

PU-286.015.20-10A

Rev.: 12/1999

DIN-Rail Power Supplies

Ⓚ

Installation und Betrieb

Ⓒ

Installation and Operation

Ⓕ

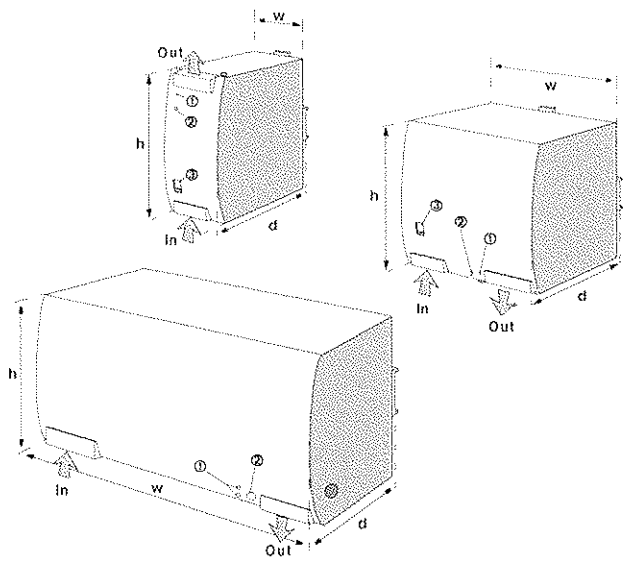
Installation et fonctionnement

Ⓔ

Instalación y funcionamiento

Ⓛ

Installazione e funzionamento



Vin @ AC 115/230 V → In = N, L, ⊕
 Vin @ 3 AC 400/500V → In = L1, L2, L3, ⊕
 Vout → Out = +, -

Fig. 1

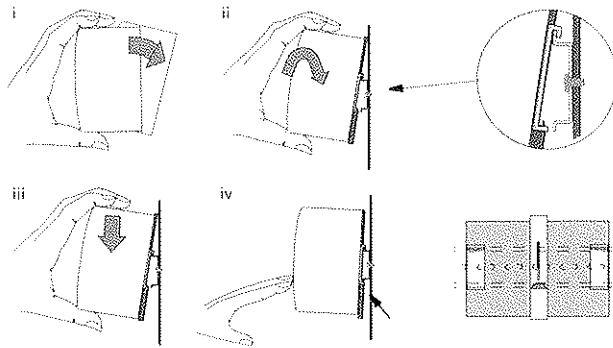


Fig. 2

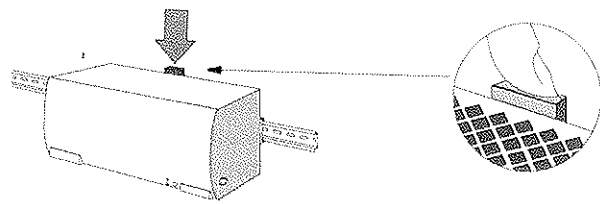


Fig. 3

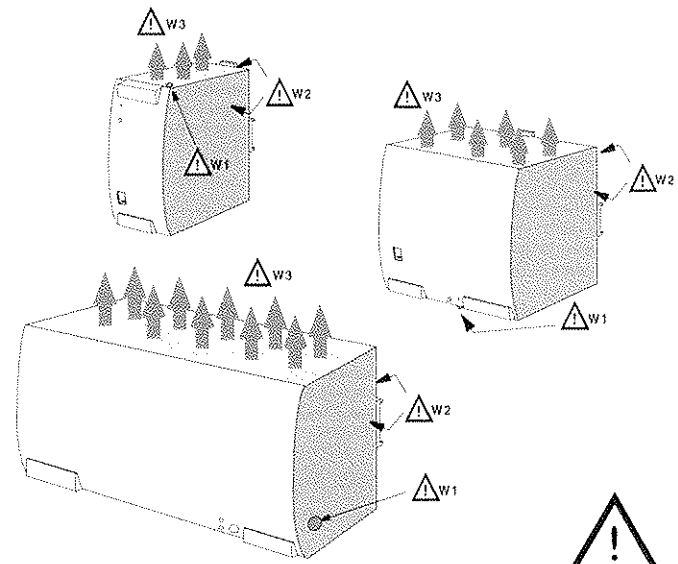
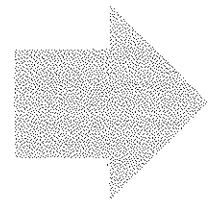


