

DIRIS A20

Notice d'utilisation

Operating instructions - Bedienungsanleitung

Istruzioni per l'uso - Gebruiksaanwijzing

Instrucciones de servicio - Manual de instruções



socomec
Innovative Power Solutions

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DANGER ET AVERTISSEMENT

DANGER AND WARNING - GEFAHREN UND SICHERHEITSHINWEISE - PERICOLO E AVERTIMENTI - GEVAAR EN WAARSCHUWING - ADVERTENCIA - PERIGO E AVISO

F

Le montage de ces matériels ne peut être effectué que par des professionnels.

Le non respect des indications de la présente notice ne saurait engager la responsabilité du constructeur.

Risque d'électrocution, de brûlures ou d'explosion

- l'installation et l'entretien de cet appareil ne doivent être effectués que par du personnel qualifié
- avant toute intervention sur l'appareil, couper les entrées tensions, court-circuitez le secondaire de chaque transformateur de courant (PTI SOCOMEC) et coupez l'alimentation auxiliaire de l'appareil
- utilisez toujours un dispositif de détection de tension approprié pour confirmer l'absence de tension
- remplacez tous les dispositifs, les portes et les couvercles avant de mettre cet appareil sous tension
- utilisez toujours la tension assignée appropriée pour alimenter cet appareil.

Si ces précautions n'étaient pas respectées, cela pourrait entraîner des blessures graves.

Risque de détérioration de l'appareil

Veillez à respecter :

- la tension d'alimentation auxiliaire
- la fréquence du réseau 50 ou 60 Hz
- une tension maximum aux bornes des entrées tension de 500 V AC phase/phase ou 289 V AC phase neutre
- un courant maximum de 6A aux bornes des entrées courants (I1, I2 et I3)

GB

This equipment must be mounted only by professionals. The manufacturer shall not be held responsible for failure to comply with the instructions in this manual.

Risk of electrocution, burns or explosion

- the device must be installed and serviced only by qualified personnel
- prior to any work on or in the device, isolate the voltage inputs and auxiliary power supplies and short-circuit the secondary winding of all current transformers (PTI SOCOMEC)
- always use an appropriate voltage detection device to confirm the absence of voltage
- put all mechanisms, door and covers back in place before energising the device
- always supply the device with the correct rated voltage

Failure to take these precautions could cause serious injuries.

Risk of damaging device

Check the following :

- the voltage of the auxiliary power
- the frequency of the distribution system (50 or 60 Hz)
- the maximum voltage across the voltage-input terminals, (V1, V2, V3 and VN) 500 V AC phase-to-phase or 289 V AC phase-to-neutral
- a maximum current of 6A on the current-input terminals (I1, I2 and I3)

D

Die Montage muss von einem Fachmann vorgenommen werden.

Eine Nichteinhaltung der vorliegenden Sicherheitshinweise befreit den Hersteller von seiner Haftung.

Gefahr von Stromschlägen, Verbrennungen oder Explosionen

- Die Installation und Wartung dieses Gerätes darf nur von Fachkräften vorgenommen werden.
- Vor jedem Eingriff am Gerät sind die Eingänge spannungslos zu schalten und die Sekundärseite jedes Stromwandlers (PTI SOCOMEC) kurzzuschließen und die Hilfsversorgung des Gerätes abzutrennen.
- Stets einen geeigneten Spannungsmesser verwenden, um sicherzugehen, dass keine Spannung anliegt.
- Alle Vorrichtungen, Türen und Deckel vor dem erneuten Einschalten des Gerätes wieder anbringen.
- Nur die vorgegebene Spannung zur Versorgung des Gerätes verwenden.

Eine Nichteinhaltung dieser Vorsichtsmaßnahmen kann zu schweren Verletzungen führen.

Gefahr einer Beschädigung des Gerätes

Bitte beachten Sie:

- Die Spannung der Hilfsversorgung,
- Die Netzfrequenz von 50 oder 60 Hz,
- Eine Höchstspannung an den Stromanschlussklemmen von 500V AC Phase/Phase oder 289V AC Phase/Nullleiter,
- Einen maximalen Strom von 6A an den Stromanschlussklemmen (I1, I2 und I3)

I

Questi materiali devono essere montati esclusivamente da professionisti.

Il mancato rispetto delle indicazioni contenute nelle presenti istruzioni solleva il fabbricante da ogni responsabilità.

Rischi di folgorazione, ustioni o esplosione

- l'installazione e la manutenzione di questo apparecchio devono essere effettuate esclusivamente da personale qualificato
 - prima di qualsiasi intervento sull'apparecchio, escludere gli ingressi di tensione, cortocircuitare il secondario di ciascun trasformatore di corrente (PTI SOCOMEC) ed escludere l'alimentazione ausiliaria dell'apparecchio
 - utilizzare sempre un opportuno dispositivo di rilevamento di tensione per confermare l'assenza di tensione
 - rimontare tutti i dispositivi, i portelli e i coperchi prima di mettere l'apparecchio sotto tensione
 - per alimentare questo apparecchio, utilizzare sempre l'appropriata tensione assegnata
- In caso di mancato rispetto di queste precauzioni, si potrebbero subire gravi ferite.

Rischi di deterioramento dell'apparecchio

Attenzione a rispettare:

- la tensione d'alimentazione ausiliaria
- la frequenza di rete a 50 o 60 Hz
- una tensione massima ai morsetti degli ingressi di tensione di 500V AC fase/fase o 289V AC fase neutro
- una corrente massima di 6A ai morsetti degli ingressi di corrente (I1, I2 e I3)

DANGER ET AVERTISSEMENT

DANGER AND WARNING - GEFAHREN UND SICHERHEITSHINWEISE - PERICOLO E AVVERTIMENTI - GEVAAR EN WAARSCHUWING - ADVERTENCIA - PERIGO E AVISO

NL

Enkel professionelen mogen deze materialen monteren. De constructeur is in geen geval verantwoordelijk indien de aanwijzingen van de onderhavige gebruiksaanwijzing niet worden in acht genomen.

Gevaar voor elektrocutie, brandwonden of ontploffing

- enkel gekwalificeerd personeel mag dit toestel plaatsen en onderhouden
- vóór iedere tussenkomst op het toestel, alle spanningsingangen afsluiten, de secundaire van iedere stroomtransformator (PTI SOCOMEC) kortsluiten en de hulpvoeding van het toestel afsluiten
- gebruik steeds een geschikte spanningsmeter om na te gaan of het toestel wel degelijk buiten spanning staat
- alle onderdelen, deuren en deksels terugplaatsen alvorens het toestel onder spanning te zetten
- gebruik altijd de geschikte toegewezen spanning om dit toestel te voeden

Indien deze voorzorgsmaatregelen niet worden in acht genomen, kan dit ernstige verwondingen tot gevolg hebben.

Gevaar voor beschadiging van het toestel

Gelieve de volgende elementen in acht te nemen:

- de spanning van de hulpvoeding
- de netfrequentie van 50 of 60 Hz
- een maximale spanning op de klemmen van de spanningsingangen van 500V AC fase/fase of 289V AC fase/neuter
- een maximale stroom van 6A op de klemmen van de stroomingangen (I1, I2 en I3)

E

El montaje de esto materiales sólo puede ser efectuado por profesionales.

No respetar las indicaciones del presente manual exime de responsabilidad al fabricante.

Riesgo de electrocución, de quemaduras o de explosión

- la instalación y mantenimiento de este aparato debe ser efectuado por personal cualificado
- antes de cualquier intervención en el aparato, cortar sus entradas de tensión, corto-circuitar el secundario de cada transformador de intensidad (PTI SOCOMEC) y cortar la alimentación auxiliar de aparato
- utilizar siempre un dispositivo de detección de tensión apropiado para asegurar la ausencia de tensión
- volver a colocar todos los dispositivos, tapas y puertas antes de poner el aparato en tensión
- utilizar siempre la tensión asignada apropiada para alimentar el aparato

No respetar estas precauciones podría entrañar un serio riesgo de producir heridas graves.

Riesgo de deterioros de aparato

Vele por respetar:

- la tensión de alimentación auxiliar
- la frecuencia de la red 50 o 60 Hz
- una tensión máxima en las bornas de entradas de tensión (V1, V2, V3 y VN) de 500V AC fase/fase o de 289V AC entre fase y neutro
- intensidad máxima de 6 amperios en bornas de las entradas de intensidad (I1, I2, I3)

P

A montagem destes materiais só pode ser realizada por profissionais.

O não cumprimento das indicações deste manual não poderá imputar a responsabilidade do construtor.

Riscos de electrocussão, de queimaduras ou de explosão

- a instalação e a manutenção deste aparelho devem ser efectuadas unicamente por pessoal qualificado
- antes de qualquer intervenção no aparelho, cortar as entradas de tensões, curto-circuitar o secundário de cada transformador de corrente (PTI SOCOMEC) e cortar a alimentação auxiliar do aparelho
- utilizar sempre um dispositivo de detecção de tensão apropriado para confirmar a ausência de tensão
- colocar no sítio todos os dispositivos, as portas e as tampas antes de restabelecer a tensão no aparelho
- utilizar sempre a tensão de referência apropriada para alimentar o aparelho

Se estas precauções não forem respeitadas, poderão ocorrer ferimentos graves.

Riscos de deterioração do aparelho

Respeitar:

- a tensão de alimentação auxiliar
- a frequência da rede 50 ou 60 Hz
- uma tensão máxima nos terminais das entradas de tensão de 500V AC fase/fase ou 289V AC fase neutro
- uma corrente máxima de 6A nos terminais das entradas de corrente (I1, I2 e I3)

OPÉRATIONS PRÉALABLES

PRELIMINARY OPERATIONS - VORAUSGEHENDE KONTROLLEN -
OPERAZIONI PRELIMINARI - VOORAGAANDE HANDELINGEN -
OPERACIONES PREVIAS - OPERAÇÕES PRELIMINARES

F

Pour la sécurité du personnel et du matériel, il est impératif de bien s'imprégner du contenu de cette notice avant la mise en service. Au moment de la réception du colis contenant le **DIRIS A20**, il est nécessaire de vérifier les points suivants:

- l'état de l'emballage,
- le produit n'a pas eu de dommage pendant le transport,
- la référence de l'appareil est conforme à votre commande,
- l'emballage comprend le produit équipé d'un bornier débrochable,
- une notice d'utilisation.

NL

Voor de veiligheid van het personeel en het materiaal is het van belang goed kennis te nemen van deze gebruiksaanwijzing voordat de apparatuur in gebruik wordt genomen.

Bij ontvangst van de doos met de **DIRIS A20** moeten de volgende punten gecontroleerd worden:

- de staat van de verpakking;
- of het product geen schade heeft geleden tijdens het transport;
- of de referentie van het toestel overeenkomt met de bestelling;
- de verpakking bevat een product uitgerust met een ontkoppelbaar aansluitblok.
- of de gebruiksaanwijzing aanwezig is.

GB

For personnel and product safety please read the contents of these operating instructions carefully before connecting.

Check the following points as soon as you receive the **DIRIS A20** package:

- the packing is in good condition,
- the product has not been damaged during transit,
- the product reference number conforms to your order,
- the package contains the product fitted with a pull-out terminal block,
- operating instructions.

E

Para la seguridad del personal y del material, será imperativo conocer perfectamente el contenido de este manual antes de su puesta en funcionamiento.

Al recibir el paquete que contiene el **DIRIS A20**, será necesario verificar los aspectos siguientes:

- estado del embalaje;
- que el producto no se haya dañado durante el transporte;
- que la referencia del Aparato esté conforme con su pedido;
- el embalaje incluye el producto equipado con una caja de bornes desenchufable;
- el manual de utilización.

D

Für die Sicherheit von Personen und Anlagen lesen Sie dieses Handbuch aufmerksam durch, bevor das Gerät in Betrieb genommen wird.

Bei Empfang des Gerätes **DIRIS A20** muß folgendes überprüft werden:

- Zustand der Verpackung,
- Sind Transportschäden zu melden?
- Entspricht der Packungsinhalt Ihrer Bestellung?
- Die Verpackung enthält das mit einer herausnehmbaren Klemmenleiste ausgestattete Produkt,
- Eine Bedienungsanleitung ist beigelegt.

P

Para a segurança do pessoal e do material, convém inteirar-se bem do conteúdo deste manual antes da colocação em serviço.

Na altura da recepção da encomenda do **DIRIS A20**, é necessário verificar os seguintes pontos:

- o estado da embalagem;
- se o produto não foi danificado durante o transporte;
- se a referência do Aparelho está acordo com a sua encomenda;
- dentro da embalagem encontre-se realmente o produto equipado de um terminal descartável;
- se existe um manual de utilização.

I

Per la sicurezza del personale e del materiale, è indispensabile leggere attentamente il contenuto del presente libretto prima della messa in servizio.

Al momento del ricevimento della scatola contenente il **DIRIS A20**, è necessario verificare i seguenti punti:

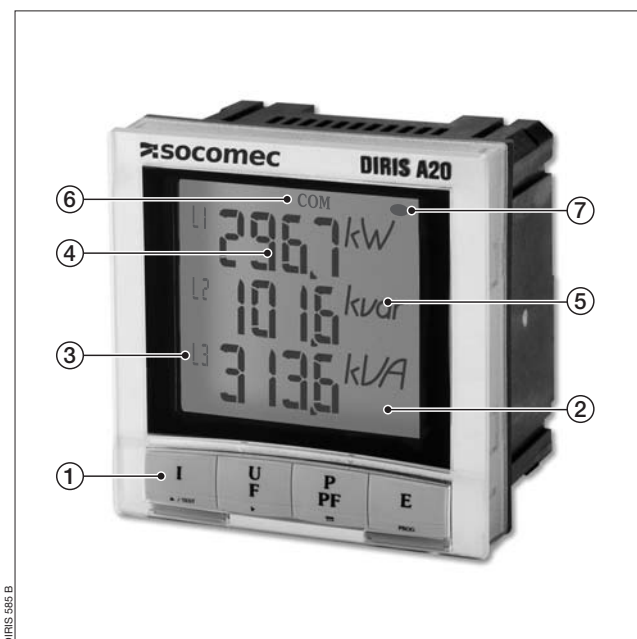
- lo stato dell'imballo;
- la presenza di danneggiamenti o rotture dovuti al trasporto;
- se il numero di riferimento dell'apparecchio è conforme a quello della richiesta;
- l'imballaggio comprende il prodotto dotato di una morsettiere staccabile;
- la presenza del libretto di istruzione originale.

