

FURUNO

OPERATOR'S MANUAL

AC/DC POWER SUPPLY UNIT

Model **406080A-FUR**

Important notice

General

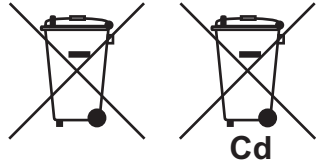
- This manual has been authored with simplified grammar, to meet the needs of international users.
- The operator of this equipment must read and follow the descriptions in this manual. Wrong operation or maintenance can cancel the warranty or cause injury.
- Do not copy any part of this manual without written permission from FURUNO.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and equipment specifications can change without notice.
- The example screens (or illustrations) shown in this manual can be different from the screens you see on your display. The screens you see depend on your system configuration and equipment settings.
- Save this manual for future reference.
- Any modification of the equipment (including software) by persons not authorized by FURUNO will cancel the warranty.
- All brand and product names are trademarks, registered trademarks or service marks of their respective holders.

How to discard this product

Discard this product according to local regulations for the disposal of industrial waste. For disposal in the USA, see the homepage of the Electronics Industries Alliance (<http://www.eiae.org/>) for the correct method of disposal.

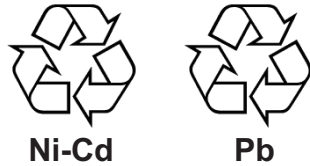
In the European Union

The crossed-out trash can symbol indicates that all types of batteries must not be discarded in standard trash, or at a trash site. Take the used batteries to a battery collection site according to your national legislation and the Batteries Directive 2006/66/EU.



In the USA

The Mobius loop symbol (three chasing arrows) indicates that Ni-Cd and lead-acid rechargeable batteries must be recycled. Take the used batteries to a battery collection site according to local laws.



In the other countries

There are no international standards for the battery recycle symbol. The number of symbols can increase when the other countries make their own recycle symbols in the future.

Safety instructions

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. FURUNO assumes no liability for the customer's failure to comply with these requirements.

GROUND THE EQUIPMENT

To minimise shock hazard, the equipment chassis and cabinet must be connected to an electrical ground and the cable instructions must be followed.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

Do not operate the equipment in the presence of flammable gases or fumes. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must not remove equipment covers. Component replacement and internal adjustment must be made by qualified maintenance personnel. Do not service the unit with the power cable connected. Always disconnect and discharge circuits before touching them.

OBSERVE MARKED AREAS

Under extreme heat conditions do not touch areas of the unit that are marked with this symbol, as it may result in injury.



COMPASS SAFE DISTANCE

Minimum safety distance: 30 cm (standard), 20 cm (steering)

DISCONNECT THE AC POWER BEFORE REMOVING THE PROTECTIVE LID

Hazardous voltage exists behind the protective lid.

Failure to comply with the rules above will void the warranty!



Warning! Never insert or remove a power supply while its power switch is in the On (I) position. Make sure the power switch is Off (O) first.

About the manual

Intended readers

This manual is an installation and user manual for the 406080A-FUR AC/DC Power Supply Unit. It is important that you observe all safety requirements listed in the beginning of this manual, and operate the 406080A-FUR AC/DC Power Supply Unit according to the instructions and guidelines in this manual. All installation must be done by qualified service personnel.

Manual overview

This manual has the following chapters:

- ***Introduction*** contains a description of the principle of operation and uses and features of the power supply.
- ***Installation*** contains step-by-step guidelines how to install the power supply as a stand-alone unit or in a combined setup and describes the connectors.
- ***Service and repair*** contains information on support, how to return units for repair and instructions how to exchange the fuses.
- Appendices with ***Technical specifications***, information about the wall mount tray and wiring 4 or more units.

Typography

In this manual, typography is used as indicated below:

Bold is used to emphasize words and to indicate connector names of the unit.

Italic is used to emphasize the paragraph title in cross-references.

Table of contents

Chapter 1	Introduction	
	General description	1
	Features	2
	Block diagram	3
	System configuration	4
Chapter 2	Installation	
	Unpacking	5
	Installing the 406080A-FUR AC/DC Power Supply Unit	6
	Installing 2 or 3 406080A-FUR AC/DC Power Supply Units	15
Chapter 3	Service and repair	
	Support, repair and service	19
	Exchanging the fuses	20
	Returning units for repair	21
App. A	Technical specifications	23
App. B	Wall-mount tray (option)	
	Overview	25
App. C	Special installation	
	Wiring 4 or more 406080A-FUR AC/DC Power Supply Units	27
App. D	Declaration of conformity	
	OEM declaration	29
	CE (LVD & EMC)	30

Packing listsPL-1

Introduction

1.1 General description

1.1.1 Positioning of connectors

When mounted vertically the 406080A-FUR AC/DC Power Supply Unit fulfills IP32 in areas with more than 42 V and IP22 in other areas.

The 406080A-FUR AC/DC Power Supply Unit can deliver 300 W output power on average with a peak of 370 W for a minimum of 2 minutes. This is useful for MF/HF applications and DSC transmissions of 2 minutes duration. It is AC powered with a battery switch-over function. The 406080A-FUR AC/DC Power Supply Unit has an on/off switch. It is lit when the power is turned on.



