

COBHAM

SAILOR 6000 GMDSS Console system

Installation manual



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1 General information

1.1 Introduction

With the System 6000 GMDSS console, all the communication equipment of the ship can be combined in one small, compact console.

One of the main purposes of the console is to make the best possible use of the limited space on board a ship. Furthermore, the fact that all the equipment is kept in the same place makes installation easy and fast. Finally, the modular structure of the system means that it can easily be altered if for example a need to have it extended should arise.

The standard console includes the following: Dimable light and connection board. Furthermore, the console is designed with removable front plates for easy service and maintenance.

The console can be configured to match any maritime communication need. On the following pages, some typical configurations are shown.

2 Installation

2.1 Dimensions

Console type numbers and part numbers refer to console hardware only, i.e. an empty console with only dimable light and connection board(s) installed.

Equipment illustrated for reference only.

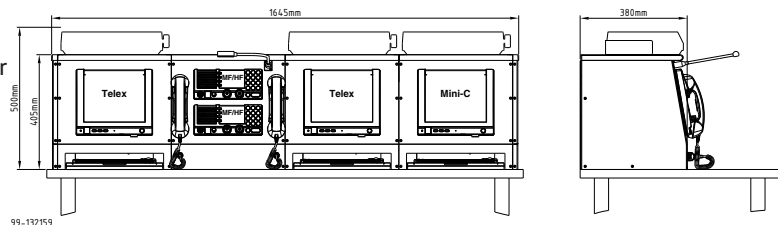
Type 6334C

2 pcs. SAILOR 630x MF/HF Control Unit
3 pcs. SAILOR H1252B USB/Parallel Printer
3 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 60 kg

incl. units 89 kg



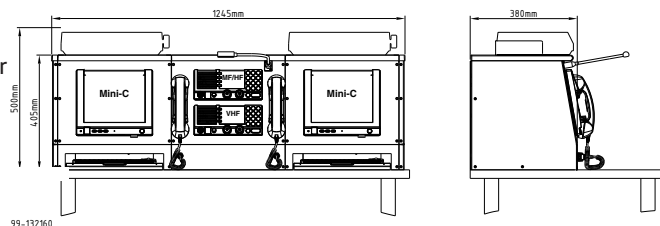
Type 6333D

1 pcs. SAILOR 630x MF/HF Control Unit
1 pcs. SAILOR 62xx VHF Radio
2 pcs. SAILOR H1252B USB/Parallel Printer
2 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 45 kg

incl. units 65 kg



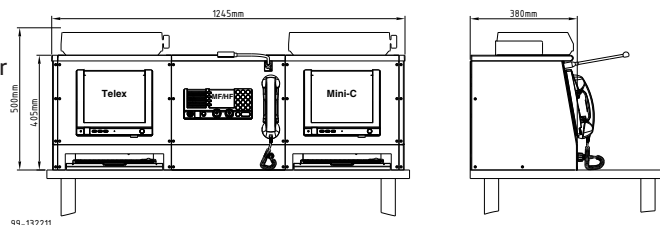
Type 6333B

1 pcs. SAILOR 630x MF/HF Control Unit
2 pcs. SAILOR H1252B USB/Parallel Printer
2 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 45 kg

incl. units 65 kg



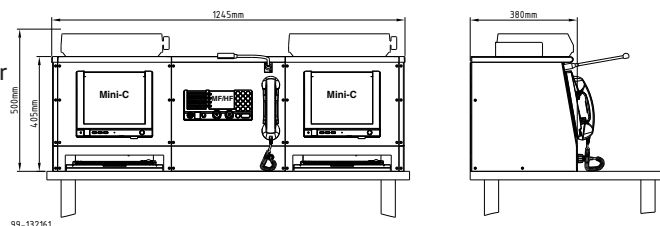
Type 6333C

1 pcs. SAILOR 630x MF/HF Control Unit
2 pcs. SAILOR H1252B USB/Parallel Printer
2 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 45 kg

incl. units 65 kg



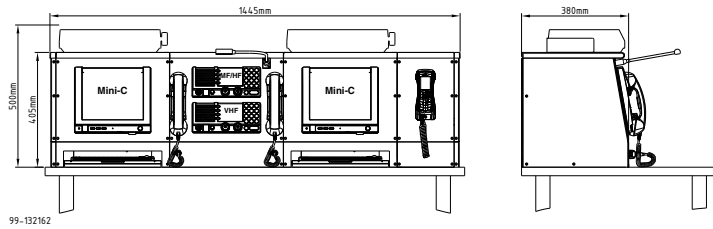
Type 6334B

- 1 pcs. SAILOR 630x MF/HF Control Unit
- 1 pcs. SAILOR 62xx VHF Radio
- 2 pcs. SAILOR H1252B USB/Parallel Printer
- 2 pcs. SAILOR 6006 Message Terminal
- 1 pcs. TT-3670 IP Handset

Weight:

excl. units 50 kg

incl. units 71 kg



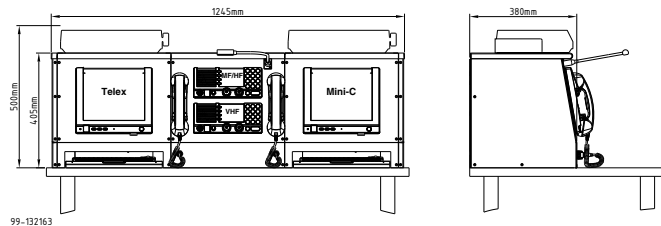
Type: 6333A

- 1 pcs. SAILOR 630x MF/HF Control Unit
- 1 pcs. SAILOR 62xx VHF Radio
- 2 pcs. SAILOR H1252B USB/Parallel Printer
- 2 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 45 kg