PRÉSENTATION

PRESENTATION - PRODUKT DARSTELLUNG - PRESENTAZIONE

PRESENTATIE - PRESENTACIÓN - APRESENTAÇÃO

- F**
1. Clavier 4 touches pour visualiser l'ensemble des mesures et modifier les paramètres de configuration
 2. Afficheur LCD rétroéclairé
 3. Phase
 4. Valeurs
 5. Unité
 6. Indicateur d'activité sur les bus de communication
 7. Indicateur de comptage de l'énergie active



- GB**
1. Key-pad with 4 dual-function keys (display or programming)
 2. Backlit LCD display
 3. Phase
 4. Values
 5. Unit
 6. Activity indicator on the communication bus
 7. Energy metering indication

- NL**
1. Toetsenbord samengesteld uit 4 drukknoppen met dubbele functies (visualisatie of configuratie)
 2. LCD scherm met backlight
 3. Fase
 4. Waarden
 5. Eenheid
 6. Activiteitsindicator op de communicatiebussen
 7. Indication voor de meting van de actieve energie

- D**
1. 4 Drucktaster mit doppelter Funktionalität (Anzeige oder Konfiguration)
 2. LCD-Anzeige von hinten beleuchtet
 3. Phase
 4. Werte
 5. Einheit
 6. Aktivitätsanzeige Kommunikationsbus
 7. Zeiger zur Erfassung der Wirkleistung

- E**
1. Teclado compuesto por 4 teclas de doble función (visualización o configuración)
 2. Indicador LCD retroiluminado
 3. Fase
 4. Valores
 5. Unidad
 6. Indicador de actividad en el bus de comunicación
 7. Indicador de contaje de energía

- I**
1. Tastiera composta da 4 pulsanti a doppia funzionalità (visualizzazione o configurazione)
 2. Display LCD retroilluminato
 3. Fase
 4. Valori
 5. Unità di misura
 6. Indicatore di attività sul bus di comunicazione
 7. Indicator di conteggio dell'energia attiva

- P**
1. Teclado composto de 4 botões de pressão de dupla funcionalidade (visualização ou configuração)
 2. Visualizador LCD retroiluminado
 3. Fase
 4. Valores
 5. Unidade
 6. Indicador de actividade nos bus de comunicação
 7. Indicador de contagem da energia activa

INSTALLATION

INSTALLATION - INSTALLATION - INSTALLAZIONE -
INSTALLERING - INSTALACIÓN - INSTALAÇÃO

RECOMMANDATIONS

- éviter la proximité avec des systèmes générateurs de perturbations électromagnétiques,
- éviter les vibrations comportant des accélérations supérieures à 1 g pour des fréquences inférieures à 60 Hz.

GB Recommendations:

- avoid proximity to systems which generate electromagnetic interference
- avoid vibrations with accelerations in excess of 1 g for frequencies below 60 Hz.

D Empfehlungen:

- vermeiden Sie die Nähe von Systemen, die elektromagnetische Störungen erzeugen können.
- vermeiden Sie außerdem mechanische Schwingungen mit Beschleunigungen von über 1 g bei Frequenzen unter 60 Hz.

I Prescrizioni:

- evitare la vicinanza con sistemi generatori di perturbazioni elettromagnetiche.
- evitare le vibrazioni che comportino delle accelerazioni superiori a 1 g per delle frequenze inferiori a 60 Hz.

NL Aanbevelingen:

- de nabijheid vermijden van systemen die elektromagnetische storingen opwekken.
- trillingen vermijden met versnellingen boven 1 g voor frequenties lager dan 60 Hz.

E Recomendaciones:

- evitar la proximidad con los sistemas generadores de perturbaciones electromagnéticas
- evitar las vibraciones que provocan aceleraciones superiores a 1 g para frecuencias inferiores a 60 Hz.

P Recomendações:

- evite a proximidade com sistemas geradores de perturbações electromagnéticas
- evite as vibrações com acelerações superiores a 1 g para frequências inferiores a 60 Hz.

PLAN DE DÉCOUPE

GB Cut-out diagram

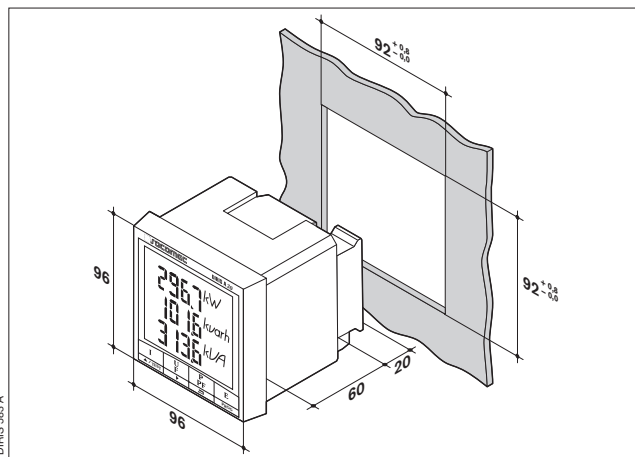
D Ausschnittmaße

I Dima di foratura

NL Snijplan

E Dimensiones

P Plano de cortes



MONTAGE

GB Mounting

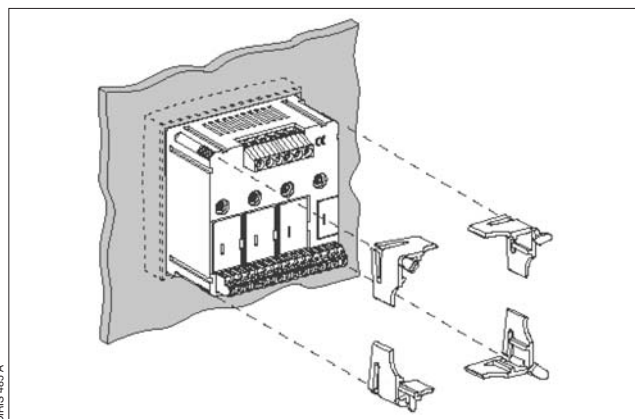
D Montage

I Assemblaggio

NL Montage

E Montaje

P Montagem



RACCORDEMENT

Le couple de serrage maximum de chaque vis est de 0,4 Nm.

Lors d'une déconnexion du **DIRIS**, il est indispensable de court-circuiter les secondaires de chaque transformateur de courant. Cette manipulation peut se faire automatiquement à partir d'un produit du catalogue Socomec: le PTI. Pour plus d'informations sur ce produit, merci de nous consulter.

GB Connection

The maximum coupling torque for each screw is 0.4 Nm.

Each CT's secondary winding must be short-circuited when disconnecting the **DIRIS**. This can be done automatically using one of Socomec's catalogue products: the PTI. Please contact us for further information.

D Anschluß

Max. Anziehdrehmoment für die jeweiligen Schrauben: 0,4 Nm.

Wird das **DIRIS** abgeklemmt, so müssen die Sekundärseiten der jeweiligen Stromwandler kurzgeschlossen werden. Dies erfolgt automatisch beim Einsatz eines PTI von Socomec (bitte anfragen).

I Collegamento

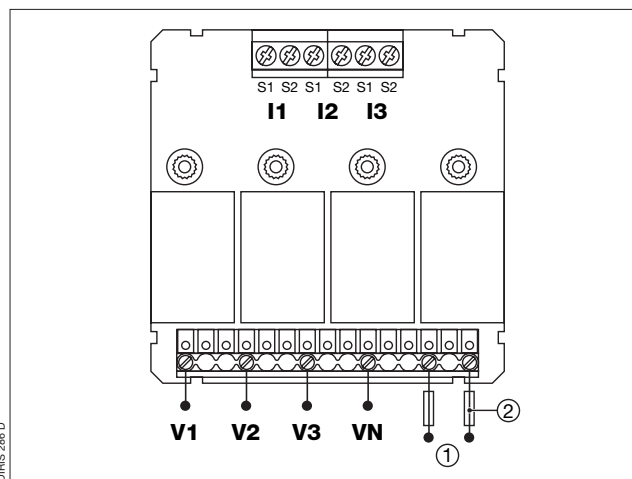
La coppia di serraggio massima dei morsetti è di 0,4 Nm.

Al momento del collegamento del **DIRIS**, è indispensabile cortocircuitare le uscite secondarie di ogni trasformatore di corrente. Questa operazione può essere fatta automaticamente con un prodotto SOCOMEC: il PTI. Per maggiori informazioni, contattarci.

NL Aansluiting

Het maximale aantrekkoppel van elke schroef is 0,4 Nm.

Bij het ontkoppelen van de **DIRIS** is het noodzakelijk de secundaire van elke stroomtransformator kort te sluiten. Deze manipulatie kan automatisch gebeuren met een product uit de catalogus van Socomec: de PTI. Voor meer informatie over dit product, ons raadplegen.



① Aux.:	IEC/CE	110 ... 400 V AC
		120 ... 350 V DC
	UL/CSA Approval	110 ... 240 V AC
		120 ... 250 V DC

② **Fus.:** 0.5 A gG / BS 88 2A gG / 0.5 A class CC

E Parte trasera

El par de apriete máximo para cada tornillo es de 0,4 Nm.

En caso de desconexión del **DIRIS**, es indispensable cortocircuitar los secundarios de cada transformador de intensidad. Esta manipulación puede hacerse automáticamente a partir de un producto del catálogo de Socomec: el PTI. Para mayor información sobre este producto, le agradeceremos consultarnos.

P Ligação

O binário de aperto máximo de cada parafuso é de 0,4 Nm.

Durante uma desconexão do **DIRIS**, é indispensável curto-circuitar os secundários de cada transformador de corrente. Esta operação pode fazer-se automaticamente a partir de um produto do catálogo da Socomec: o PTI. Para mais informações acerca deste produto é favor consultar-nos.

INSTALLATION

INSTALLATION - INSTALLATION - INSTALLAZIONE -
INSTALLERING - INSTALACIÓN - INSTALAÇÃO

MODULES OPTIONS

Les **DIRIS A20** peuvent être équipés de modules options:

- **Communication JBUS/MODBUS; réf: 4825 0082:**
Liaison série RS485 JBUS/MODBUS en mode RTU avec une vitesse de 2400 à 38400 bauds. (Notice d'utilisation réf : 876 581)
- **Sortie impulsion; réf : 4825 0080**
2 sorties impulsions associées aux comptage des énergies kWh, kvarh (Notice d'utilisation réf : 876 582)

GB Modules option

The **DIRIS A20** can be fitted with optional modules:

- **JBUS/MODBUS communication; ref: 4825 0082:**
RS485 JBUS/MODBUS serial port in RTU mode with a speed from 2400 to 38400 baud. (User manual ref: 876 581)
- **Pulse output; ref: 4825 0080:**
2 pulse outputs connected to the metering of energy in kWh and kvarh (User manual ref: 876 582)

D Optionsmodule

Die **DIRIS A20** können mit Optionsmodulen ausgestattet sein:

- **Kommunikation JBUS/MODBUS;**
Best.-Nr.: 4825 0082 :
Serieller Anschluss RS485 JBUS/MODBUS im RTU-Modus mit einer Geschwindigkeit von 2400 bis 38400 bauds. (Bedienerhandbuch Best.-Nr.: 876 581)
- **Impulsausgang; Best.-Nr.: 4825 0080**
2 Impulsausgänge zum Zählen des Stroms kWh, kvarh (Bedienerhandbuch Best. Nr.: 876 582)

I Moduli opzioni

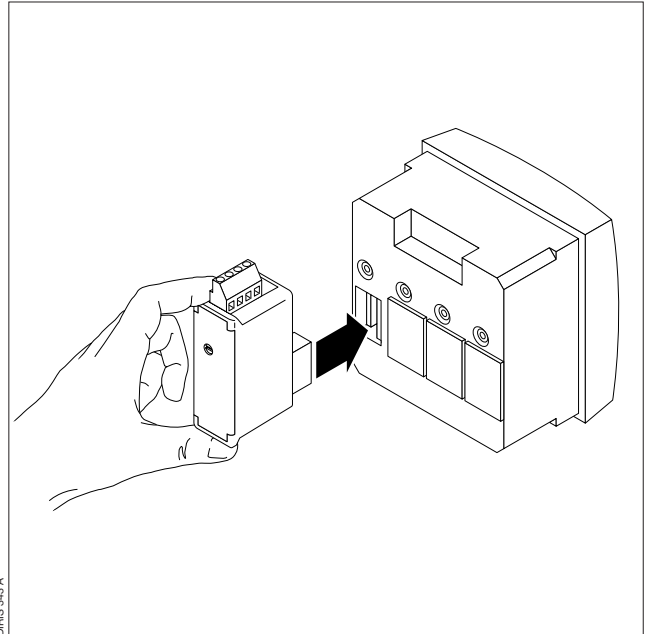
I **DIRIS A20** possono essere dotati di moduli opzionali:

- **Comunicazione JBUS/MODBUS; rif.:4825 0082:**
Collegamento serie RS485 JBUS/MODBUS in modalità RTU con una velocità da 2400 a 38400 baud. (Istruzioni d'uso rif.: 876 581)
- **Uscita a impulsi; rif. : 4825 0080**
2 uscite a impulsi associate ai conteggi delle energie kWh, kvarh (Istruzioni d'uso rif.: 876 582)

NL Modules opties

De **DIRIS A20** kunnen worden uitgerust met optiemodules :

- **Communicatie JBUS/MODBUS ; ref: 4825 0082:**
Seriële verbinding RS485 JBUS/MODBUS in RTU-modus met een snelheid van 2400 tot 38400 baud. (Gebruiksaanwijzing ref : 876 581)
- **Impulsuitgang ; ref : 4825 0080**
2 impulsuitgangen toegewezen aan het tellen van de kWh, kvarh energie (Gebruiksaanwijzing ref : 876 582)



E Modulos opciones

Los **DIRIS A20** pueden estar equipados con distintos módulos opcionales:

- **Comunicación JBUS/MODBUS; ref.: 4825 0082:**
Enlace de serie RS485 JBUS/MODBUS en modo RTU con una velocidad comprendida entre 2.400 y 38.400 baudios. (Instrucciones de servicio ref.: 876 581)
- **Salida de impulsos; ref.: 4825 0080**
2 salidas de impulsos asociadas al conteo de energía kWh, kVAh y kVAh (Instrucciones de servicio ref.: 876 582)

P Módulos opções

Os **DIRIS A20** podem ser equipados com módulos opções:

- **Comunicação JBUS/MODBUS; ref.:4825 0082:**
Ligação em série RS485 JBUS/MODBUS em modo RTU com uma velocidade entre 2400 e 38400 bauds. (Manual de instruções, ref.: 876 581)
- **Saída de impulsões; ref.: 4825 0080**
2 saídas de impulsões associadas à contagem das energias kWh e kvarh (Manual de instruções ref.: 876 582)

RÉSEAU TRIPHASÉ DÉSÉQUILIBRÉ (3NBL/4NBL)

La solution avec 2 TC diminue de 0,5 % la précision de la phase dont le courant est déduit par calcul vectoriel.



En régime IT, ne pas raccorder les secondaires de TC à la terre.



Unbalanced three-phase network (3NBL/4NBL)

The solution with 2 CTs with the 2nd and 3rd phase current calculated via vectorial summation, results in an 0.5% reduction in phase accuracy.



In IT load, do not connect the secondary of TC with the earth



Dreiphasennetz mit ungleicher belastung (3NBL/4NBL)

Die Lösung mit 2 Stromwandlern verringert um ca. 0,5 % die Genauigkeit der Phasen, deren Strom vektorieell errechnet wird.



Bei einer Erdungsart Typ IT-System Sekundarseite der SW nicht erden



Rete trifase non equilibrata (3NBL/4NBL)
La soluzione di misura delle fasi da cui la corrente viene dedotta in maniera vettoriale.