All connectors are placed at the same end of the power supply to simplify mounting and installation. The connector panel is protected by a transparent lid. To secure an installation with heavy cables a cable-relief bracket can be installed.

1.2 Features

The 406080A-FUR AC/DC Power Supply Unit has the following features:

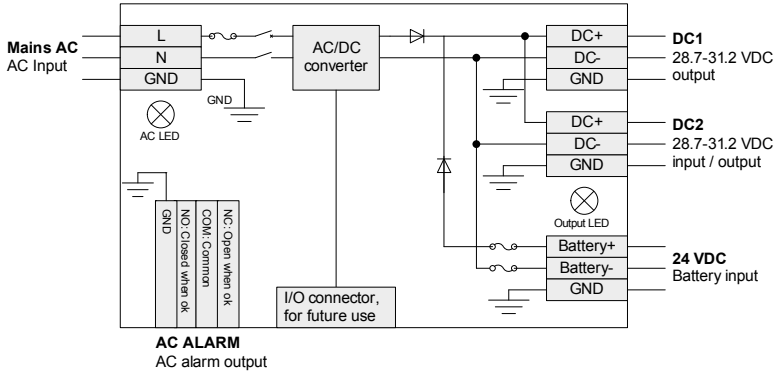
- Two DC connectors, output, range: 28.7 V - 31.2 V
- Output power 300 W continuous, 370 W peak (2 min., 100-240 VAC) or 270 W continuous, 333 W peak (2 min., 90-100 VAC)
- Daisy-chaining of up to three units to give up to 1110 W.¹
- AC input (100-240 VAC operating) with fuse (6.3 A) with Power Factor Correction
- Automatic detection of input voltage range
- AC alarm and Short circuit protection
- Over-temperature protection (shutdown with automatic restart)
- Switch over to battery power in case of AC supply failure
- No forced cooling required
- On/off switch
- IP 32 for internal high voltage areas (>42 V), IP 22 in other areas when vertically mounted (wall) and connector panel is facing down²
- Approval and certification: IEC 60945 Maritime approval

1. Output power capability depend on the mounting position (horizontal or vertical), input voltage, ambient temperature and ventilation at the place of installation.

2. IP 30 and IP 20 for other mounting positions.

1.3 Block diagram

The drawing below shows the block diagram of the 406080A-FUR AC/DC Power Supply Unit.

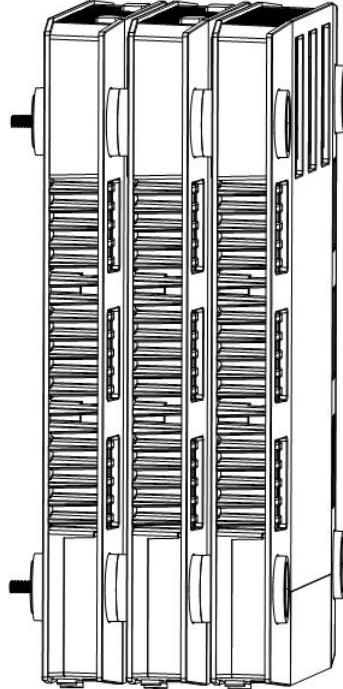


1.4 System configuration

The 406080A-FUR AC/DC Power Supply Unit is designed to be used with BGAN-X and FleetBroadband terminals. It can be used as a stand-alone DC power supply or as a building block in a larger power supply.

When more power is needed than one power supply can give, i.e. 300 W, you can stack up to three power supplies on top of each other and connect them.

When stacking 2 or 3 units the load on each of the units is automatically balanced among the units.



Installation

This chapter provides information about

- *Unpacking*
- *Installing the 406080A-FUR AC/DC Power Supply Unit*

The 406080A-FUR AC/DC Power Supply Unit can be mounted on its own as a single unit, or you can daisy-chain and stack up to 3 units. The 406080A-FUR AC/DC Power Supply Unit can also be fitted in a 1 U rack mount.

2.1 Unpacking

- 406080A-FUR AC/DC Power Supply Unit
- 1 AC fuse, 6.3 A
- 2 battery fuses, 30 A
- 4 mounting bolts for mounting 1 unit, M6X55 mm, DIN912 Unbrako
- Cable-relief bracket, comb-style
- 406080A-FUR AC/DC Power Supply Unit Installation manual (this manual)

2.1.1 Optional accessories

The following optional accessories are available and can be ordered:

- Wall-mount tray, heavy duty, with cable-relief bracket, order number: 406080A-opt.001
- 4 mounting bolts for mounting 2 406080A-FUR AC/DC Power Supply Units, M6X100 mm, DIN912 Unbrako, order number: 406080A-opt.002
- 4 mounting bolts for mounting 3 406080A-FUR AC/DC Power Supply Units, M6X140 mm, DIN912 Unbrako, order number: 406080A-opt.003

2.2 Installing the 406080A-FUR AC/DC Power Supply Unit

You can mount the power supply in a vertical or horizontal position. When mounted in a vertical position, with the connector panel pointing downwards, the 406080A-FUR AC/DC Power Supply Unit fulfills IP32 in areas with more than 42 V and IP22 in other areas.