Fig. 4

Ⓜ	Building power supply for integration in professional systems.	⚠	Read installation instructions before connecting to main.	Ⓜ
Ⓜ	Use 0.5 mm ² to 4 mm ² of conductor	⚠	Protect unit from fire and water!	Ⓜ
Ⓜ	Make sure that all strands enter the terminal block.	⚠	Convection cooling. Do not obstruct air flow!	Ⓜ
Ⓜ	Do not use without protective earth (PE) connection!	⚠	Operational range 0°C - 40°C / 32°F - 104°F	Ⓜ
Ⓜ	Mind the correct output polarity	♻	At end of life Send to approved recycling service!	Ⓜ
⚠	Risk of electric shock and stored electrical energy. Wait 5 min. after disconnecting input power, before cover can be removed!	Ⓜ	MADE IN GERMANY	Ⓜ




Fig. 5
















Notes on Safety



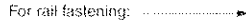
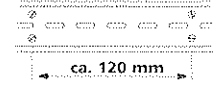

Read instructions!	Before working with this unit: read these instructions carefully and completely. Make sure that you have understood all the information (ask colleagues)! Comply with notes on the unit!
Disconnect system from supply network	Before any installation, maintenance or modification work: Disconnect your system from the supply network. Ensure that it cannot be re-connected inadvertently!
Before start of operation: Ensure appropriate installation	<p>Warning! Improper installation/operation may impair safety and result in operating trouble, even destruction of the unit. The unit must not be installed and put into service except by appropriately qualified personnel. Compliance with the relevant regulations (DIN, VDE or specific national regulations) must be ensured. Before operation is started the following conditions must be ensured in particular:</p> <ul style="list-style-type: none"> • Connection to mains supply in compliance with VDE0100 and VDE0160 • With stranded wires: all strands must be fastened in the terminal blocks (potential danger of contact with the case) • Unit and power supply cables must be sufficiently fused; if necessary it must also be possible to disconnect the unit manually from the voltage supply • The non-fused earth conductor must be connected to the ⊕ terminal • All output lines must be rated for the power supply output current and must be connected with the correct polarity • Sufficient cooling must be ensured • If present, the input voltage selector must be set appropriately
Grounding screws	Screws at the housing are for internal grounding. Do not remove them! Do not connect cables!  Fig. 4
In operation: No modifications!	As long as the unit is in operation: do not modify the installation! The same applies also to the secondary side (high current!). Risk of electric arcs and electric shock (could cause death!) If available: Only (dis)connect the plug connector when the power is off!
Risk of burns	The unit becomes hot (particularly on the rear side and on the side surfaces). Do not touch the unit in operation and shortly after disconnection!  Fig. 4
Convection Cooling	Do not cover upper and lower wall surface! Leave sufficient space around the unit for cooling! For recommendation for spacing see supplementary sheet „Technical Data“.  Fig. 4
Warning: High voltage! Stored energy!	The unit contains unprotected conductors carrying a lethal high voltage, and components storing a very substantial amount of energy. Improper handling may result in an electric shock or serious burns! <ul style="list-style-type: none"> • The unit must not be opened except by appropriately trained personnel! • Do not introduce any objects into the unit! • Do not open the unit until at least 5 minutes after it has been disconnected from the mains on all poles!
Energy hazard at output!	With some units in this range (output power >240 VA), the output is capable of providing hazardous energy. Final equipment manufacturer must provide protection to service personnel against inadvertent contact.

