



- Voltmeter
- Ammeter
- Frequency Meter

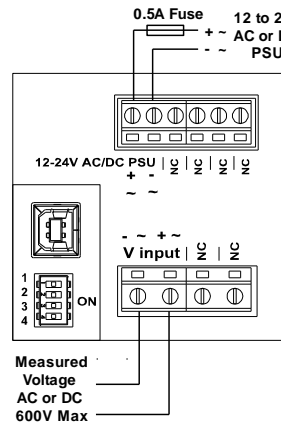
**EN:** Before installation, read the Safety Warnings overleaf.

**DE:** Vor der Installation, 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.



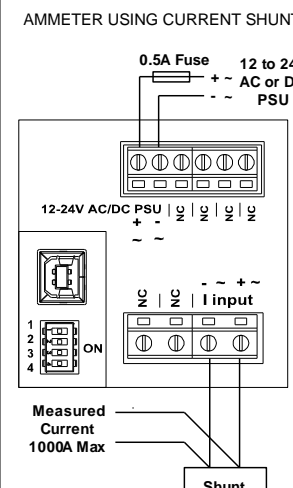
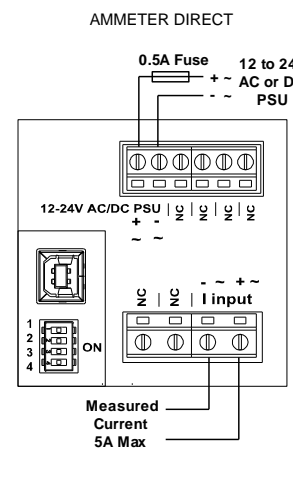
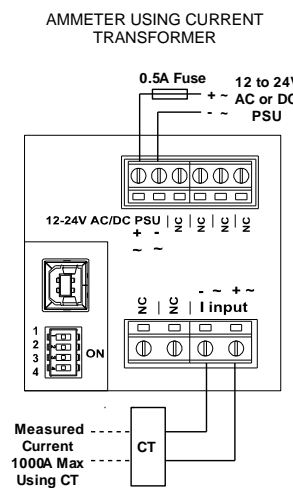
Item	Sw Pos	Measured Value	Bar Graph Min	Bar Graph Max	Display Value Format	Display Value Max	
1	0000	Custom (Defined in Software Application)					
2	1000	Auto Ranging					
3	0100	12 V	0	20	###.##	99.99	
4	1100	12 V	10	14	###.##	99.99	
5	0010	24 V	0	40	###.##	99.99	
6	1010	24 V	15	35	###.##	99.99	
7	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	

EN	DE	FR	ES	IT
Configure the APM using the DIP switch and the switch position tables for each model. You do not need software to set auto-ranging and preset scales / measuring ranges. To set custom ranges and advanced features, download the APM configurator software from truAPM.com.	Konfigurieren Sie das APM mit der DIP-Schalter und den Schalter-Stellung-Tabellen für jedes Modell. Sie brauchen keine Software automatische Anpassung und preset Scales / Messbereiche. Um benutzerdefinierte Bereiche und erweiterte Funktionen eingestellt, laden die Software von truAPM.com.	Configurez le APM en utilisant le commutateur DIP et les tables de position de commutation pour chaque modèle. Vous n'avez pas besoin de logiciel pour créer des échelles d'auto-allant et prédéfinis / plages de mesure. Pour définir des gammes personnalisées et des fonctionnalités avancées, téléchargez le logiciel à partir truAPM.com.	Configure la APM mediante el interruptor DIP y las tablas de posiciones de interruptor para cada modelo. Usted no necesita software para establecer escalas de rango automático y preestablecidos / rangos de medición. Para establecer rangos personalizados y funciones avanzadas, descargar el software desde truAPM.com.	Configurare l'APM con il DIP-switch e le tabelle di posizione interruttore per ogni modello. Non è necessario software per impostare l'auto-ranging e preset scale / intervalli di misura. Per impostare intervalli personalizzati e funzioni avanzate, scaricare il software da truAPM.com.