Warning! Never insert or remove a power supply while its power switch is in the On (I) position. Make sure the power switch is Off (O) first.

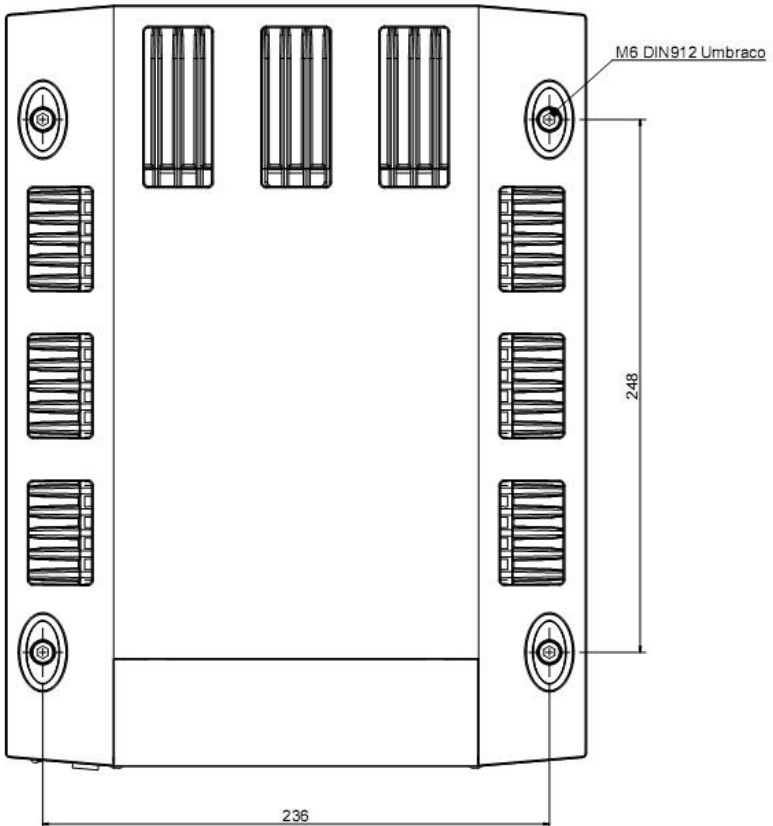
Important

To ensure adequate cooling of the AC/DC Power Supply an unobstructed space of minimum 5 cm must be maintained around all sides of the unit except for the bottom side.

2.2.1 Outline and dimensions

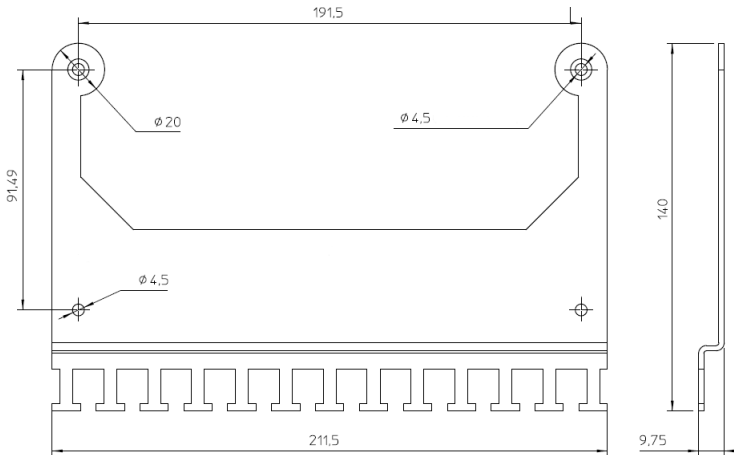
The following drawing shows the 406080A-FUR AC/DC Power Supply Unit and the position of the mounting holes. It is mounted with four mounting bolts.

- 4 mounting bolts for mounting 1 unit, M6X55 mm, DIN912 Unbrako



To install the 406080A-FUR AC/DC Power Supply Unit, do as follows:

1. Install the cable-relief bracket, if required. Align it with the connector row of the 406080A-FUR AC/DC Power Supply Unit.
2. Fasten the cable-relief bracket directly to the wall, between the wall and the 406080A-FUR AC/DC Power Supply Unit, with four M4 x 6 mm screws.



3. Fasten the 406080A-FUR AC/DC Power Supply Unit to the wall with 4 mounting bolts, M6X55 mm, DIN912 Unbrako (included the delivery).

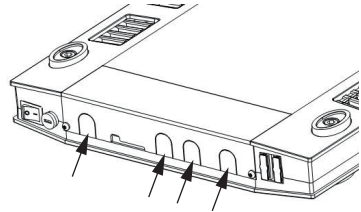
An optional, larger Wall-mount tray, heavy duty, is available for the 406080A-FUR AC/DC Power Supply Unit. For further details see *Wall-mount tray (option)* on page 25.

2.2.2 Protective lid for the connector panel (406080A-FUR AC/DC Power Supply Unit)



Warning! Disconnect the AC power before removing the protective lid. Hazardous voltage exists behind the protective lid.