En régime IT, no enchufar los secundarios de TC a la toma de tierra



Onevenwichtig driefasennet (3NBL/4NBL)
De oplossing met 2 TC vermindert de precisie van de fase waarvan de stroom vectorieel verminderd wordt, met 0,5 %.



In IT-net de secondaires van de stroomtransformator niet verbinden met de aarding.



Red trifásica desequilibrada (3NBL/4NBL)
La solución con 2 TC disminuye de 0,5 % la precisión de las medición de las fases sin transformador ya que el valor de la intensidad se deduce vectorialmente.



En esquema IT, no conectar los secundarios de los TC a tierra.

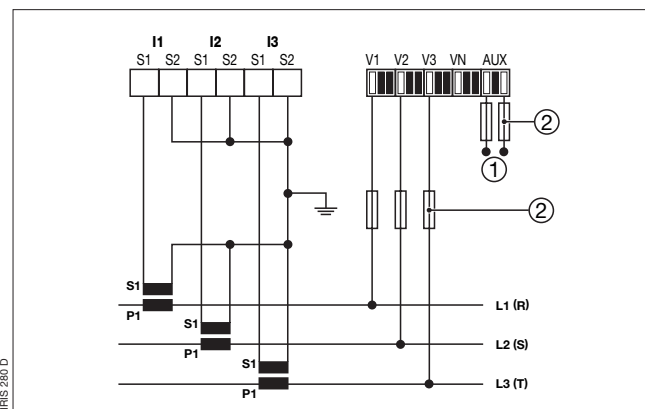
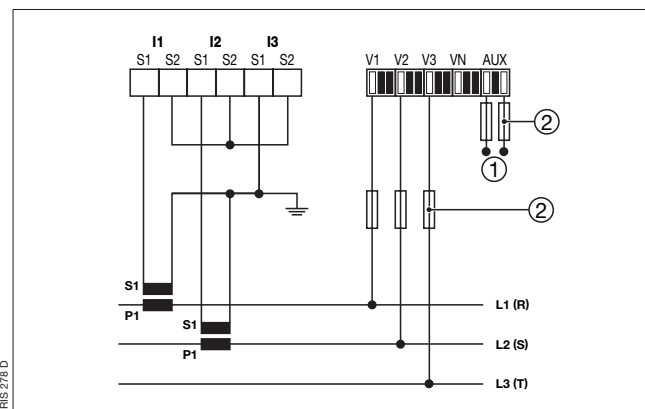
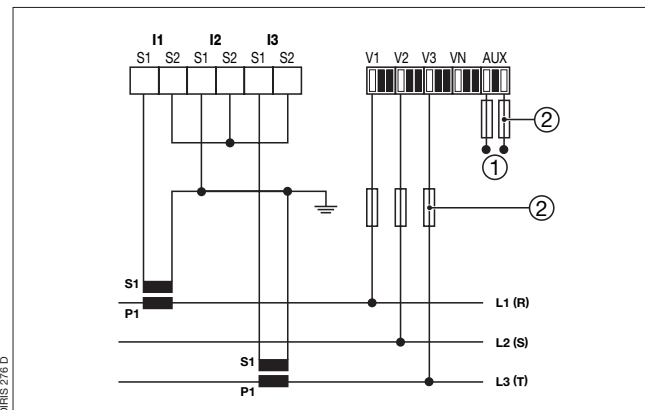
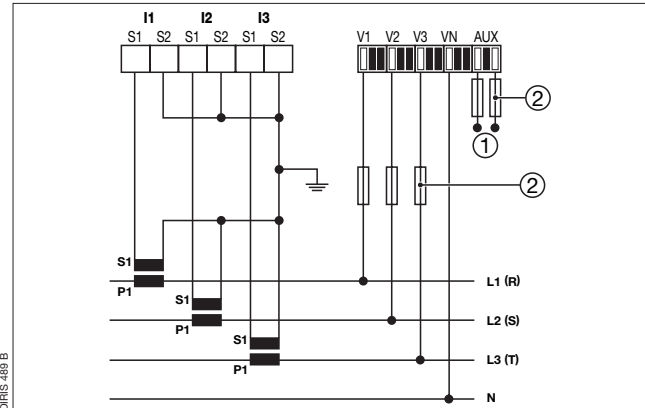


Rede trifásica desequilibrada (3NBL/4NBL)
A solução com 2 TC diminui de 0,5 % a precisão da fase cuja corrente é deduzida vectorialmente.



Em regime IT, não conectar os secundários de TC à terra

- ① Aux.: IEC/CE 110 ... 400 V AC
120 ... 350 V DC
UL/CSA Approval 110 ... 240 V AC
120 ... 250 V DC
- ② Fus.: 0.5 A gG / BS 88 2A gG / 0.5 A class CC



INSTALLATION

INSTALLATION - INSTALLATION - INSTALLAZIONE -
INSTALLERING - INSTALACIÓN - INSTALAÇÃO

RÉSEAU TRIPHASÉ ÉQUILIBRÉ (3BL/4BL)

La solution avec 1 TC diminue de 0,5 % la précision des phases dont le courant est déduit par calcul vectoriel.

GB Balanced three-phase network (3BL/4BL)
The solution using one CT, with the 3rd phase current calculated via vectorial summation, results in an 0.5% reduction in phase accuracy.

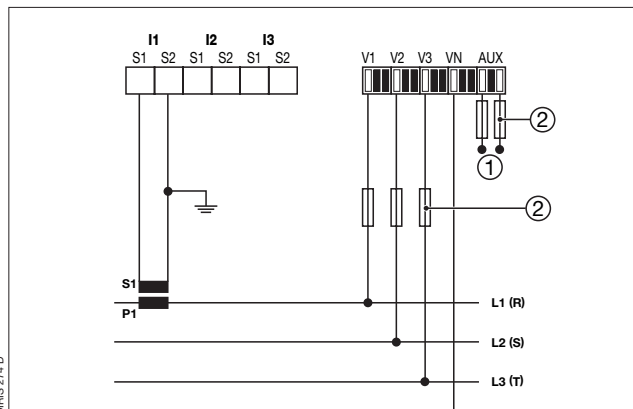
D Dreiphasennetz mit gleicher Belastung (3BL/4BL)
Die Lösung mit 1 Stromwandler verringert um ca. 0,5 % die Genauigkeit der Phasen, deren Strom vektoriell errechnet wird.

I Rete trifase equilibrata (3BL/4BL)
La soluzione con 1 TA diminuisce di 0,5 % la precisione di misura della fase da cui la corrente viene dedotta in maniera vettoriale.

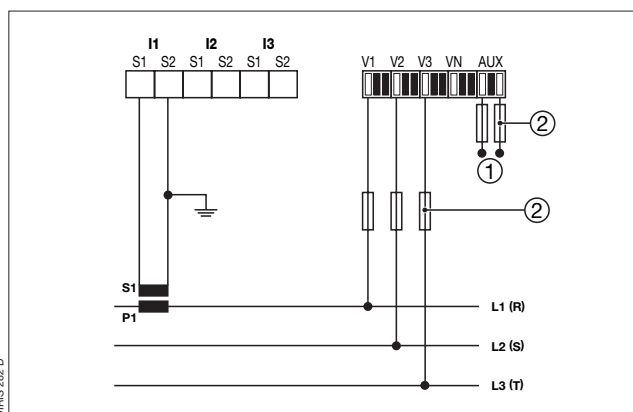
NL Evenwichtig driefasennet (3BL/4BL)
De oplossing met 1 TC vermindert de precisie van de fases waarvan de stroom vectorieel verminderd wordt, met 0,5 %.

E Red trifásica equilibrada (3BL/4BL)
La solución con 1 TC disminuye de 0,5 % la precisión de las medición de las fases sin transformador ya que el valor de la intensidad se deduce vectorialmente.

P Rede trifásica desequilibrada (3BL/4BL)
A solução com 1 TC diminui de 0,5 % a precisão da fase cuja corrente é deduzida vectorialmente.



DIRIS 214 D

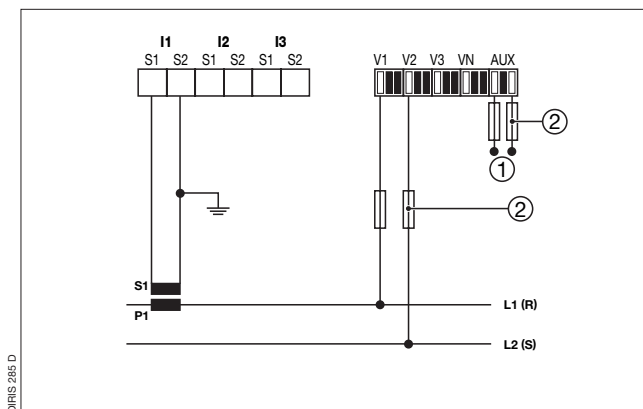


DIRIS 212 D

- ① **Aux.:** IEC/CE 110 ... 400 V AC
120 ... 350 V DC
UL/CSA Approval 110 ... 240 V AC
120 ... 250 V DC
- ② **Fus.:** 0.5 A gG / BS 88 2A gG / 0.5 A class CC

RÉSEAU BIPHASÉ (2BL)

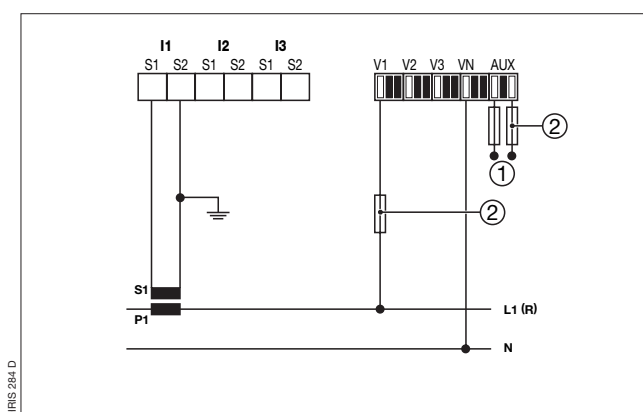
- GB** Two-phase network (2BL)
- D** Zweiphasennetz (2BL)
- I** Rete bifase (2BL)
- NL** Tweefasennet (2BL)
- E** Red bifásica (2BL)
- P** Rede bifásica (2BL)



- ① **Aux.:** IEC/CE 110 ... 400 V AC
120 ... 350 V DC
UL/CSA Approval 110 ... 240 V AC
120 ... 250 V DC
- ② **Fus.:** 0.5 A gG / BS 88 2A gG / 0.5 A class CC

RÉSEAU MONOPHASÉ (1BL)

- GB** Single-phase network (1BL)
- D** Einphasennetz (1BL)
- I** Rete monofase (1BL)
- NL** Enkelfasenet (1BL)
- E** Red monofásica (1BL)
- P** Rede monofásica (1BL)



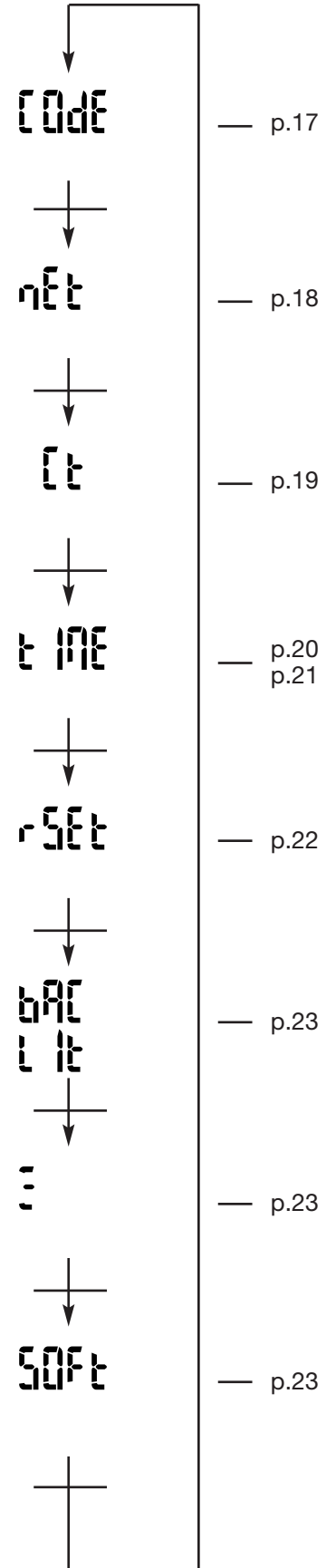
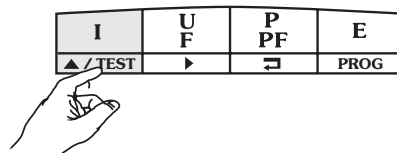
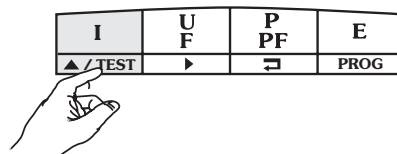
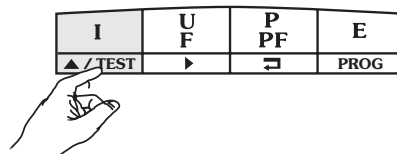
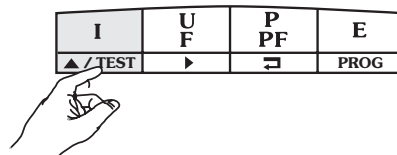
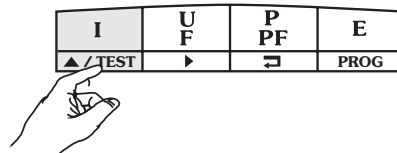
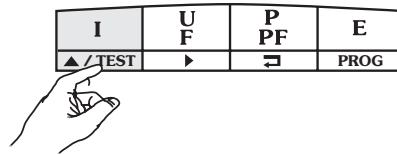
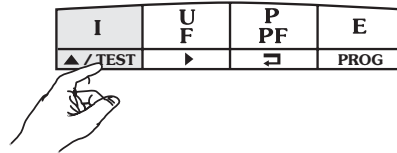
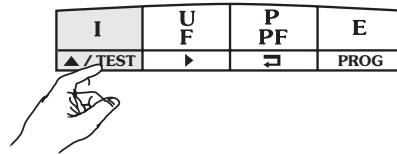
- ① **Aux.:** IEC/CE 110 ... 400 V AC
120 ... 350 V DC
UL/CSA Approval 110 ... 240 V AC
120 ... 250 V DC
- ② **Fus.:** 0.5 A gG / BS 88 2A gG / 0.5 A class CC

PROGRAMMATION

PROGRAMMING - KONFIGURATION - PROGRAMMAZIONE - PROGRAMMERING- PROGRAMACIÓN - PROGRAMAÇÃO

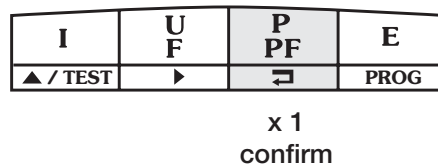
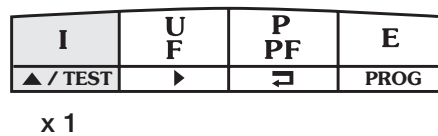
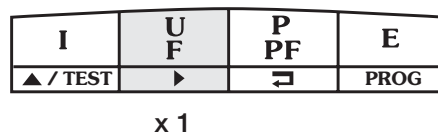
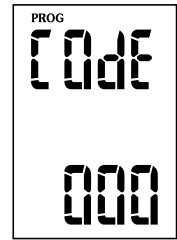
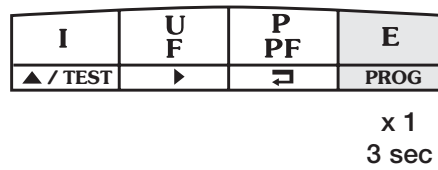
MENU PROGRAMMATION