## Voltmeter configuration / Voltmeter Konfiguration / Configuration de voltmeter / Configuración de voltímetro / Configurazione del voltmeter

EN	DE	FR	ES	IT
Use the DIP switch to set the Voltmeter bar graph range and target values. The digital readout will still show the actual voltage even if the bar graph is out of range.				
<b>Operating specification</b>	<b>DE: Betriebs Spezifikation</b>	<b>FR: Spécification d'exploitation</b>	<b>ES: Especificación de funcionamiento</b>	<b>IT: Specifiche operative</b>
<b>INPUT</b>	<b>EINGANG</b>	<b>ENTRÉE</b>	<b>ENTRADA</b>	<b>INGRESSO</b>
Input range (DC)	0-600	V DC		
Input range (AC)	0-528	V AC		
Max overvoltage rating	800	V	Maximale Überspannungs Bewertung	Surtension maximale nominale
Impedance	1.5	MΩ	Valor máximo de la sobretensión	Valutazione di massima sovratensione
Accuracy	1%	%		
Resolution	10	mV		
Sample rate	40	KHz		
Display modes	peak or RMS			

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

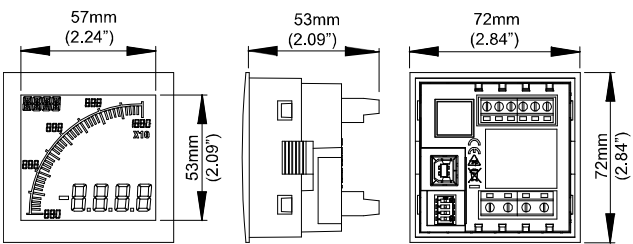


Item	Sw Pos	Measured Value	Bar Graph Min	Bar Graph Max	Display Value Format	Display Value Max	
1	0000	Custom (Defined in Software Application)					
2	1000	Auto Ranging					
3	0100	4 A	0	4	###.##	5.000	
4	1100	5 A	0	5	###.##	5.000	
5	0010	10 A	0	10	###.##	10.000	
6	1010	20 A	0	20	###.##	20.000	
7	0110	40 A	0	40	###.##	40.000	
8	1110	50 A	0	50	###.##	50.000	
9	0001	60 A	0	60	###.##	60.000	
10	1001	80 A	0	80	###.##	80.000	
11	0101	100 A	0	100	###.##	100.000	
12	1101	200 A	0	200	###.##	200.000	
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	

■ =Using external 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.				
<b>Operating specification</b>	<b>DE: Betriebs Spezifikation</b>	<b>FR: Spécification d'exploitation</b>	<b>ES: Especificación de funcionamiento</b>	<b>IT: Specifiche operative</b>
<b>INPUT</b>	<b>EINGANG</b>	<b>ENTRÉE</b>	<b>ENTRADA</b>	<b>INGRESSO</b>
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			

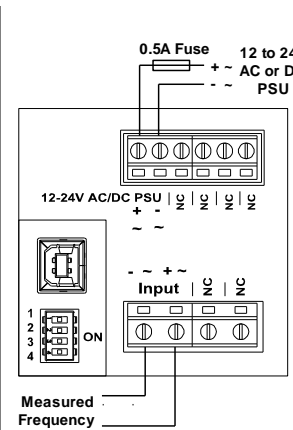
## Size / Größe / Taille / El Tamaño / La dimensione



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

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



Item	Sw Pos	Measured Value	Bar Graph Min	Bar Graph Max	Display Value Format	Display Value 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	300 Hz	0	600	###.##	999.9	
16	1111	400 Hz	0	1000	####.	1000	

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.				
<b>EN: Operating specification</b>	<b>DE: Betriebs Spezifikation</b>	<b>FR: Spécification d'exploitation</b>	<b>ES: Especificación de funcionamiento</b>	<b>IT: Specifiche operative</b>
<b>INPUT</b>	<b>EINGANG</b>	<b>ENTRÉE</b>	<b>ENTRADA</b>	<b>INGRESSO</b>
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	10	V	Minimalen Signalpegel	Niveau de signal minimum
– Max	528	V		