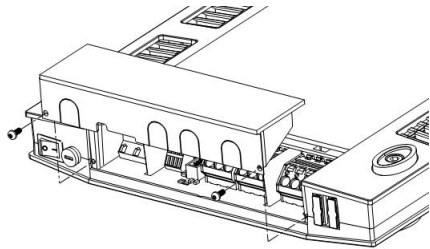
The connectors are protected by a plastic lid. To access a connector you have to remove the lid. To make room for the connector cables you must remove the U-shaped cutout for the respective cable in the plastic protective lid.



Removing the protective lid (406080A-FUR AC/DC Power Supply Unit)

To connect the cables you must remove the protective lid.

To do this, unscrew the two screws (M3x7mm" Torx-8) as shown in the picture and put the lid aside.



Inserting the cable in the Spring-loaded terminal connector

The connectors are spring-terminal connectors. Use a suitable tool to open the spring and insert the cable in the opening below.



2.2.3 Connectors


Connector overview

- AC input
- DC output
- DC output or optional input for daisy-chaining
- Battery input
- AC alarm output

AC input

The 406080A-FUR AC/DC Power Supply Unit is AC powered. To connect the AC input do as follows:

1. Remove the u-shaped cut-out for this input from the protective lid.
2. Connect the Mains cable to the connector marked **MAINS AC**.

Mains AC	
Connector type	Spring loaded terminal, dual-row connector
Wire cross section	Up to 2.5 mm ²
L	Line. AC power cord
N	Neutral. AC power cord
	GND. AC power cord
Fuse	6.3 A. It is accessible from outside the housing. It is positioned next to the on/off switch. To remove the fuse turn the device that holds the fuse and extract it.

This connector is used when adding a 406080A-FUR AC/DC Power Supply Unit (dual row spring loaded terminal).



To connect to additional
AC/DC Power Supply


AC input

3. In order to be able to daisy-chain up to three 406080A-FUR AC/DC Power Supply Units the **Mains AC** connector has two terminals:
 - Use one terminal for the incoming mains power.
 - Use the other terminal for the mains power going to the next 406080A-FUR AC/DC Power Supply Unit.

DC output

The 406080A-FUR AC/DC Power Supply Unit supplies a DC output. To connect the DC output **DC1** do as follows:

1. Connect the DC cable to the connector marked **DC1** and the equipment that must be powered.

DC 1	
Connector type	Spring-loaded terminal
Wire cross section	Up to 6 mm ²
Maximum load	30 A
+	DC out, plus
-	DC out, minus
	GND

2. Remove the u-shaped cut-out for this input from the protective lid.

When connecting 2 or 3 units in parallel, the combined power may be drawn from a single connector. A single connector can handle 30 A.



Caution! If you need more than 3x300 W or 30 A you need to follow special guidelines when connecting the required 406080A-FUR AC/DC Power Supply Units. Refer to *Wiring 4 or more 406080A-FUR AC/DC Power Supply Units* on page 27 to see how to connect the 406080A-FUR AC/DC Power Supply Units to meet these requirements.

DC output or optional input for daisy-chaining

The second DC connector (DC 2) of the 406080A-FUR AC/DC Power Supply Unit can be used for 2 purposes, to provide DC output or to serve as an input connector when daisy-chaining up to 3 406080A-FUR AC/DC Power Supply Units.

To connect to **DC2** do as follows:

1. To have a second DC output: Connect the DC cable to the connector marked **DC1** and the equipment that must be powered.
2. To daisy-chain a second 406080A-FUR AC/DC Power Supply Unit. Connect the cable from **DC1** in 406080A-FUR AC/DC Power Supply Unit 1 to **DC2** in 406080A-FUR AC/DC Power Supply Unit 2. Connect the DC cable to the connector marked **DC 2** and the equipment that must be powered.
3. Remove the u-shaped cut-out for this input from the protective lid.

To daisy-chain a third 406080A-FUR AC/DC Power Supply Unit repeat step 2. The connector specifications are the same as for **DC1**.


To see an overview how to connect 406080A-FUR AC/DC Power Supply Units in a daisy chain see *Wiring for daisy-chaining* on page 17.

Battery input

You can connect an external 24 V emergency battery to the 406080A-FUR AC/DC Power Supply Unit to make sure the unit is operational in case the AC input fails. The battery input is protected against wrong polarity of the battery.

To connect the **BATTERY** input do as follows:

1. Connect the cable to the connector marked **BATTERY** and the battery.

BATTERY	
Connector type	Spring loaded terminal
Wire cross section	Up to 6 mm ²
+	Battery plus
-	Battery minus
	GND
Fuses	Two 30 A fuses, one for battery plus and one for the battery minus. These are accessible from outside the housing and are positioned to the right of the protective lid.

2. Remove the u-shaped cut-out for this input from the protective lid.


AC alarm output

The AC alarm output provides an alarm signal when the 406080A-FUR AC/DC Power Supply Unit cannot deliver the required power from the AC input. This is the case when

- No AC power is present.
- The AC fuse is blown.
- The on/off switch is in the position off.
- The output is short-circuited or heavily overloaded.
- An internal error has occurred.

