  |  |
|                                | Retaining clip   |  |  |  |  |
| <b>Dimensions &amp; Weight</b> | <b>Panel Cut-out:</b> 68 x 68 mm (2.68 in) +0.7 -0 mm (0.02 in).<br><b>Max. panel thickness:</b> 11.0 mm.<br><b>Dimensions:</b> Depth behind panel inside front: 55mm (2.17in) incl. external connections. <b>Weight:</b> 180 grams. |  |  |  |  |



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