- (GB)** Programming menu
- (D)** Konfiguration Menü
- (I)** Programmazione rapporto
- (NL)** Programmatie menu
- (E)** Programación menú
- (P)** Programação menu



ENTRER EN PROGRAMMATION (COdE = 100)

- ⓐ Acces to programming mode
COdE = 100
- ⓓ Zur Konfigurationsebene
COdE = 100
- Ⓢ Accesso alla programmazione
COdE = 100
- Ⓝ Overgaan tot programmeermodus
COdE = 100
- ⓔ Entrar en modo programación
COdE = 100
- Ⓟ Entrar em modo programação
COdE = 100

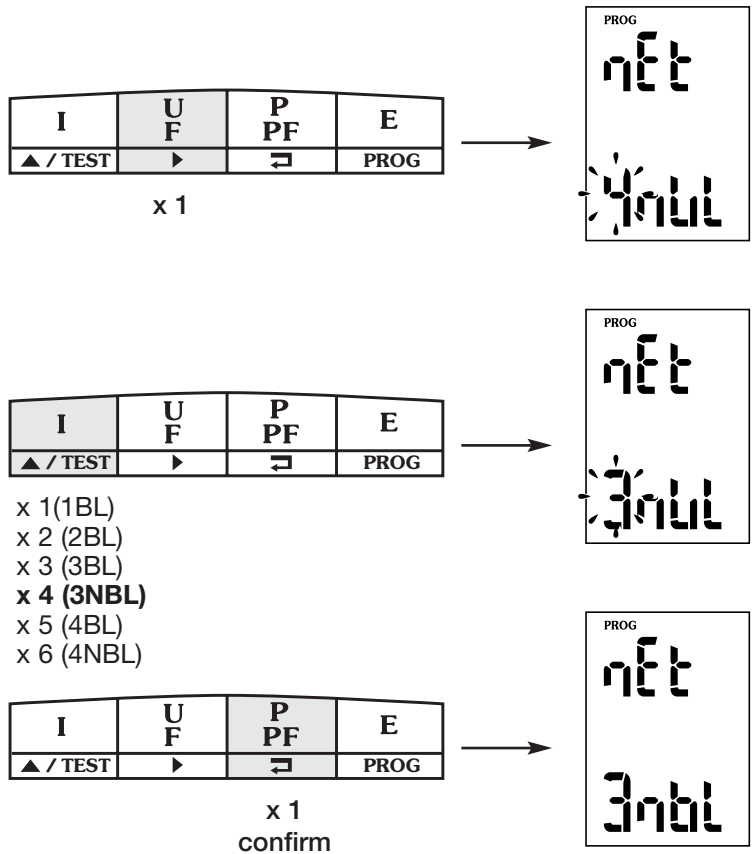


PROGRAMMATION

PROGRAMMING - KONFIGURATION - PROGRAMMAZIONE -
 PROGRAMMERING- PROGRAMACIÓN - PROGRAMAÇÃO

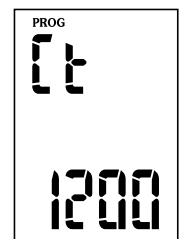
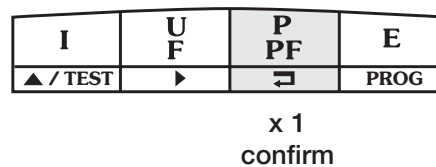
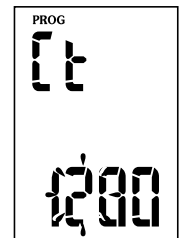
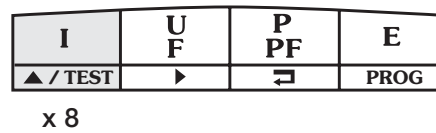
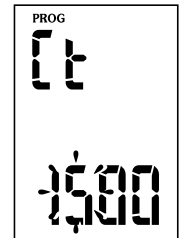
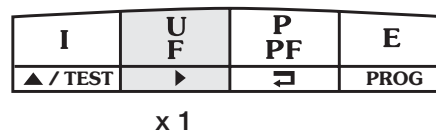
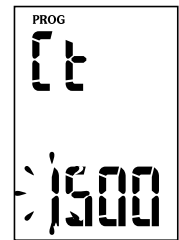
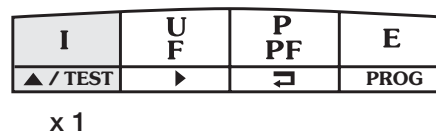
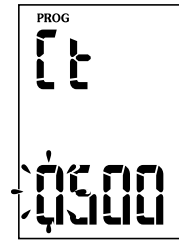
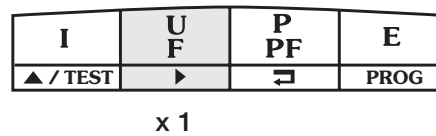
RÉSEAU (Exemple: nEt = 3NBL)

- GB** Network
Example: nEt = 3NBL
- D** Netzfrequenz
Beispiel: nEt = 3NBL
- I** Frequenza
Esempio: nEt = 3NBL
- NL** Netfrequentie
Voorbeeld: nEt = 3NBL
- E** Frecuencia
Ejemplo: nEt = 3NBL
- P** Frequência
Exemplo: nEt = 3NBL



TRANSFORMATEURS DE COURANT (Exemple: Ct = 1200/5A)

- GB** Current transformers
Example: Ct = 1200/5A
- D** Phasenstromwandler
Beispiel: Ct = 1200/5A
- I** Transformatore di corrente
Esempio: Ct = 1200/5A
- NL** Stroomtransformator
Voorbeeld: Ct = 1200/5A
- E** Transformador de corrente
Ejemplo: Ct = 1200/5A
- P** Transformador de corrente
Exemplo: Ct = 1200/5A

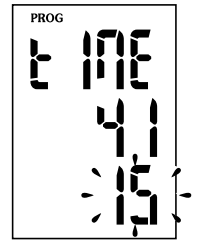
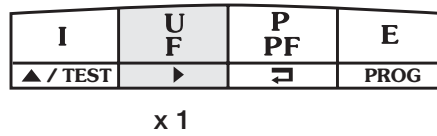


PROGRAMMATION

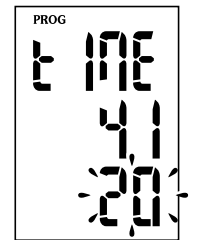
PROGRAMMING - KONFIGURATION - PROGRAMMAZIONE -
 PROGRAMMERING- PROGRAMACIÓN - PROGRAMAÇÃO

INTÉGRATION DES COURANTS (Exemple: tIME = 20 min)

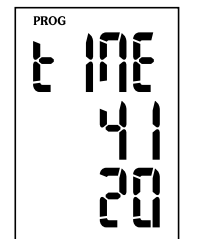
- (GB)** Integration time
Example: tIME = 20 min
- (D)** Integrationszeit des shöme
Beispiel: tIME = 20 min
- (I)** Integrazione delle correnti
Esempio: tIME = 20 min
- (NL)** Integratietijd van de stromen
Voorbeeld: tIME = 20 min
- (E)** Integración de las intensidades
Ejemplo: tIME = 20 min
- (P)** Integração das cotentes
Exemplo: tIME = 20 min



- x 1 (20 min)
- x 2 (30 min)
- x 3 (60 min)
- x 4 (2 sec)
- x 5 (5 min)
- x 6 (8 min)
- x 7 (10 min)
- x 8 (15 min)

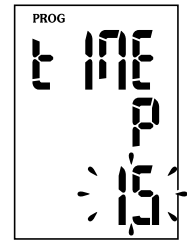
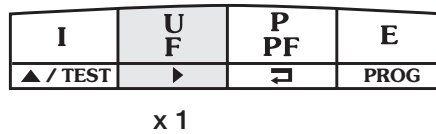


x 1
confirm

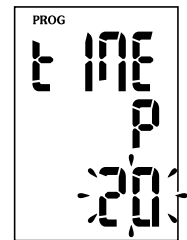


INTÉGRATION DE LA PUISSANCE ACTIVE (Exemple: tIME = 20 min)

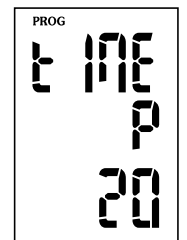
- GB** Integration active time
Example: tIME = 20 min
- D** Integrationszeit des Wirkleistung
Beispiel: tIME = 20 min
- I** Integrazione potenza attiva
Esempio: tIME = 20 min
- NL** Integratietijd van de actief vermogen
Voorbeeld: tIME = 20 min
- E** Integración de las potencia activa
Ejemplo: tIME = 20 min
- P** Integração das potência activa
Exemplo: tIME = 20 min



- x 1 (20 min)
- x 2 (30 min)
- x 3 (60 min)
- x 4 (2 sec)
- x 5 (5 min)
- x 6 (8 min)
- x 7 (10 min)
- x 8 (15 min)



x 1
confirm

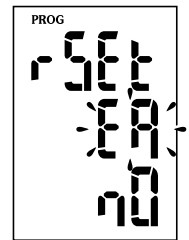
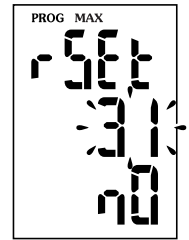
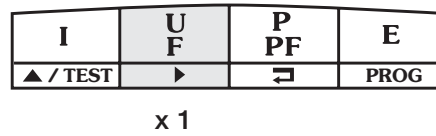


PROGRAMMATION

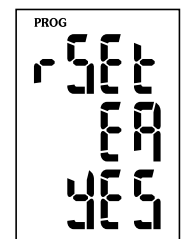
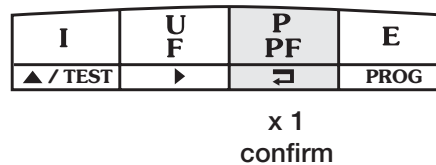
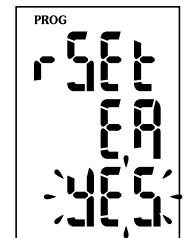
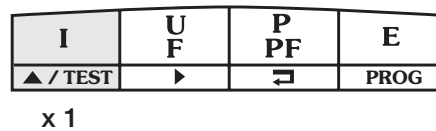
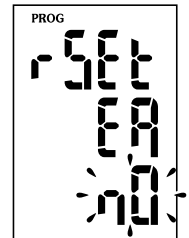
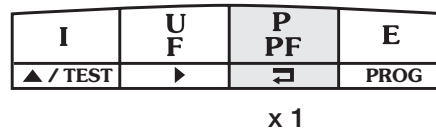
PROGRAMMING - KONFIGURATION - PROGRAMMAZIONE -
PROGRAMMERING- PROGRAMACIÓN - PROGRAMAÇÃO

REMISE À ZÉRO (Exemple: rSET = Ea)

- (GB)** Reset to zero
Example: rSET = Ea
- (D)** Rückstellungen
Beispiel: rSET = Ea
- (I)** Azzeramento
Esempio: rSET = Ea
- (NL)** Reset
Voorbeeld: rSET = Ea
- (E)** Volver a cero
Ejemplo: rSET = Ea
- (P)** Colocações a zero
Exemplo: rSET = Ea

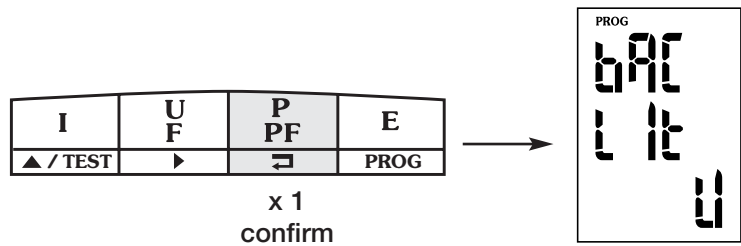
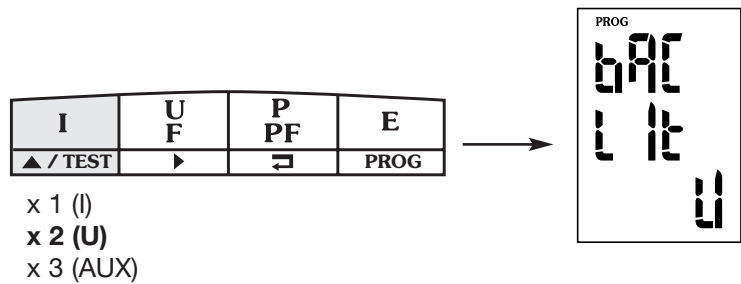
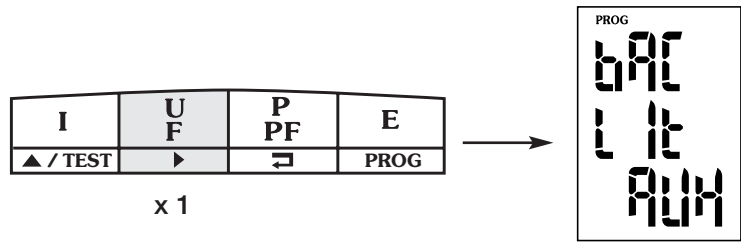


- x 1 P (max P)
- x 2 Ea (kWh)**
- x 3 Er (kWh)
- x 4 3l (max 4l)



RÉTROÉCLAIRAGE (Exemple : bACLI = U)

- GB** Backlit
Example: bACLI = U
- D** LCD Anzeige von hinten beleuchtet
Beispiel: bACLI = U
- I** Retroilluminato
Esempio: bACLI = U
- NL** Backlight
Voorbeeld: bACLI = U
- E** Retroiluminación
Ejemplo: bACLI = U
- P** Retroiluminação
Exemplo: bACLI = U

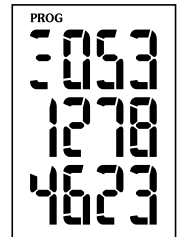


PROGRAMMATION

PROGRAMMING - KONFIGURATION - PROGRAMMAZIONE -
PROGRAMMERING- PROGRAMACIÓN - PROGRAMAÇÃO

NUMÉRO DE SÉRIE (Exemple : 05312784623)

- Ⓒ **GB** Serial number
Example: Exemple : 05312784623
- Ⓒ **D** Seriennummer
Beispiel: 05312784623
- Ⓒ **I** Numero di serie
Esempio: 05312784623
- Ⓒ **NL** Seriennummer
Voorbeeld: 05312784623
- Ⓒ **E** Número de serie
Ejemplo: 05312784623
- Ⓒ **P** Número de serie
Exemplo: 05312784623



VERSION LOGICIEL

- Ⓒ **GB** Software version
- Ⓒ **D** Softwareversion
- Ⓒ **I** Versione software
- Ⓒ **NL** Softwareversie
- Ⓒ **E** Versión de software
- Ⓒ **P** Versão do software