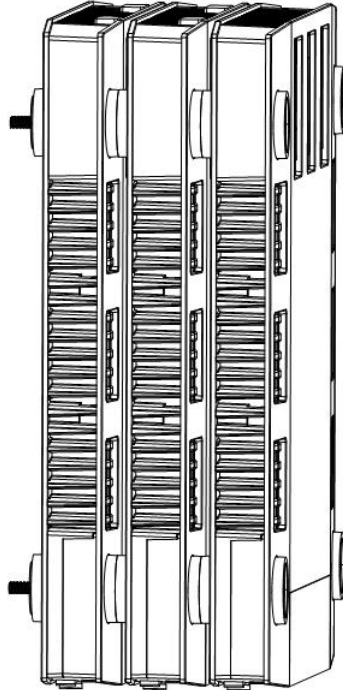
To wire the **AC alarm** output do as follows:

1. Attach the cable to the connector marked **AC Alarm** according to the specifications in the table below:

AC ALARM (406080A-FUR AC/DC Power Supply Unit)	
Connector type	Spring loaded terminal
Wire cross section	Up to 1.5 mm ²
Terminal 1	Closed when ok
Terminal 2	Open when ok
Terminal 3	Common
Terminal 4 	GND

2.3 Installing 2 or 3 406080A-FUR AC/DC Power Supply Units

You can mount up to three 406080A-FUR AC/DC Power Supply Units in a vertical (recommended to use the Wall-mount tray, heavy duty, with cable-relief bracket, order number: 406080A-opt.001) or horizontal position. When mounted in a vertical position, with the connector panel pointing downwards, the unit fulfills IP32 in areas with more than 42 V and IP22 in other areas. The mounting holes in the 406080A-FUR AC/DC Power Supply Unit are designed in such a way that units fit nicely on top of each other when being stacked.

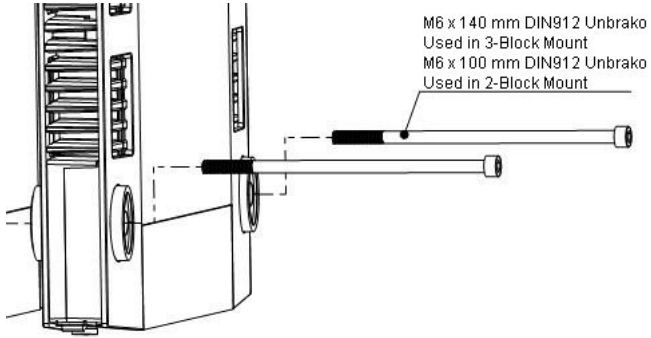


Important

To ensure adequate cooling of the Power Supplies maintain an unobstructed space of minimum 5 cm around all sides of the group of units (except between the units and the bottom side).

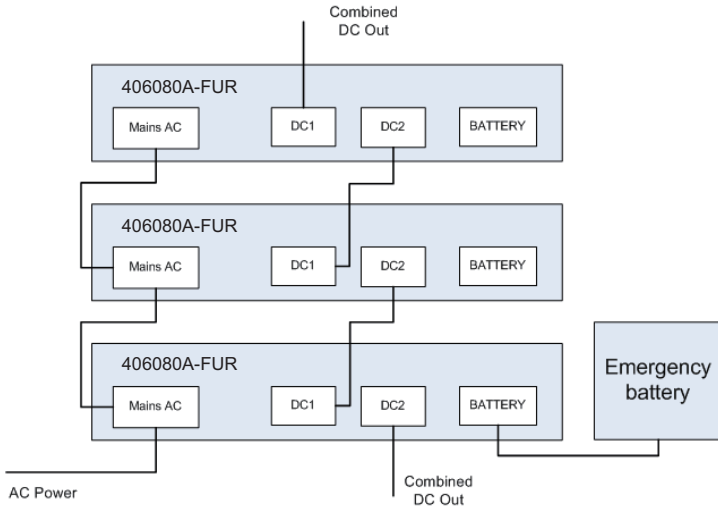
The following drawing shows the specifications of the mounting bolts needed when installing two or three units on top of each other.

- 2-block mount: 4 x M6X100 mm DIN912 Unbrako
- 3-block mount: 4 x M6X140 mm DIN912 Unbrako



2.3.1 Wiring for daisy-chaining

The following drawing shows how to wire the 406080A-FUR AC/DC Power Supply Units when daisy-chaining two or three units.



To daisy-chain two or three 406080A-FUR AC/DC Power Supply Units proceed as follows:

1. Connect Mains AC of unit 1 to unit 2.
2. Connect DC1 of unit 1 to DC2 of unit 2.
3. For the third unit, repeat steps 1. and 2. to connect unit 2 to unit 3.



Caution! If you need more than 3x300 W or 30 A you need to follow special guidelines when connecting the required 406080A-FUR AC/DC Power Supply Units. Refer to *Wiring 4 or more 406080A-FUR AC/DC Power Supply Units* on page 27 to see how to connect the 406080A-FUR AC/DC Power Supply Units to meet these requirements.