Safety Label (on the unit, cf. Fig. 5)

 Important: read the instructions carefully before operation is started!	 Mind the output polarity!
 Admissible application (cf. "Application" on the reverse, next page at the top)	 Refers to the opening of the unit; cf. "Notes on Safety" above
 Cross-sectional area of cable 0,5...4 mm ² , strip over 6 mm	 To be recycled after the end of service life
 Make sure that all strands are fastened in the terminal.	 Admissible temperature range
 Do not operate the unit without non-fused earth conductor.	 Do not obstruct air flow for convective cooling!
	 Keep away from fire and water!

Installation



Zulässiger Einsatzbereich	This unit is a primary switched power supply unit for incorporation¹⁾, designed for application in professional systems. In operation, they must not be accessible. It may be installed and put into service by appropriately qualified personnel only.
Mounting	
Mounting	Mount in horizontal position²⁾ only, with input terminals down (or else sufficient cooling will not be possible). Leave space for cooling! Recommended respective distances: see supplementary sheet „Technical Data“.
Attachment	Admissible: TS35/15 or TS35/7.5 For rail fastening: 
<ul style="list-style-type: none"> • Mount DIN support rail • Snap on support rail (vgl. Fig. 2) 	<ul style="list-style-type: none"> i) Tilt the unit slightly rearwards. ii) Fit the unit over top hat rail. iii) Slide it downward until it hits the stop. iv) Press against the bottom front side for locking. v) Shake the unit slightly to check the locking action 
Front elements	
Operation indicator (O)	Indicates whether the unit is working properly. <ul style="list-style-type: none"> • The green LED is on in normal operation and goes out if overloaded. • Some units also have a red LED. This lights up when overloaded and goes out if there is a short circuit or flashes slowly with hiccup operation.
Potentiometer⁶⁾ (P)	Setting the output voltage ³⁾ . For access to the potentiometer remove protective cap, replace it later on.
Input Voltage Selector⁶⁾ (S)	Choice between 115V and 230V supply voltage. ⁴⁾ If admissible at all ⁵⁾ , with DC operation, the unit must be switched to the 230V setting; otherwise it could be damaged!
Connection / Internal fuse	
Connection	<ul style="list-style-type: none"> • Data for permitted loads, cable cross-sections and stripping as well as for external fusing: see the enclosed leaflet „Technical Data“, sub heading "Input" or "Output" • Use only commercial cables designed for the indicated voltage and current values! • With flexible cables: make sure that all cable strands are fastened in the terminal. • Suitable conductor terminal sleeves may be used. • Ensure proper polarity at output terminals!
Grounding	<ul style="list-style-type: none"> • Do not operate the unit without PE! Units that are connected to the mains (power supply units, switching relays) must not be operated without adequate earthing of the housing and if applicable the primary side. The housing is connected to the earth terminal PE (⊕) with earthing screws. Therefore, housing screws should not be loosened (could cause death)! • Secondary side is not earthed: if necessary the ⊕ or ⊖ terminal can be earthed optionally.
Internal fuse	<i>Units with internal fuse only:</i> The internal fuse is not accessible as it must not be replaced by the user. If this internal fuse has blown the unit has an internal defect and, for safety reasons, must be shipped to the manufacturer.
Removal	
Removal Detaching from the support rail	Before removal: Switch main power off and disconnect your system from the supply network. See Fig. 3: push the button on the rear upper edge of the unit downwards (unlock). Gently lift lower front edge of the unit (tipping) and remove.
Recycling	
	The unit contains elements which are suitable for recycling, and components which need special disposal. You are therefore requested to make sure that the unit will be recycled by the end of its service life.

Remarks:

a) See enclosed leaflet "Technical Data" sub heading "Input" or "Output" for details.
b) unless there are other instructions either on the unit or in the enclosed leaflet "Technical Data"
c) Not available with all units
This is a general information leaflet for all units in the current range. With some units deviations from the instructions described here are possible, therefore instructions in the "Technical data" leaflet enclosed always take priority. In case of doubt the German version applies.