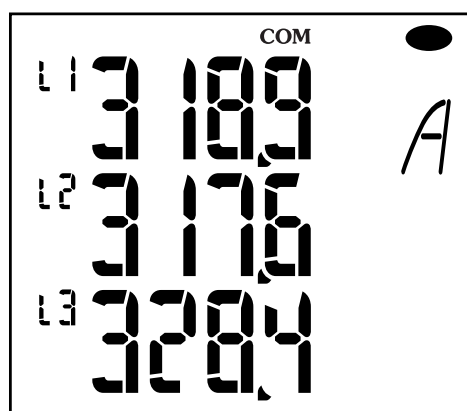


QUITTER LA PROGRAMMATION

- Ⓒ **GB** To quit programming
- Ⓒ **D** Konfigurationsebene verlassen
- Ⓒ **I** Per abbandonare la programmazione
- Ⓒ **NL** Om vit pogrammering te gaan
- Ⓒ **E** Para salirde la programación
- Ⓒ **P** Para sair da programação

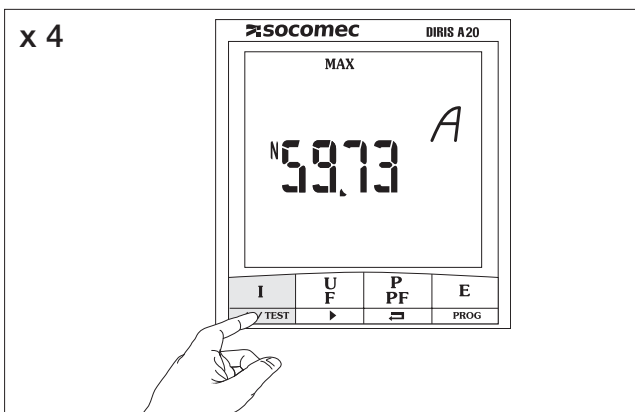
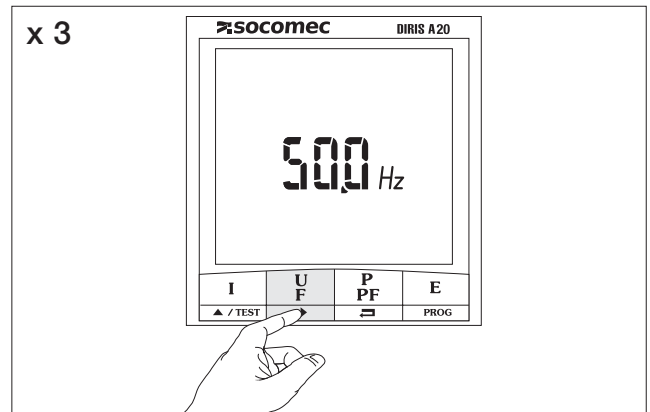
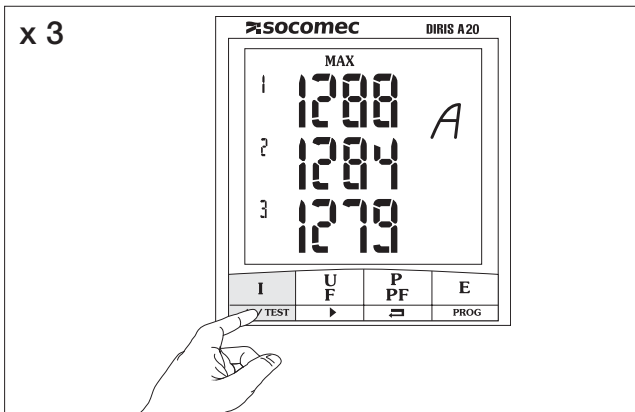
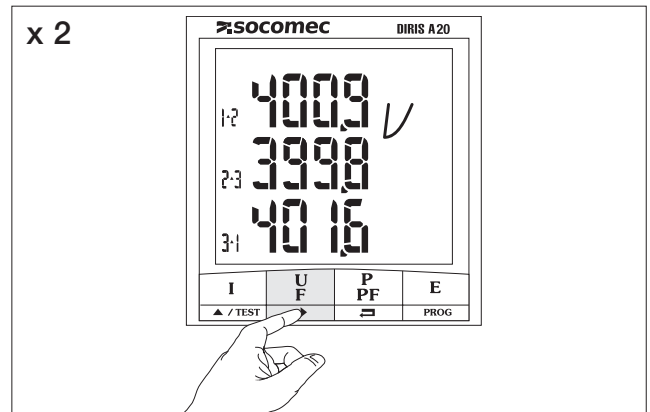
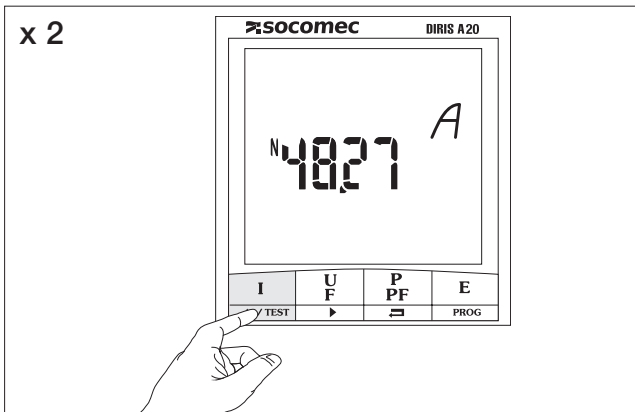
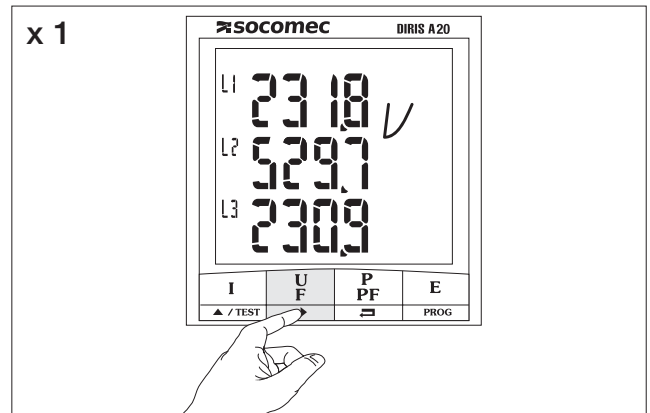
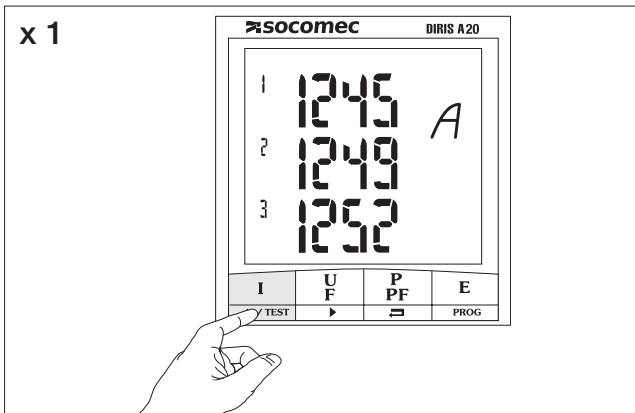
I	U F	P PF	E
▲ / TEST	▶	☐	PROG

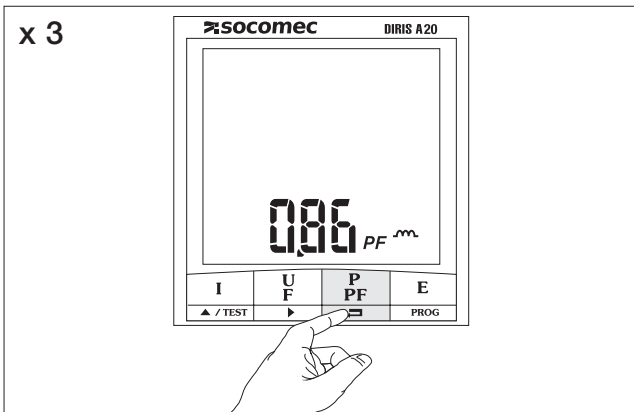
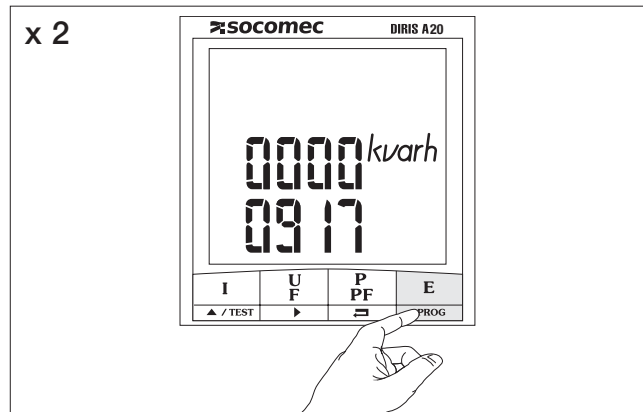
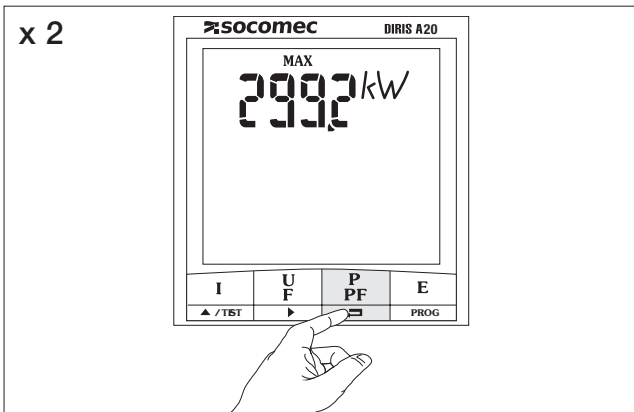
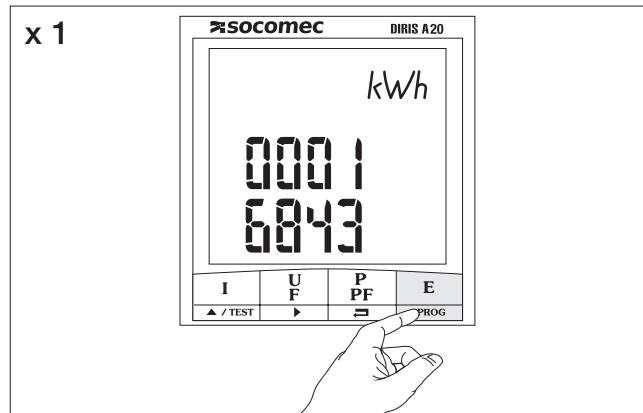
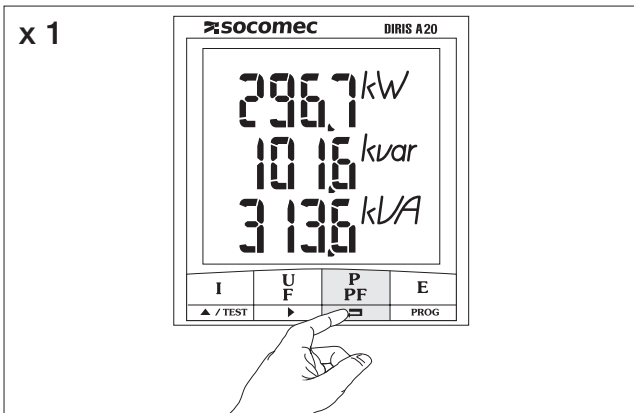
x 1
3 sec.



UTILISATION

OPERATION - BETRIEB - UTILIZZO - GEBRUIK - UTILIZACIÓN - UTILIZAÇÃO





FONCTION DE TEST DU RACCORDEMENT

CONNECTION TEST FUNCTION - ANSCHLUSS FUNCTIONSTEST -
 COLLEGAMENTO PROVA FUNZIONE - AANSLUITING TEST FUNCTIE -
 CONEXIÓN PRUEBA FUNCIÓN - LIGAÇÃO TESTE FUNÇÃO

F

Lors du test, le DIRIS doit avoir du courant et de la tension sur chacune des phases.

De plus, cette fonction considère que le FP de l'installation est compris entre $0,6 > FP < 1$. Si le FP de l'installation n'est pas compris dans cette zone, cette fonction ne peut être utilisée.

En 4 BL / 3 BL / 2BL / 1 BL, le raccordement des TI est uniquement contrôlé.

En 4NBL et 3 NBL l'ensemble du raccordement est contrôlé.

Err 0 = aucune erreur

Err 1 = inversion du raccordement du TC sur la phase 1

Err 2 = inversion du raccordement du TC sur la phase 2

Err 3 = inversion du raccordement du TC sur la phase 3

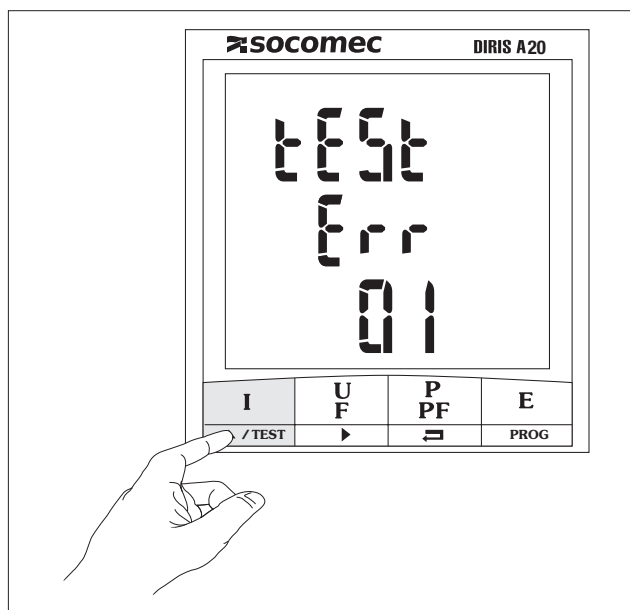
Err 4 = inversion en tension entre V1 et V2

Err 5 = inversion en tension entre V2 et V3

Err 6 = inversion en tension entre V3 et V1

Pour les Err 1, Err 2 et Err 3, la modification peut se faire automatiquement via le DIRIS ou manuellement en corrigeant le raccordement des courants.

Pour les Err 4, Err5 et Err 6 la modification doit se faire manuellement en corrigeant le raccordement des tensions.



GB

During the test, the DIRIS must have current and voltage for each of the phases.

In addition to this, the function recognises the PF of the installation as being between $0.6 > PF < 1$. If the PF of the installation is not within this range, this function cannot be used.

In 4 BL/3 BL/2BL/1 BL, the connection of the CTs is controlled only.

In 4NBL and 3NBL the connection as a whole is controlled.

Err 0 = no error

Err 1 = CT phase 1 inverted

Err 2 = CT phase 2 inverted

Err 3 = CT phase 3 inverted

Err 4 = V1 and V2 voltages inverted

Err 5 = V2 and V3 voltages inverted

Err 6 = V3 and V1 voltages inverted

For the Err 1, Err 2 and Err 3, the modification can be performed automatically by the DIRIS or manually by correcting the current connections.

For the Err 4, Err 5 and Err 6 the modification must be performed manually by correcting the voltage connections.