This page is intentionally left blank.

Service and repair

The 406080A-FUR AC/DC Power Supply Unit is designed to operate without preventive maintenance.

Repair or repair attempts performed by unqualified personnel may limit the warranty. The warranty on the system is defined and outlined by the distributor that supplied the 406080A-FUR AC/DC Power Supply Unit.

3.1 Support, repair and service

3.1.1 Contact for support

For support contact the distributor that supplied the 406080A-FUR AC/DC Power Supply Unit.

3.1.2 Repair and servicing

The device does not require maintenance and adjustment apart from routine checking of its installation.



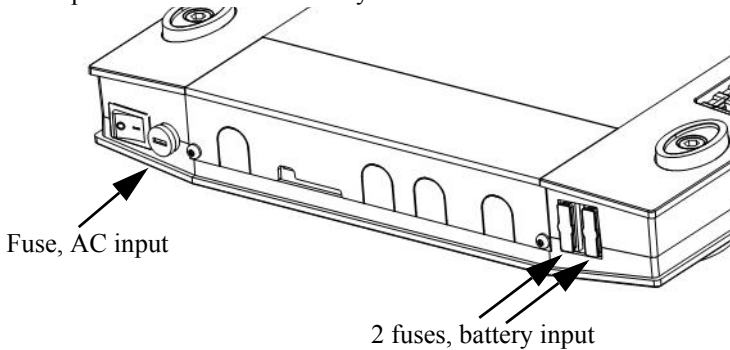
Warning! Never insert or remove a power supply while its power switch is in the On (I) position. Make sure the power switch is Off (O) first.

Important

In case of malfunction do not open the 406080A-FUR AC/DC Power Supply Unit but send it in for repair. For information how to proceed see *Returning units for repair* on page 21.

3.2 Exchanging the fuses

The 406080A-FUR AC/DC Power Supply Unit has fuses to secure AC input and input from an external battery.



To exchange the AC fuse, do as follows:

1. Locate the fuse, it is accessible from outside the housing. It is positioned next to the on/off switch.
2. Turn the fuse holder and extract it.
3. Take out the old fuse and insert a new one (type: 5x20 mm, 6.3 AT).
4. Insert and fasten the fuse holder.



Caution! If the AC fuse is blown directly after being replaced there might be a critical fault in the 406080A-FUR AC/DC Power Supply Unit. Return the unit for repair.

Exchanging the BATTERY fuses

To exchange the two BATTERY fuses, do as follows:

1. Locate the fuses for battery plus and one for battery minus. These are accessible from outside the housing, They are is positioned to the right of the protective lid.
2. Pull out the fuses.
3. Insert two new fuses (type: ATO Blade Fuse, 30 A)

3.3 Returning units for repair

Should your FURUNO product fail, please contact your dealer or installer, or the nearest FURUNO partner.

Your dealer, installer or FURUNO partner will assist you whether the need is user training, technical support, arranging on-site repair or sending the product for repair.

Your dealer, installer or FURUNO partner will also take care of any warranty issue.

3.3.1 Repacking for shipment

Should you need to send the product for repair, please read the below information before packing the product.

The shipping carton has been carefully designed to protect the 406080A-FUR AC/DC Power Supply Unit and its accessories during shipment. This carton and its associated packing material should be used when repacking for shipment. Attach a tag indicating the type of service required, return address, part number and full serial number. Mark the carton FRAGILE to ensure careful handling.

Note

Correct shipment is the customer's own responsibility.

If the original shipping carton is not available, the following general instructions should be used for repacking with commercially available material.

1. Wrap the defective unit in heavy paper or plastic. Attach a tag indicating the type of service required, return address, part number and full serial number.
2. Use a strong shipping container, e.g. a double walled carton.
3. Protect the front- and rear panel with cardboard and insert a layer of shock-absorbing material between all surfaces of the equipment and the sides of the container.
4. Seal the shipping container securely.
5. Mark the shipping container FRAGILE to ensure careful handling.

Failure to do so may invalidate the warranty.

Technical specifications

The following table shows the electrical and environmental specifications of the 406080A-FUR AC/DC Power Supply Unit.

Specifications	Value
Output power at 100 VAC - 240 VAC	300 W continuous 370 W peak (2 min.)
Output power at 90 VAC - 100 VAC	270 W continuous 333 W peak (2 min.)
DC output (nominal)	31.2 VDC at 0 A 29.3 VDC at 10 A 28.7 VDC at 13 A
AC input voltage	115-230 VAC nominal, 100-240 VAC operating
Alarm in case of	AC power failure
IP rating in high voltage (>42 V)	IP 3X
IP rating in other areas	IP 2X
IP rating when mounted vertically on a wall	IP X2
Operating temperature	-15° to +55° C
Storage temperature	-40° to +80° C
Cooling	No forced cooling required.