EN: Safety Warnings

DE: Sicherheitswarnungen

FR: Avertissements de Sécurité

ES: Advertencias de Seguridad

IT: Avvertenze di Sicurezza

<p><b>WARNING:</b> Installation and maintenance must be carried out by suitably qualified and competent personnel only. Hazardous voltages may be present on the connection terminals.</p> <p><b>INSTALLATION</b></p> <ul style="list-style-type: none"> <li>Install this product according to the operating and installation requirements of Overvoltage Category II and Pollution Degree 2 (as defined by IEC 664).</li> <li>Always fit an external supply fuse.</li> <li>All conductors carrying hazardous voltage must have external switching or disconnect mechanisms fitted that provide at least 3 mm of contact separation in all poles.</li> <li>Signal cables connected to this device must not exceed 30 metres long.</li> <li>If signal cables are routed outside the building, install extra surge-protection devices.</li> </ul> <p><b>MAINTENANCE</b></p> <ul style="list-style-type: none"> <li>Before cleaning, inspection or maintenance, isolate all power sources to the unit.</li> <li>There are no user-serviceable parts inside this unit. Never open the case.</li> <li>Inspect all external wiring connections at regular intervals. Replace any damaged wiring and tighten any loose connections.</li> <li>To clean the unit, use a dry cloth to wipe the casing.</li> </ul> <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Take great care connecting the supply. If you connect power to the wrong terminals, it may destroy the unit.</li> </ul>	<p><b>WARNUNG:</b> Installation und Wartung müssen von nur ausreichend qualifizierten und kompetentes Personal durchgeführt werden. Gefährliche Spannungen können an den Anschlussklemmen vorhanden sein.</p> <p><b>INSTALLIERUNG</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>WARTUNG</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>NOTIZEN</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul>	<p><b>ATTENTION :</b> Installation et la maintenance doivent être exécutées seulement par du personnel dûment qualifié et compétent. Des tensions dangereuses peuvent se trouver sur les bornes de connexion.</p> <p><b>INSTALLATION</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>ENTRETIEN</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul>	<p><b>ADVERTENCIA:</b> Instalación y mantenimiento sólo debe ser realizada por personal debidamente cualificado y competente. Voltajes peligrosos pueden estar presentes en los terminales de conexión.</p> <p><b>INSTALACIÓN</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>MANTENIMIENTO</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>NOTAS</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul>	<p><b>Attenzione:</b> Installazione e manutenzione deve solo essere eseguita da personale adeguatamente qualificato e competente. Tensioni pericolose possono essere presente ai morsetti di connessione.</p> <p><b>INSTALLAZIONE</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>MANUTENZIONE</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul> <p><b>APPUNTI</b></p> <ul style="list-style-type: none"> <li>Text</li> </ul>
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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 +/-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

<p>EN: 4-20 mA analogue output using setpoint 1. Note: <b>DC PSU ONLY</b></p> <p>DE: FR: ES: IT: Uscita analogica</p>	<p>EN: Using a diode-protected relay on setpoint 1. Note: <b>DC PSU ONLY</b></p> <p>DE: FR: ES: IT: Uscita relè...</p>
<p>EN: Analogue Output and relay using both setpoints. Note: <b>DC PSU ONLY</b></p> <p>DE: FR: ES: IT: Uscite analogiche e relè...</p>	<p>EN: Use the Reset input with the peak hold function</p> <p>DE: FR: ES: IT: Ingresso di reset...</p>

- EN:** You need the software to configure the setpoints and outputs. For more details, output configurations and the software, visit [www.truAPM.com](http://www.truAPM.com).
- DE:** Sie müssen die Software, um die Sollwerte und Ausgänge konfigurieren. Für mehr Details, Ausgangskonfigurationen und der Software, finden Sie [www.truAPM.com](http://www.truAPM.com).
- FR:** Vous avez besoin du logiciel pour configurer les points de consigne et des sorties. Pour plus de détails, configurations de sortie et le logiciel, visitez [www.truAPM.com](http://www.truAPM.com).
- ES:** Necesita el software para configurar los valores de consigna y salidas. Para más detalles, configuraciones de salida y la de software, visite [www.truAPM.com](http://www.truAPM.com).
- IT:** È necessario il software per configurare i valori di riferimento e le uscite. Per maggiori dettagli, configurazioni di uscita e il software, visitate il sito [www.truAPM.com](http://www.truAPM.com).

<b>Certification</b>	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). <b>Max. panel thickness:</b> 11.0 mm. <b>Dimensions:</b> Depth behind panel inside front: 55mm (2.17in) incl. external connections. <b>Weight:</b> 180 grams.				

Contact / Kontakt / Contacter / Contacto / Contatto		
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