D

Beim Test muss DIRIS an jeder der Phasen Strom und Spannung haben.

Des Weiteren geht diese Funktion davon aus, dass der Leistungsfaktor der Installation zwischen $0,6 > LF < 1$ liegt. Wenn der LF der Installation nicht innerhalb dieses Bereichs liegt, kann diese Funktion nicht verwendet werden.

Bei 4 BL / 3 BL / 2BL / 1 BL wird nur der Anschluss der TI kontrolliert.

Bei 4NBL und 3 NBL wird der gesamte Anschluss kontrolliert.

Err 0 = kein Fehler

Err 1 = umwandlung des Stromwandlers auf Phase 1

Err 2 = umwandlung des Stromwandlers auf Phase 2

Err 3 = umwandlung des Stromwandlers auf Phase 3

Err 4 = umwandlung der Spannung zwischen V1 und V2

Err 5 = umwandlung der Spannung zwischen V2 und V3

Err 6 = umwandlung der Spannung zwischen V3 und V1

Für die Err 1, Err 2 und Err 3 kann die Änderung automatisch über das DIRIS oder manuell durch Korrektur der Stromanschlüsse erfolgen.

Für die Err 4, Err 5 und Err 6 muss die Änderung manuell durch Korrektur des Anschlusses der Spannungen erfolgen.

F Exemple: TEST Err 0

GB Example: TEST Err 0

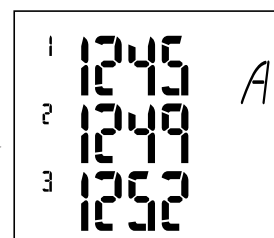
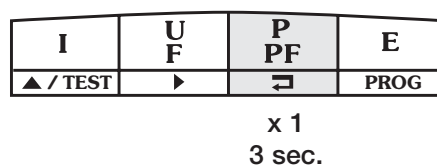
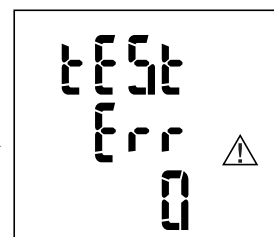
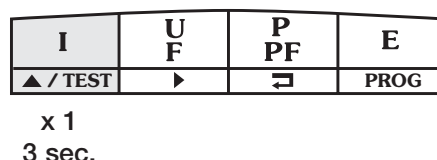
D Beispiel: TEST Err 0

I Esempio: TEST Err 0

NL Voorbeeld: TEST Err 0

E Ejemplo: TEST Err 0

P Exemplo: TEST Err 0



I

Al momento del test, il DIRIS deve avere corrente e tensione su ciascuna fase.

Inoltre, questa funzione considera l'FP dell'installazione compreso tra $0,6 > FP < 1$. Se l'FP dell'installazione non è compreso in questo intervallo, la funzione non può essere utilizzata.

Il collegamento dei TI è controllato unicamente in 4 BL/3 BL/2BL/1 BL.

L'insieme del collegamento è controllato in 4NBL e 3 NBL.

Err 0 = nessun errore

Err 1 = inversione del raccordo del TC sulla fase 1

Err 2 = inversione del raccordo del TC sulla fase 2

Err 3 = inversione del raccordo del TC sulla fase 3

Err 4 = inversione in tensione tra V1 e V2

Err 5 = inversione in tensione tra V2 e V3

Err 6 = inversione in tensione tra V3 e V1

Per quanto riguarda gli Err 1, Err 2 e Err 3, la modifica si può applicare automaticamente tramite DIRIS o manualmente, correggendo il collegamento delle correnti.

Per quanto riguarda gli Err 4, Err5 e Err 6, la modifica si deve applicare manualmente, correggendo il collegamento delle tensioni.

NL

Tijdens de test moet de **DIRIS** stroom hebben en spanning op beide fasen.

Bovendien is deze functie gebaseerd op een FP van de installatie tussen $0,6 > FP < 1$. Als de FP van de installatie zich niet binnen deze zone bevindt kan deze functie niet worden gebruikt.

In 4 BL / 3 BL / 2BL / 1 BL, wordt alleen de aansluiting van de TI's gecontroleerd.

In 4NBL en 3 NBL wordt het geheel van de aansluiting gecontroleerd.

Err 0 = geen enkele fout

Err 1 = inversie van de aansluiting van de spanningstransformator op fase 1

Err 2 = inversie van de aansluiting van de spanningstransformator op fase 2

Err 3 = inversie van de aansluiting van de spanningstransformator op fase 3

Err 4 = Spanningsinversie tussen V1 en V2

Err 5 = Spanningsinversie tussen V2 en V3

Err 6 = Spanningsinversie tussen V3 en V1

Voor Err 1, Err 2 en Err 3, kan de wijziging automatisch plaatsvinden via de DIRIS of handmatig door de aansluiting van de stromen te corrigeren.

Voor de Err 4, Err5 en Err 6 moet de wijziging handmatig worden doorgevoerd door middel van het corrigeren van de aansluiting van de spanningen.

FONCTION DE TEST DU RACCORDEMENT

CONNECTION TEST FUNCTION - ANSCHLUSS FUNCTIONSTEST -
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 CONEXIÓN PRUEBA FUNCIÓN - LIGAÇÃO TESTE FUNÇÃO

E

Durante la prueba, el DIRIS debe recibir corriente y tensión en cada una de las fases.

Además, esta función considera que el factor de potencia (FP) de la instalación se encuentra entre $0,6 > FP < 1$. Si el FP de la instalación no está en ese intervalo, no se podrá utilizar la función.

En los modelos 4 BL / 3 BL / 2BL / 1 BL, únicamente está controlada la conexión de los TI.

En los modelos 4 NBL y 3 NBL están controladas todas las conexiones.

Err 0 = ningún error

Err 1 = inversión de la conexión TC fase 1

Err 2 = inversión de la conexión TC fase 2

Err 3 = inversión de la conexión TC fase 3

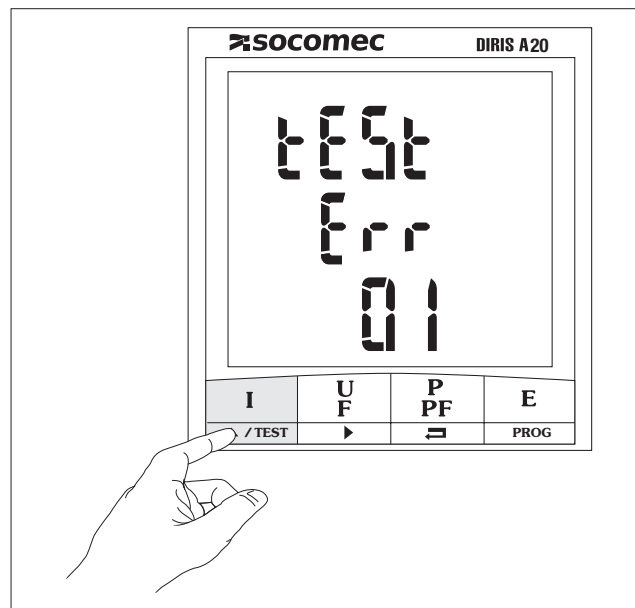
Err 4 = inversión intensidad entre V1 e V2

Err 5 = inversión intensidad entre V2 e V3

Err 6 = inversión intensidad entre V3 e V1

En el caso de los modelos Err 1, Err 2 y Err 3, la modificación puede realizarse de forma automática a través del DIRIS o manual por medio de la corrección de la conexión de la corriente.

En el caso de los modelos Err 4, Err5 y Err 6, la modificación puede realizarse de forma manual por medio de la corrección de la conexión de la tensión.



P

Durante o teste, o DIRIS deve ter corrente e tensão em cada uma das fases.

Além disso, esta função considera que o FP da instalação está compreendido entre $0,6 > FP < 1$. Se o FP da instalação não estiver dentro deste intervalo, esta função não poderá ser utilizada.

Em 4 BL / 3 BL / 2BL / 1 BL, a ligação dos TI só é controlada.

Em 4NBL e 3 NBL, é controlado o conjunto da ligação.

Err 0 = nenhum erro

Err 1 = inversão da ligação do TC na fase 1

Err 2 = inversão da ligação do TC na fase 2

Err 3 = inversão da ligação do TC na fase 3

Err 4 = inversão em tensão entre V1 e V2

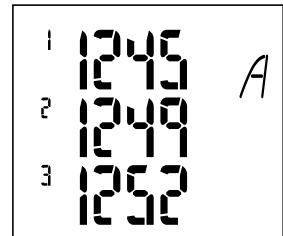
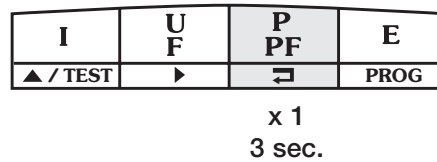
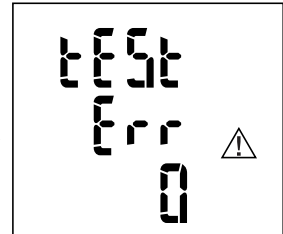
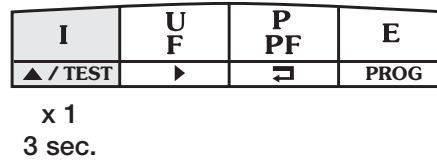
Err 5 = inversão em tensão entre V2 e V3

Err 6 = inversão em tensão entre V3 e V1

Para os Err 1, Err 2 e Err 3, a modificação pode ser feita automaticamente, através do DIRIS, ou manualmente, corrigindo a ligação das correntes.

Para os Err 4, Err5 e Err 6, a modificação pode ser feita manualmente, corrigindo a ligação das tensões.

- (F) Exemple: TEST Err 0
- (GB) Example: TEST Err 0
- (D) Beispiel: TEST Err 0
- (I) Esempio: TEST Err 0
- (NL) Voorbeeld: TEST Err 0
- (E) Ejemplo: TEST Err 0
- (P) Exemplo: TEST Err 0



FONCTION DE TEST DU RACCORDEMENT

CONNECTION TEST FUNCTION - ANSCHLUSS FUNCTIONSTEST -
 COLLEGAMENTO PROVA FUNZIONE - AANSLUITING TEST FUNCTIE -
 CONEXIÓN PRUEBA FUNCIÓN - LIGAÇÃO TESTE FUNÇÃO

F Exemple: TEST Err 1

GB Example: TEST Err 1

D Beispiel: TEST Err 1

I Esempio: TEST Err 1

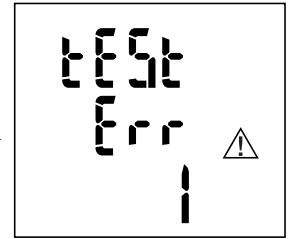
NL Voorbeeld: TEST Err 1

E Ejemplo: TEST Err 1

P Exemplo: TEST Err 1

I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1
3 sec.



I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1



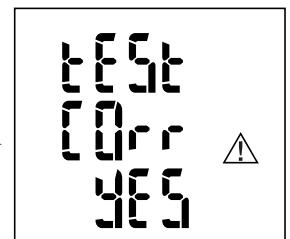
I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1



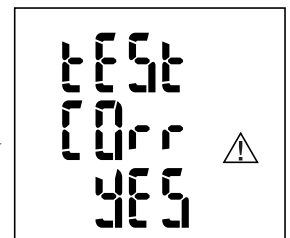
I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1



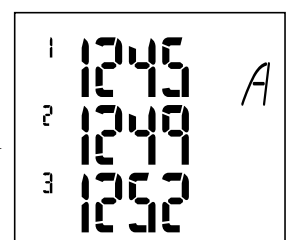
I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1



I	U F	P PF	E
▲ / TEST	▶	☐	PROG

x 1
3 sec.



- F** > 2^{ème} opération de test
Remarque : cette opération ne tient pas compte des modifications effectuées lors du premier test.
- GB** > second test operation
NB: this operation does not hold account of the modifications carried out at the time of the first test.
- D** > Zweiter Testbetrieb
Hinweis: Bei diesem Betrieb werden die Änderungen aus dem ersten Test nicht berücksichtigt.
- I** > 2^a operazione di test
Nota: questa operazione non tiene conto delle modifiche compiute in occasione del primo test.

- NL** > 2^e testoperatie
Opmerking: deze operatie houdt geen rekening met de wijzigingen aangebracht tijdens de eerste test.
- E** > segunda operación de prueba
Nota: operación no tiene en cuenta las modificaciones efectuadas en la primer prueba.
- P** > 2^a operação de teste
Nota: esta operação não leva em conta as modificações efectuadas durante o primeiro teste

I	U F	P PF	E
▲ / TEST	▶	↻	PROG

x 1
3 sec.

I	U F	P PF	E
▲ / TEST	▶	↻	PROG

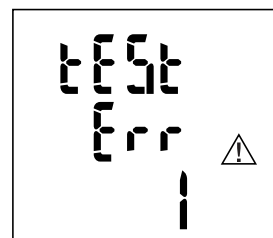
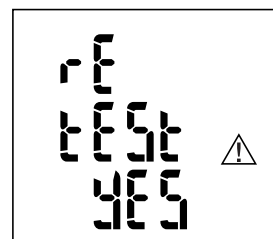
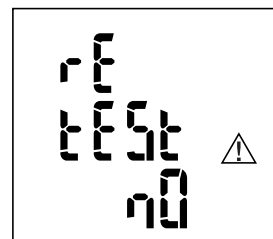
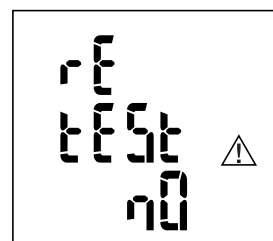
x 1

I	U F	P PF	E
▲ / TEST	▶	↻	PROG

x 1

I	U F	P PF	E
▲ / TEST	▶	↻	PROG

x 1



Opération test

Test operation - Testbetrieb - Operazione di test - Testoperatie - Segunda operación de prueba - Operação de teste

ASSISTANCE

ASSISTANCE - HILFE - ASSISTENZA - ASSISTENTIE -
ASISTENCIA - ASSISTÊNCIA

F

- **Appareil éteint**
Vérifiez l'alimentation auxiliaire
- **Rétroéclairage éteint**
Vérifiez la configuration du rétroéclairage (p. 23)
- **Tensions = 0**
Vérifiez le raccordement
- **Courants = 0 ou erronés**
Vérifiez le raccordement
Vérifiez la configuration du TC
- **Puissances et facteurs de puissance (PF) erronés**
Lancez la fonction de test du raccordement (p. 28)
- **Phases manquantes sur l'afficheur**
Vérifiez la configuration du réseau (p. 18)

D

- **Gerät nicht in Betrieb**
Überprüfen Sie die Hilfsversorgung
- **Hintergrundbeleuchtung erloschen**
Überprüfen Sie die Konfiguration der Hintergrundbeleuchtung (p. 23)
- **Spannungen = 0**
Überprüfen Sie den Anschluß
- **Ströme = 0 oder fehlerhaft**
Überprüfen Sie den Anschluß
Überprüfen Sie die Konfiguration des SW
- **Leistungen oder Leistungsfaktor (PF)**
Starten Sie die Anschlußtestfunktion (p. 28)
- **Fehlende Phasen auf der Anzeige**
Überprüfen Sie die Konfiguration des (p. 18)