Appendix A: Technical specifications

Specifications	Value
Survival temperature (power on)	-40° to +80° C
Dimensions	H: 46.5 mm, L: 354 mm, W: 265 mm
Weight	Approx. 3.7 kg
Compass safe distance	30 cm

Wall-mount tray (option)

B.1 Overview

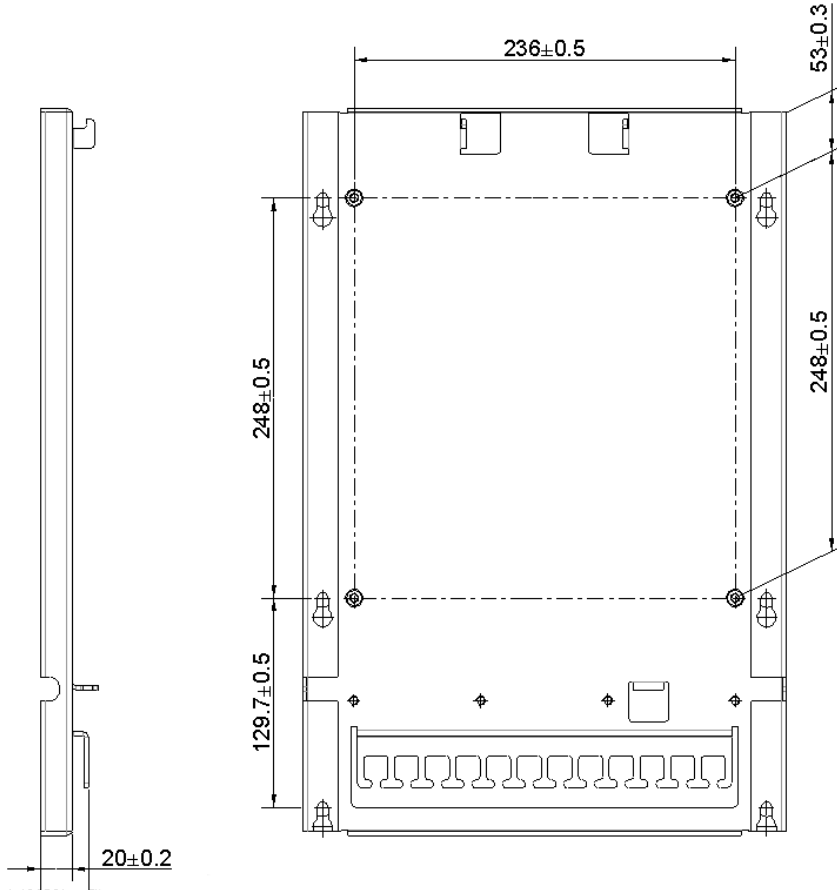
A Wall-mount tray, heavy duty, with cable-relief bracket is available and can be ordered (order number: 406080A-opt.001).



Up to 3 406080A-FUR AC/DC Power Supply Units can be mounted on this tray.

B.1.1 Dimensions and weight

B.1.1.1 Dimensions



B.1.1.2 Weight

The Wall-mount tray, heavy duty, weighs 2.5 kg.

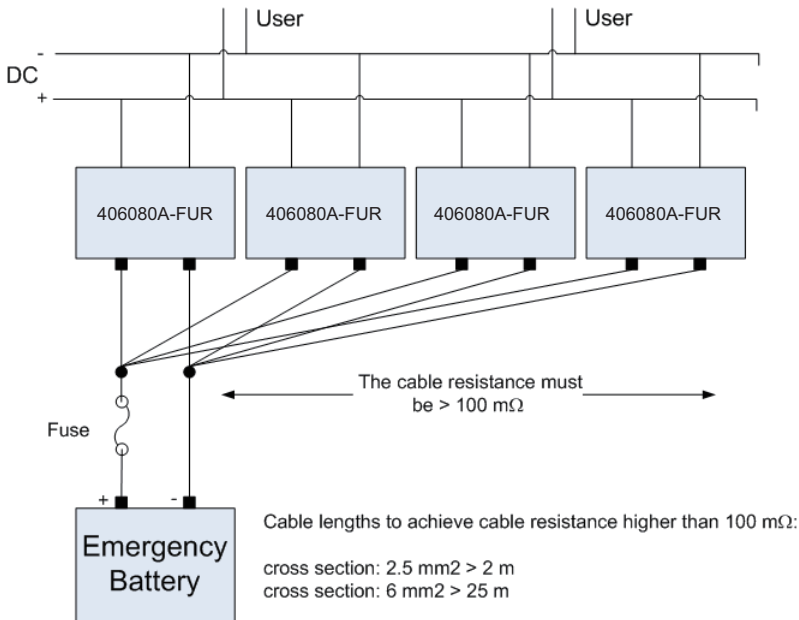
Special installation

If you need more than 3x300 W or 30 A you can connect more than 3 406080A-FUR AC/DC Power Supply Units.

Important

You must connect the units as shown in the drawing. This is to make sure that a single connector is never overloaded with more than 30 A.

C.1 Wiring 4 or more 406080A-FUR AC/DC Power Supply Units



This page is intentionally left blank.