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Hinweis:
Dieses Heft enthält allgemeine Informationen zu allen Geräten der vorliegenden Baureihe. Es beschreibt zusammen mit dem Beiblatt „Technische Daten“ Installation und Betrieb Ihrer neuen Stromversorgung. Bei einigen Geräten dieser Baureihe sind Abweichungen von den hier beschriebenen Angaben möglich: **deshalb haben Angaben im Beiblatt „Technische Daten“ stets Vorrang.**



Wir bemühen uns, diese Anleitung frei von Fehlern zu halten, können Irrtümer aber leider nie völlig ausschließen. In Zweifelsfällen fragen Sie bitte bei uns oder bei Ihrem Lieferanten nach; entsprechende Informationen finden Sie im Beiblatt „Technische Daten“. Bei sprachlichen Widersprüchen gilt die deutsche Version.
Die deutsche Anleitung finden Sie ab Seite 3
Die zugehörigen Abbildungen finden Sie ab Seite 1

Note:
This booklet contains general information on all units in the current range. Together with the "Technical data" sheet also enclosed it describes the installation and operation of your new power supply unit. With some units in this range deviations from the instructions described here are possible: **therefore instructions in the "Technical data" leaflet enclosed always take priority.**
We have made strenuous efforts to ensure that there are no mistakes in these instructions, but unfortunately we cannot completely exclude errors. In case of doubt, please contact us or your supplier. You will find the relevant information in the enclosed leaflet "Technical data". The German version applies if there are linguistic contradictions.
You will find the English instructions on page 5
You will find the illustrations on page 1



Information:
Ce cahier contient des informations générales sur tous les appareils de la présente série de construction. Conjointement avec la feuille annexe "Données Techniques", il décrit l'installation et le fonctionnement de votre nouvelle alimentation en courant électrique. Pour certains appareils de cette série de construction, il est possible qu'il y ait des écarts par rapport aux présentes indications: **c'est pourquoi, les indications contenues dans la feuille annexe "Données Techniques" ont toujours la priorité.**
Nous nous efforçons de réduire le nombre d'erreurs dans ce mode d'emploi, mais malheureusement elles ne peuvent pas toujours être évitées. En cas de doute, nous vous prions de vous adresser à nous ou auprès de votre fournisseur. Vous trouverez des informations correspondantes dans la feuille "Données Techniques". En cas de contradictions linguistiques, c'est la version allemande qui est impérative.
Vous trouverez la version française à partir de la page 7
Vous trouverez les graphiques correspondants à partir de la page 1



Nota:
Este cuaderno contiene información general sobre todos los dispositivos de esta serie. En combinación con la ficha "Datos técnicos" describe la instalación y el funcionamiento de su nueva alimentación eléctrica. En algunos de los dispositivos de esta serie puede haber diferencias con respecto a los datos que figuran aquí. **Por este motivo, siempre tienen prioridad las indicaciones contenidas en la ficha "Datos técnicos".**
Nos esforzamos en mantener estas indicaciones libres de errores; desgraciadamente, nunca se puede garantizar totalmente. En caso de duda, consúltenos a nosotros o a su proveedor; encontrará la información pertinente en la ficha "Datos técnicos". En caso de contradicciones verbales, es válida la versión alemana.
Las indicaciones en español figuran a partir de la página 11
Las figuras correspondientes se encuentran a partir de la página 9



Nota:
Il presente opuscolo contiene le informazioni generali per tutti gli apparecchi della presente serie di produzione. Descrive, unitamente al supplemento "Dati Tecnici", l'installazione ed il funzionamento della Vostra nuova alimentazione di corrente. In alcuni apparecchi di questa serie sono possibili eventuali discrepanze rispetto alle indicazioni descritte, **perciò hanno sempre la preminenza le indicazioni riportate nel supplemento "Dati Tecnici".**
Abbiamo fatto del nostro meglio per evitare errori nell'ambito di queste istruzioni che, tuttavia, non possono essere purtroppo completamente esclusi. In caso di dubbi, Vi preghiamo di interpellarci o di contattare il Vostro fornitore; le informazioni richieste sono reperibili nel supplemento "Dati Tecnici". In caso di controversie linguistiche vale la lingua tedesca.
Le istruzioni in italiano sono riportate a partire da pagina 13
Le rispettive figure sono riportate a partire da pagina 9