GB

- **Device Switched off**
Check auxiliary supply
- **Backlight switched off**
Check backlight configuration in set up menu (p. 23)
- **Voltage = 0**
Verify the connections
- **Current = 0 or incorrect**
Verify the connections
Verify the configuration of CT's in set up
- **Powers and power-factor (PF)**
Use the test connection function (p. 28)
- **Phases missing on Display**
Check the Network configuration (in set up menu) (p. 18)

I

- **Apparecchio spento**
Verificare l'alimentazione ausiliaria
- **Back light spento**
Verificare ha configurazione del Back light (p. 23)
- **Tensioni = 0**
Verificare il collegamento
- **Correnti = 0 o errati**
Verificare il collegamento
Verificare la configurazione del TA
- **Potenze e fattore di potenza (PF) errati.**
Lanciare la funzione di prova del collegamento (p. 28)
- **Fasi mancanti sullo schermo**
Verificare la configurazione della rete (p. 18)

NL

- **Toestel licht niet op**
Controleer de hulpspanning
- **Achtergrondverlichting licht niet op**
Controleer de instellingen van de achtergrondverlichting (p. 23)
- **Spanningen = 0**
Controleer de aansluiting
- **Stromen = 0 of foutief**
Controleer de aansluiting
Controleer de instelling van de TI
- **Vermogens en arbeidsfactor (PF) foutief**
Start de testfunctie van de aansluiting (p. 28)
- **Ontbreken van fasen op het display**
Controleer de instelling van het net (p. 18)

P

- **Aparelho apagado**
Verificar a alimentação auxiliar
- **Retroiluminação apagado**
Verificar tem configuração do retroiluminação (p. 23)
- **Tensões = 0**
Verificar a conexão
- **Correntes = 0 o errados**
Verificar a conexão
Verificar a configuração do TC
- **Potências e factor de potência (PF) errado**
Lançar a função de teste da conexão (p. 28)
- **Fases em falta sobre display**
Verificar a configuração da rede (p. 18)

E

- **Aparato apagado**
Verificar la alimentación auxiliar
- **Retroiluminación apagada**
Verificar la configuración del display retroiluminado (p. 23)
- **Tensiones = 0**
Verificar las conexiones
- **Intensidades = 0 o erróneas**
Verificar las conexiones
Verificar la configuración del TC
- **Potencias y factor de potencia (PF) erróneos**
Ejecutar la función test de conexión (p. 28)
- **Ausencia de fases en el display**
Verificar la configuración de la red (p. 18)

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CHARACTERÍSTICAS TÉCNICAS

F

BOÎTIER

Dimensions:	96 x 96 x 60 mm 96 x 96 x 80 avec tous les modules d'options (DIN 43700)
Raccordement:	à partir de borniers débrochables 2,5 mm ² (tensions et autres) et fixes 6 mm ² (courants)
Indice de protection:	Face avant IP52 et boîtier IP30
Poids:	400 g

AFFICHEUR

Type :	LCD avec rétroéclairage
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MESURE

Réseau triphasé (3 ou 4 fils), biphasé (2 fils) et monophasé

TENSION (TRMS)

Mesure directe:	Phases/phases: de 50 à 500 V AC Phase/neutre: de 28 à 289 V AC
Surcharge permanente entre phases:	800 V AC
Période d'actualisation:	1 s

COURANT (TRMS)

A partir du TC avec un:	• Primaire : jusqu'à 9999 A • Secondaire : 5 A
Courant minimum de mesure	5 mA
Consommation des entrées:	< 0,6 VA
Affichage:	de 0 à 11 kA (1,1 fois la valeur du primaire)
Surcharge permanente:	6 A
Surcharge intermittente:	10 In pendant 1 s
Période d'actualisation:	1 s

PUISSANCES

Totales:	0 à 11 MW/Mvar/MVA
Période d'actualisation:	1 s

FREQUENCE

	de 45,0 à 65,0 Hz
Période d'actualisation:	1 s

PRÉCISION DES MESURES

Courants:	0,2 % de 10 à 110 % de In
Tensions:	0,2 % de 140 à 700 V AC
Puissances:	0,5 % de la pleine échelle (-90° à + 90°)
Facteur de Puissance:	0,5 % pour 0,5 < FP < 1
Fréquence:	0,1 % de 45 à 65 Hz
Comptage de l'énergie active:	± 0,5% de 0,02 à 1,2 In avec PF = 0,5 L ou 0,8 C (classe 0,5S IEC 62053-22)
Comptage de l'énergie réactive:	± 2% de 0,1 à 1,2 In avec sinφ = 0,5 L ou C (classe 2 IEC 62053-23)

ALIMENTATION AUXILIAIRE IEC/CE

110 à 400 V AC 50/60 Hz	± 10 %
120 à 350 V DC:	± 20 %
Consommation:	< 5 VA

F

PRÉCISION

Énergie active :	IEC 62053-22 classe 0,5S
Énergie réactive :	IEC 62053-23 classe 2

MARQUAGE CE

Le **DIRIS A20** satisfait aux :

- dispositions de la directive européenne sur la compatibilité électromagnétique (CEM) n° 89/336/CEE du 3 mai 1989, modifiée par la directive n° 92/31/CEE datée du 28 avril 1992 et par la directive n° 93/68/CEE du 22 juillet 1993.
- à la directive basse tension n° 73/23 CEE du 19 février 1973 modifié par la directive n° 93/68/CEE du 22 juillet 1993.

COMPATIBILITÉ ÉLECTROMAGNÉTIQUE

Immunité aux décharges électrostatiques:	IEC 61000-4-2 - Niveau III
Immunité aux champs électromagnétiques rayonnés:	IEC 61000-4-3 - Niveau III
Immunité aux transitoires rapides en salve:	IEC 61000-4-4 - Niveau III
Immunité aux ondes de choc:	IEC 61000-4-5 - Niveau III
Immunité aux perturbations induites par les champs radioélectriques:	IEC 61000-4-6 - Niveau III
Immunité aux champs magnétiques à la fréquence réseau:	IEC 61000-4-8 - Niveau III
Emissions conduites et rayonnées:	CISPR11 - Classe A
Immunité aux creux et coupures brèves de tension:	IEC 61000-4-11

CLIMAT

Température de fonctionnement:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Température de stockage:	IEC 60068-2-1/IEC 60068-2-2 -20 °C à +85 °C
Humidité:	IEC 60068-2-30 - 95 %
Brouillards salins:	IEC 60068-2-52 - 2,5 % NaCl

CARACTERISTIQUES MECANIKUES

Vibration comprise entre 10 et 50 Hz:	IEC 60068-2-6 - 2g
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ISOLATION

Catégorie d'installation:	III (480 VAC ph/ph)
Degré de pollution:	2
Tension de choc assignée:	IEC 60947-1 - V imp: 4 kV
Face avant:	Classe II
Sécurité électrique:	IEC 61010-1

UL - CSA Approval

Alimentation auxiliaire	110 à 240 V AC 120 à 250 V DC
Normes	UL 61010-1 CSA-C22.2 No. 61010-1
Certificat	N° de dossier UL: E257746 N° de rapport CSA DIRIS A20: 1810571 N° de rapport CSA DIRIS A40: 1810577

Utilisation Intérieure

Altitude supérieure à 2000 m ou aux environs de 2000 m si spécifié par le constructeur (voir clause D.9 pour plus d'information)
Température 0 à 40 °C. 80 % d'humidité relative maximum, pour une température supérieure à 31 °C l'humidité décroît linéairement pour atteindre 50 % à 40 °C

Surtension transitoire conformément à la catégorie d'installation.

Catégories de surtension I, II et III.

Pour la plupart des alimentations la catégorie minimum est la catégorie II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CARACTERÍSTICAS TÉCNICAS

GB

CASE

Dimensions:	96 x 96 x 60 mm or 96 x 96 x 80 mm with all optional modules (DIN 43700)
Connection:	via 2.5 mm ² disconnectable terminals (voltage and others) and 6 mm ² fixed terminals (current)
IP index:	IP52 (front panel) and IP30 (case)
Weight:	400 gr.

DISPLAY

Type :	backlit LCD display
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MEASUREMENTS

Three-phase (3 or 4 wires), two-phase (2 wire) and single-phase networks

VOLTAGE (TRMS)

Direct measurement:	from 50 to 500 V AC (phase/phase) from 28 to 289 V AC (phase/neutral)
Permanent overload:	800 V AC
Update period:	1 second

CURRENT (TRMS)

Via CT with:	<ul style="list-style-type: none"> • Primary: up to 9999 A • Secondary: 5 A
Minimum measuring current	5 mA
Input consumption:	< 0.6 VA
Display:	from 0 to 11 kA (1.1 times the primary value)
permanent overload:	6 A
intermittent overload:	10 In / 1 second
Update period:	1 second

POWER

Total:	0 to 11 MW/Mvar/MVA
Update period:	1 second

FREQUENCY

	from 45,0 to 65,0 Hz
Update period:	1 second

MEASUREMENT ACCURACY

Current:	0.2 % from 10 to 110 % / In
Voltage:	0.2 % from 140 to 700 V AC
Power:	0.5 % of full scale (-90° à + 90°)
Power factor:	0.5 % for 0.5 < FP < 1
Frequency:	0.1 % from 45 to 65 Hz
Active energy metering:	± 0.5% from 0.02 to 1,2 In with PF = 0.5 L or 0.8 C (class 0.5S IEC 62053-22)
Reactive energy metering:	± 2% from 0.1 to 1,2 In with sinφ = 0.5 L or C (class 1 IEC 62053-23)

AUXILIARY SUPPLY IEC/CE

110 to 400 V AC 50/60 Hz	± 10 %
120 to 350 V DC	± 20 %
Consumption:	< 5 VA



ACCURACY

Accuracy on active energy:	IEC 62053-22 class 0.5S
Accuracy on reactive energy:	IEC 62053-23 class 2

CE MARKING

The **DIRIS A20** complies with:

- The requirements of the European directive on electromagnetic compatibility (EMC) no. 89/336/CEE dated 3 May 1989, modified by directive no. 92/31/CEE dated 28 April 1992 and by directive no. 93/68/CEE dated 22 July 1993.
- Low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993.

ELECTROMAGNETIC COMPATIBILITY

Immunity to electrostatic discharges:	IEC 61000-4-2 - Level III
Immunity to radiated radio-frequency fields:	IEC 61000-4-3 - Level III
Immunity to electrical fast transients/bursts:	IEC 61000-4-4 - Level III
Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

CLIMATE

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Storage temperature range:	IEC 60068-2-1/IEC 60068-2-2 -20 °C to +85 °C
Humidity:	IEC 60068-2-30 - 95 %
Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

MECHANICAL CHARACTERISTICS

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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INSULATION

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Auxiliary supply (UL-CSA Approval)	110 to 240 V AC 120 to 250 V DC
Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746 CSA report No. for DIRIS A20: 1810571 CSA report No. for DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Transient overvoltages according to installations categories.

Overvoltage categories I,II and III.

For mains supply the minimum and normam category is II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CHARACTERÍSTICAS TÉCNICAS

D

GEHÄUSE

Abmessungen:	96x96x60 oder 80 mit sämtlichen Modulen (DIN 43700)
Anschluß:	über herausziehbare Klemmleisten 2,5 mm ² (Spannungen und andere) und feste Klemmleisten 6 mm ² (Ströme).
Schutzgrad:	Frontseite IP52 und Gehäuse IP30
Gewicht:	400 gr

ANZEIGE

Typ:	LCD-Anzeige von hinten beleuchtet
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MESSUNG

Netz: dreiphasig (3 oder 4 Leiter), zweiphasig (2 Leiter) und einphasig

SPANNUNGSWERTE (TRMS)

Direkt:	Phase/Phase: von 50 bis 500 V AC Phase/Nullleiter: von 28 bis 289 V AC
Anhaltende Überlast:	800 V AC
Aktualisierung der Anzeige:	1 Sekunde

STROMWERTE (TRMS)

Über Stromwandler:	• Primär: bis 9999 A • Sekundär: 5 A
Minimaler Messstrom	5 mA
Bedarf der Eingänge:	< 0,6 VA
Anzeige:	von 0 bis 11 kA (1,1 x Primärwert)
Anhaltende Überlast:	6 A
Kurzzeitige Überlast:	10 In während 1 Sekunde
Aktualisierung der Messung:	1 Sekunde

LEISTUNGSWERTE

Insgesamt:	0 bis 11 MW/Mvar/MVA
Aktualisierung der Messung:	1 Sekunde

FREQUENZWERTE

	von 45,0 bis 65,0 Hz
Aktualisierung der Messung:	1 Sekunde

GENAUIGKEIT DER MESSUNGEN

Ströme:	0,2 % von 10 bis 110 % von In
Spannungen:	0,2 % von 140 bis 700 V AC
Leistungen:	0,5 % der gesamten Skala (-90° bis + 90°)
Leistungsfaktor:	0,5 % für 0,5 < LF < 1
Frequenz:	0,1 % von 45 bis 65 Hz
Wirkenergie:	± 0,5 % von 0,02 à 1,2 In mit LF = 0,5 L oder 0,8 C (IEC 62053-22 Klasse 0,5S)
Blindenergie:	± 2% von 0,1 bis 1,2 In mit sinφ = 0,5 L oder C (IEC 62053-23 Klasse 2)

HILFSSPANNUNG IEC/CE

110 bis 400 V AC bei 50/60 Hz	± 10 %
120 bis 350 V DC :	± 20 %
Bedarf:	< 5 VA

D

GENAUIGKEIT

Genauigkeit bei der Wirkenergie:	IEC 62053-22 Klasse 0,5S
Genauigkeit bei der Blindenergie:	IEC 62053-23 Klasse 2

EG-KENNZEICHEN

The **DIRIS A20** complies with:

- The requirements of the European directive on electromagnetic compatibility (EMC) no. 89/336/CEE dated 3 May 1989, modified by directive no. 92/31/CEE dated 28 April 1992 and by directive no. 93/68/CEE dated 22 July 1993.
- Low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993.

ELEKTROMAGNETISCHE VEREINBARKEIT

Immunity to electrostatic discharges:	IEC 61000-4-2 - Level III
Immunity to radiated radio-frequency fields:	IEC 61000-4-3 - Level III
Immunity to electrical fast transients/bursts:	IEC 61000-4-4 - Level III
Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

KLIMA

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Storage temperature range:	IEC 60068-2-1/IEC 60068-2-2 -20 °C to +85 °C
Humidity:	IEC 60068-2-30 - 95 %
Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

MECHANISCHE DATEN

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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ISOLATION

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Auxiliary supply (UL-CSA Approval)	110 to 240 V AC 120 to 250 V DC
Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746 CSA report No. for DIRIS A20: 1810571 CSA report No. for DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Transient overvoltages according to installations categories.

Overvoltage categories I,II and III.