Declaration of conformity

D.1 OEM declaration

COBHAM

Cobham SATCOM
Lundtoftegaardsvej 93 D
2800 Kgs. Lyngby
Denmark

T: +45 39 55 88 00
F: +45 39 55 88 88

Declaration of Thrane & Thrane A/S

1. This declaration refers to the following Thrane & Thrane antenna model:

407090B FV-110, Maritime Ku-Band Antenna System consisting of:

407016A FV-110 Antenna Control Unit (ACU) PN = 407016A-F19

407009B FV-110 VSAT Above Deck Unit (ADU) PN = 407009B-FUR

2. Thrane and Thrane A/S hereby declare that the antenna units referenced in 1, are electrical and hardware identical to the units of Maritime Ku-Band Antenna System referenced in 4. The only difference of the two systems is labels and a different user interface in the software.
3. Thrane and Thrane A/S hereby declare that all Declaration of Conformity concerning for the Maritime Ku-Band Antenna System referenced in 4 also apply for the Maritime Ku-Band Antenna System referenced in 1.
4. TT-7090B SAILOR 900 VSAT, Maritime Ku-Band Antenna System consisting of:
- TT-7016A Antenna Control Unit (ACU) PN = 407016A-T19
- TT-7009B Above Deck Unit (ADU) PN = 407009B-THR

Date: 17/6-2015



Vibeke Fink
R&D Director
Thrane & Thrane A/S

D.2 CE (LVD & EMC)

The 406080A-FUR AC/DC Power Supply Unit is CE certified (LVD & EMC directives) as stated in the “Declaration of Conformity with LVD and EMC Directives”.

Thrane & Thrane

Thrane & Thrane A/S

Declaration of Conformity with LVD and EMC Directives

The undersigned of this letter declares that the following equipment complies with the specifications of EC directive 73/23/EC concerning Low Voltage Safety and EC directive 89/336/EC concerning EMC.

Equipment included in this declaration

TT-6080A SAILOR 6080 Power Supply

PN = 406080A

Equipment Applicability

The TT-6080A SAILOR 6080 Power Supply is a general AC supplied Power Supply with a battery switch-over function. When more power is needed than one power supply can give (i.e. 300 W), you can stack up to three power supplies on top of each other and connect them.

Declaration

The safety requirement with respect to the LVD directive 73/23/EC is met by conforming to the harmonized EU standards EN 60950-1. The protection requirement with respect to the EMC directive 89/336/EC is met by conforming to the harmonized EU standards EN 60945 and EN 55022.

Manufacturer

Thrane & Thrane A/S,

Lundtoftegårdsvej 93D, DK-2800 Kgs. Lyngby, Denmark
Porsvej 2, DK-9200 Aalborg SV, Denmark

Place and Date

Kgs. Lyngby, 9. February 2011


Walther Thygesen, CEO
Thrane & Thrane A/S



Doc. no. 99-130622-B

Thrane & Thrane A/S - T +45 39 55 80 00 - F +45 39 55 80 88 - info@thrane.com - www.thrane.com
Head office: Lundtoftegårdsvej 93 D - 2800 Sg. Lyngby - Denmark
Aalborg office: Porsvej 2 - PO Box 7071 - 9200 Aalborg SV - Denmark
Bank: Danske Bank - Comp.no. 45 72 46 18 - VAT: DK20 64 64 46



Page: 1 of 1
VOLVO
OCEAN
RACE
2008 - 2009
LEADER

PACKING LIST

16AX-X-9853 -2 1/1

406080A-FUR

PL-1

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
AC/DC電源ユニット AC/DC POWER SUPPLY UNIT		406080A-FUR 000-028-917-00	1
工事材料 INSTALLATION MATERIALS			
+サヲコネジ FLAT HEAD SCREW		3X10 SUS304 999-999-217-00 (*)	4
+ナベ タッピンネジ SELF-TAPPING SCREW		4X25 SUS304 999-999-216-00 (*)	4
+ナベ タッピンネジ SELF-TAPPING SCREW		5X50 SUS304 999-999-219-00 (*)	4
ケーブル固定板 CABLE RELIEF BRACKET		82-125350 999-999-215-00 (*)	1
プラスチックキャップ PLASTIC CAP		TT41-128535 999-999-218-00 (*)	4
六角穴付ボルト HEXAGONAL HEAD BOLT		M6X55 SUS304 999-999-220-00 (*)	4
図書 DOCUMENT			
検査合格証 PRODUCTION CERTIFICATE		99-147229-A 999-999-235-00 (*)	1
取扱説明書 OPERATOR'S MANUAL		0M*-50991-* 000-191-007-1* **	1

1.(*)は、タミコードに付き、注文できません。

1.(*) THIS CODE CANNOT BE ORDERED.

2.コード番号末尾の[**]は、選択品の代表コードを表します。

2.CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.



(Elemental Chlorine Free)

The paper used in this manual
is elemental chlorine free.

FURUNO ELECTRIC CO., LTD.

9-52 Ashihara-cho,
Nishinomiya, 662-8580, JAPAN

• FURUNO Authorized Distributor/Dealer

All rights reserved. Printed in Japan

Pub. No. OME-50991-A1

(TAHA) 406080A-FUR

A : SEP. 2015

A1 : OCT. 30, 2015



0 0 0 1 9 1 0 1 2 1 0