For mains supply the minimum and normam category is II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CHARACTERÍSTICAS TÉCNICAS

**SCATOLA**

Dimensioni	96x96x60 96x96x80 con tutti i moduli opzionali (DIN 43700)
Collegamenti	2,5 mm ² per le morsettiere staccabili (tensione e moduli) e da 6 mm ² per quelle fisse (correnti)
Grado di protezione:	Frontale IP52 e Scatola IP30
Peso:	400g

DISPLAY

Tipo:	LCD retroilluminato
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MISURE

Rete trifase (3 o 4 fili), bifase (2 fili) e monofase

TENSIONE (TRMS)

Misura diretta	Fase/fase: da 50 a 500 V AC Fase/neutro: da 28 a 289 V AC
Sovraccarico permanente (fase/fase)	800 V AC
Periodo di attualizzazione	1 secondo

CORRENTE (TRMS)

Ingresso da TA con:	• Primario: fino a 9999 A • Secondario: 5 A
Corrente minima di misura	5 mA
Consumo delle entrate	< 0,6 VA
Visualizzazione	da 0 a 11 kA (1,1 volte il valore del primario)
Sovraccarico permanente	6 A
Sovraccarico intermittente	10 I _n per 1 secondo
Periodo di attualizzazione	1 s

POTENZE

Totale	da 0 a 11 MW/Mvar/MVA
Periodo di attualizzazione	1 s

FREQUENZA

	da 45,0 a 65,0 Hz
Periodo di attualizzazione	1 s

MISURE

Corrente	0,2 % da 10 a 110 % di I _n
Tensione	0,2 % da 140 a 700 V AC
Potenza	0,5 % del fondo scala (da -90° a + 90°)
Fattore di Potenza	0,5 % per 0,5 < FP < 1
Frequenza	0,1 % da 45 a 65 Hz
Conteggio dell'energia attiva	± 0,5% da 0,02 a 1,2 I _n con FP = 0,5 L o 0,8 C (classe 0,5S IEC 62053-22)
Conteggio dell'energia reattiva	± 2% da 0,1 a 1,2 I _n con sinφ = 0,5 L o C (classe 2 IEC 62053-23)

ALIMENTAZIONE AUSILIARIA IEC/CE

da 110 a 400 V AC 50/60 Hz	± 10 %
da 120 a 350 V DC	± 20 %
Consumo	< 5 VA



PRECISIONE

Precisione sull'energia attiva:	IEC 62053-22 class 0,5S
Precisione sull'energia reattiva:	IEC 62053-23 class 2

MARCATURA CE

The **DIRIS A20** complies with:

- The requirements of the European directive on electromagnetic compatibility (EMC) no. 89/336/CEE dated 3 May 1989, modified by directive no. 92/31/CEE dated 28 April 1992 and by directive no. 93/68/CEE dated 22 July 1993.
- Low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993.

COMPATIBILITÀ ELETTROMAGNETICA

Immunity to electrostatic discharges:	IEC 61000-4-2 - Level III
Immunity to radiated radio-frequency fields:	IEC 61000-4-3 - Level III
Immunity to electrical fast transients/bursts:	IEC 61000-4-4 - Level III
Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

CLIMA

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Storage temperature range:	IEC 60068-2-1/IEC 60068-2-2 -20 °C to +85 °C
Humidity:	IEC 60068-2-30 - 95 %
Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

CARATTERISTICHE MECCANICHE

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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ISOLAMENTO

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Auxiliary supply (UL-CSA Approval)	110 to 240 V AC 120 to 250 V DC
Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746 CSA report No. for DIRIS A20: 1810571 CSA report No. for DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Transient overvoltages according to installations categories.

Overvoltage categories I,II and III.

For mains supply the minimum and normam category is II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CARACTERÍSTICAS TÉCNICAS

NL

BEHUIZING

Afmetingen:	96 x 96 x 60 mm of 96 x 96 x 80 met alle optionele modules (DIN 43700)
Aansluiting:	via afneembare klemmenstroken 2,5 mm ² (spanningen en andere) en vaste klemmenstroken 6 mm ² (stromen)
Beschermingsindex:	Voorzijde IP52 en kast IP30
Gewicht:	400 gr

DISPLAY

Type:	LCD met backlight
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METINGEN

Driefasennet (3 of 4 draden), tweefasennet (2 draden) en enkelfasennet		
SPANNING (TRMS)		
Directe meting:	Fase/fase:	van 50 tot 500 V AC
	Fase/nul:	van 28 tot 289 V AC
Permanente overbelasting:	800 V AC	
Updateperiode:	1 seconde	
STROOM (TRMS)		
Vanaf de stroomtransformator met een:	• Primaire:	tot 9999 A
	• Secundaire:	5 A
Minimale meetstroom	5 mA	
Verbruik van de ingangen:	< 0,6 VA	
Weergave:	van 0 tot 11 kA (1,1 maal de waarde van de primaire)	
Permanente overbelasting:	6 A	
Intermittente overbelasting:	10 In gedurende 1 seconde	
Updateperiode:	1 seconde	
VERMOGENS		
Totalen:	0 tot 11 MW/Mvar/MVA	
Updateperiode:	1 seconde	
FREQUENTIE:		
	van 45,0 tot 65,0 Hz	
Updateperiode:	1 seconde	

PRECISIE VAN DE METINGEN

Stromen:	0,2 % van 10 tot 110 % de In
Spanningen:	0,2 % van 140 tot 700 V AC
Vermogens:	0,5 % van de volle schaal (-90° tot + 90°)
Vermogensfactor:	0,5 % voor 0,5 < FP < 1
Frequentie:	0,1 % van 45 tot 65 Hz
Telling van actieve energie:	± 0,5% van 0,02 tot 1,2 In met PF = 0,5 L of 0,8 C (klasse 0,5S IEC 62053-22)
Telling van reactieve energie:	± 2% van 0,1 tot 1,2 In met sinφ = 0,5 L of C (klasse 2 IEC 62053-23)

HULPVOEDING IEC/CE

110 tot 400 V AC: bij 50/60 Hz	± 10 %
120 tot 350 V DC:	± 20 %
Verbruik:	< 5 VA

NL

NAUWKEURIGHEID

Precisie op de actieve energie:	IEC 62053-22 klasse 0,5S
Precisie op de reactieve energie:	IEC 62053-23 klasse 2

EG-MARKERING

The **DIRIS A20** complies with:

- The requirements of the European directive on electromagnetic compatibility (EMC) no. 89/336/CEE dated 3 May 1989, modified by directive no. 92/31/CEE dated 28 April 1992 and by directive no. 93/68/CEE dated 22 July 1993.
- Low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993.

ELEKTROMAGNETISCHE VERENIGBAARHEID

Immunity to electrostatic discharges:	IEC 61000-4-2 - Level III
Immunity to radiated radio-frequency fields:	IEC 61000-4-3 - Level III
Immunity to electrical fast transients/bursts:	IEC 61000-4-4 - Level III
Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

KLIMAAT

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Storage temperature range:	IEC 60068-2-1/IEC 60068-2-2 -20 °C to +85 °C
Humidity:	IEC 60068-2-30 - 95 %
Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

MACHINALE EIGENSCHAPPEN

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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ISOLATIE

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Auxiliary supply (UL-CSA Approval)	110 to 240 V AC 120 to 250 V DC
Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746 CSA report No. for DIRIS A20: 1810571 CSA report No. for DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Transient overvoltages according to installations categories.

Overvoltage categories I,II and III.

For mains supply the minimum and normam category is II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CARACTERÍSTICAS TÉCNICAS

E

CAJA

Dimensiones:	96x96x60 o 80 con todos los módulos de opciones (DIN 43700)
Conexión	a partir de las cajas de bornes móviles 2,5 mm ² (tensiones y otros) y fijas 4 mm ² (intensidades)
Índice de protección:	Cara frontal IP52 y caja IP30
Peso:	400 gr

VISUALIZADOR

Type:	LCD con retroiluminación
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MEDIDAS

Red trifásica (3 o 4 hilos), bifásica (2 hilos) y monofásica

TENSIÓN (TRMS)

Medida directa:	Fase/fase	de 50 a 500 V AC
	Fase/neutro	de 28 a 289 V AC
Sobrecarga permanente:		800 V AC
Periodo de actualización:		1 segundo

INTENSIDAD (TRMS)

A partir de transformador de intensidad con un:	• Primario	hasta 9999 A
	• Secundario	5 A
Corriente mínima de medida		5 mA
Consumo des entradas:		< 0,6 VA
Visualización		de 0 a 11 kA (1,1 veces el valor del primario)
Sobrecarga permanente:		6 A
Sobrecarga intermitente:		10 I _n durante 1 segundo
Periodo de actualización:		1 segundo

POTENCIAS

Totales:	0 a 11 MW/Mvar/MVA
Periodo de actualización:	1 segundo

FRECUENCIA

	de 45,0 a 65,0 Hz
Periodo de actualización:	1 segundo

PRECISIÓN DE LAS MEDIDAS

Intensidades:	0,2 % de 10 a 110 % de I _n
Tensiones:	0,2 % de 140 a 700 V AC
Potencias:	0,5 % de la plena escala (-90° a + 90°)
Factor de Potencia:	0,5 % para 0,5 < FP < 1
Frecuencia:	0,1 % de 45 a 65 Hz
Recuento de la energía activa:	± 0,5 % de 0,02 a 1,2 I _n con PF = 0,5 L o 0,8 C (clase 0,5S IEC 62053-22)
Recuento de la energía reactiva:	± 2% de 0,1 a 1,2 I _n con sinφ = 0,5 L o C (clase 1 IEC 62053-23)

ALIMENTACIÓN AUXILIAR IEC/CE

110 a 400 V AC	en 50/60 Hz ± 10 %
120 a 350 V DC	± 20 %
Consumo	< 5 VA

E

PRECISIÓN

Precisión en la energía activa :	IEC 62053-22 classe 0,5S
Precisión en la energía reactiva :	IEC 62053-23 classe 2

MARCADO CE

The **DIRIS A20** complies with:

- The requirements of the European directive on electromagnetic compatibility (EMC) no. 89/336/CEE dated 3 May 1989, modified by directive no. 92/31/CEE dated 28 April 1992 and by directive no. 93/68/CEE dated 22 July 1993.
- Low voltage directive no. 73/23/CEE dated 19 February 1973, modified by directive no. 93/68/CEE dated 22 July 1993.

COMPATIBILIDAD ELECTROMAGNÉTICA

Immunity to electrostatic discharges:	IEC 61000-4-2 - Level III
Immunity to radiated radio-frequency fields:	IEC 61000-4-3 - Level III
Immunity to electrical fast transients/bursts:	IEC 61000-4-4 - Level III
Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

CLIMAT

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
Storage temperature range:	IEC 60068-2-1/IEC 60068-2-2 -20 °C to +85 °C
Humidity:	IEC 60068-2-30 - 95 %
Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

CARACTERÍSTICAS MECÁNICAS

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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 AISLAMIENTO

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Alimentación auxiliar (UL-CSA Approval)	110 a 240 V AC 120 a 250 V DC
Norma	UL 61010-1 CSA-C22.2 No. 61010-1
Certificado	No de expediente UL: E257746 No de informe CSA DIRIS A20: 1810571 No de informe CSA DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Transient overvoltages according to installations categories.

Overvoltage categories I,II and III.

For mains supply the minimum and normam category is II.

CARACTÉRISTIQUES TECHNIQUES

TECHNICAL CHARACTERISTICS - TECHNISCHE DATEN -
 CARATTERISTICHE TECNICHE - TECHNISCHE EIGENSCHAPPEN -
 CARACTERÍSTICAS TÉCNICAS - CHARACTERÍSTICAS TÉCNICAS

P

CAIXA

Dimensões:	96X96X60 ou 80 com todos os módulos de opções (DIN 43700)
Ligação	a partir de blocos descartáveis 2,5 mm ² (tensões e outras) e fixas 6 mm ² (correntes)
Índice de protecção:	Face dianteira IP52 e caixa IP30
Peso:	400 gr

VISUALIZADOR

Type :	LCD com retroiluminação
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MEDIDAS

Rede trifásica (3 ou 4 fios), bifásica (2 fios) e monofásica
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TENSÃO (TRMS)

Medida directa:	Fase/fase	de 50 a 500 V AC
	Fase/neutro	de 28 a 289V AC
Sobrecarga permanente:	800 V AC	
Período de actualização:	1 segundo	

CORRENTE (TRMS)

A partir do transformador de corrente com um:	• Primário	até 9999 A
	• Secundário	5 A
Corrente mínima de medida	5 mA	
Corrente mínima de medidaConsumo das entradas:	< 0,6 VA	
Visualização	de 0 a 11 kA (1, prima 1 vez o valor do primário)	
Sobrecarga permanente:	6 A	
Sobrecarga intermitente:	10 In durante 1 segundo	
Período de actualização:	1 segundo	

POTÊNCIAS

Totais:	de 0 a 11 MW/Mvar/MVA
Período de actualização:	1 segundo

FREQUÊNCIA

	de 45,0 a 65,0 Hz
Período de actualização:	1 segundo

PRECISÃO DAS MEDIDAS

Correntes:	0,2 % de 10 a 110 % de In
Tensões:	0,2 % de 140 a 700 V AC
Potências:	0,5 % da escala completa (-90° a + 90°)
Factor de Potência:	0,5 % para 0,5 < FP < 1
Frequência:	0,1 % de 45 a 65 Hz
Contagem da energia activa:	± 0,5% de 0,02 a 1,2 In com PF = 0,5 L ou 0,8 C (classe 0,5S IEC 62053-22)
Contagem da energia reactiva:	± 2% de 0,2 a 1,2 In com sinφ = 0,5 L ou C (classe 1 IEC 62053-23)

ALIMENTAÇÃO AUXILIAR IEC/CE

110 a 400 V AC	em 50/60 Hz ± 10 %
120 a 350 V DC	± 20 %
Consumo	< 5 VA

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ACCURACY

Exactidão na energia activa :	IEC 62053-23 classe 0,5S
Exactidão na energia reactiva :	IEC 62053-23 classe 2

MARCAÇÃO CE

The **DIRIS A20** complies with:

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Immunity to impulse waves:	IEC 61000-4-5 - Level III
Immunity to conducted disturbances:	IEC 61000-4-6 - Level III
Immunity to power frequency magnetic fields:	IEC 61000-4-8 - Level III
Conducted and radiated emissions:	CISPR11 - Class A
Immunity to voltage dips and short interruptions:	IEC 61000-4-11

CLIMA

Operating-temperature range:	IEC 60068-2-1/IEC 60068-2-2 -10 °C to +55 °C
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Saling fog:	IEC 60068-2-52 - 2,5 % NaCl

CARACTERÍSTICAS MECÂNICAS

Vibration from 10 to 50 Hz:	IEC 60068-2-6 - 2g
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ISOLAÇÃO

Installation category:	III (480 VAC ph/ph)
Degree of pollution:	2
Rated impulse withstand voltage:	IEC 60947-1 - V imp: 4 kV
Front face:	Class II
Electric security:	IEC 61010-1

UL - CSA Approval

Auxiliary supply (UL-CSA Approval)	110 to 240 V AC 120 to 250 V DC
Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746 CSA report No. for DIRIS A20: 1810571 CSA report No. for DIRIS A40: 1810577

Indoor use

Altitude up to 2000 m or above 2000 m if specified by the manufacturer (see clause D.9 for further information)

Temperature 0 to 40°C. Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

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