incl. units 65 kg



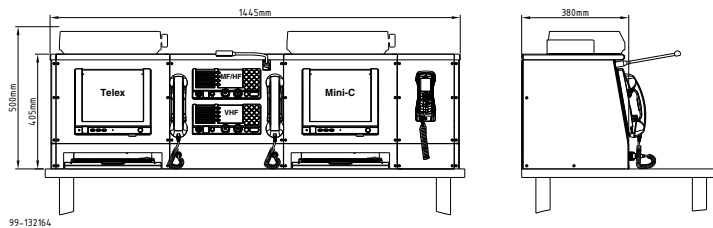
Type 6334A

- 1 pcs. SAILOR 630x MF/HF Control Unit
- 1 pcs. SAILOR 62xx VHF Radio
- 2 pcs. SAILOR H1252B USB/Parallel Printer
- 2 pcs. SAILOR 6006 Message Terminal
- 1 pcs. TT-3670 IP Handset

Weight:

excl. units 50 kg

incl. units 71 kg



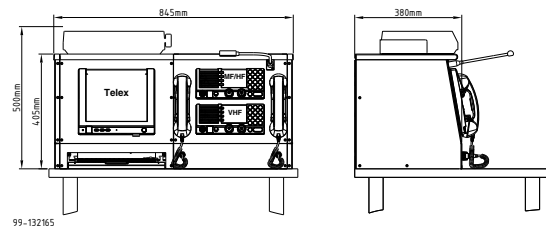
Type 6332A

- 1 pcs. SAILOR 630x MF/HF Control Unit
- 1 pcs. SAILOR 62xx VHF Radio
- 1 pcs. SAILOR H1252B USB/Parallel Printer
- 1 pcs. SAILOR 6006 Message Terminal

Weight:

excl. units 28 kg

incl. units 45 kg



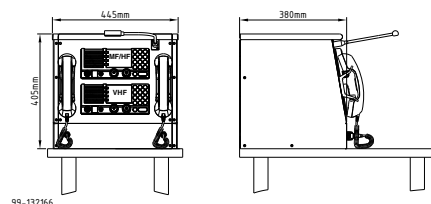
Type 6331A

- 1 pcs. SAILOR 630x MF/HF Control Unit
- 1 pcs. SAILOR 62xx VHF Radio

Weight:

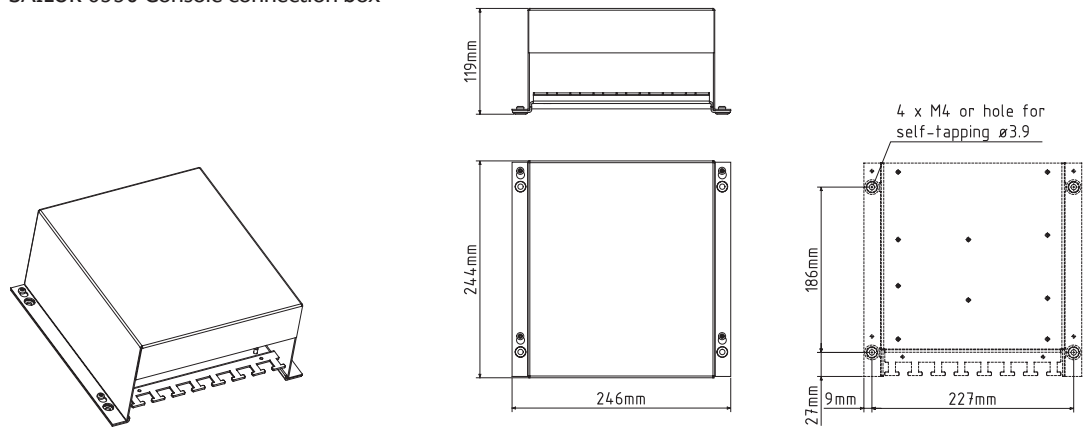
excl. units 15 kg

incl. units 23 kg

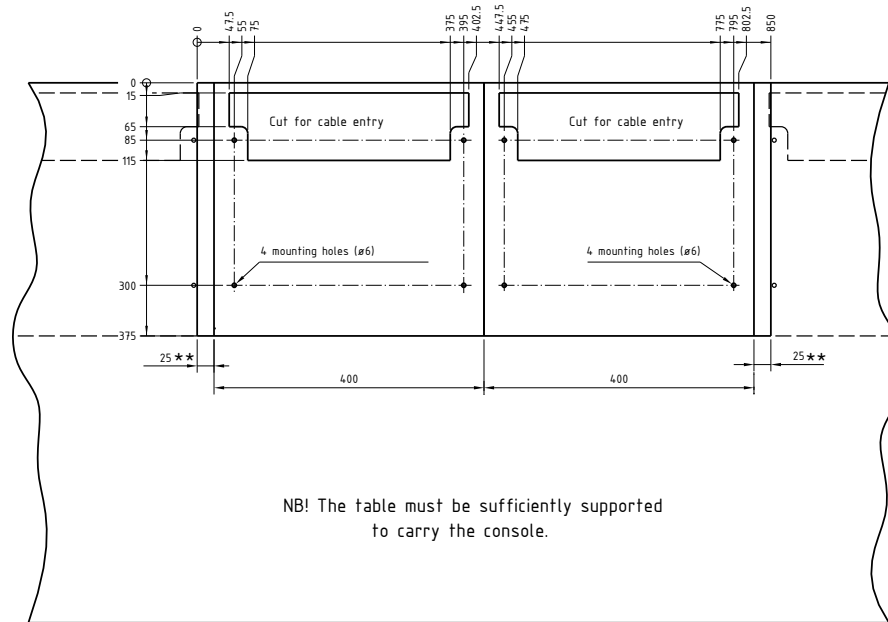


Type 6330

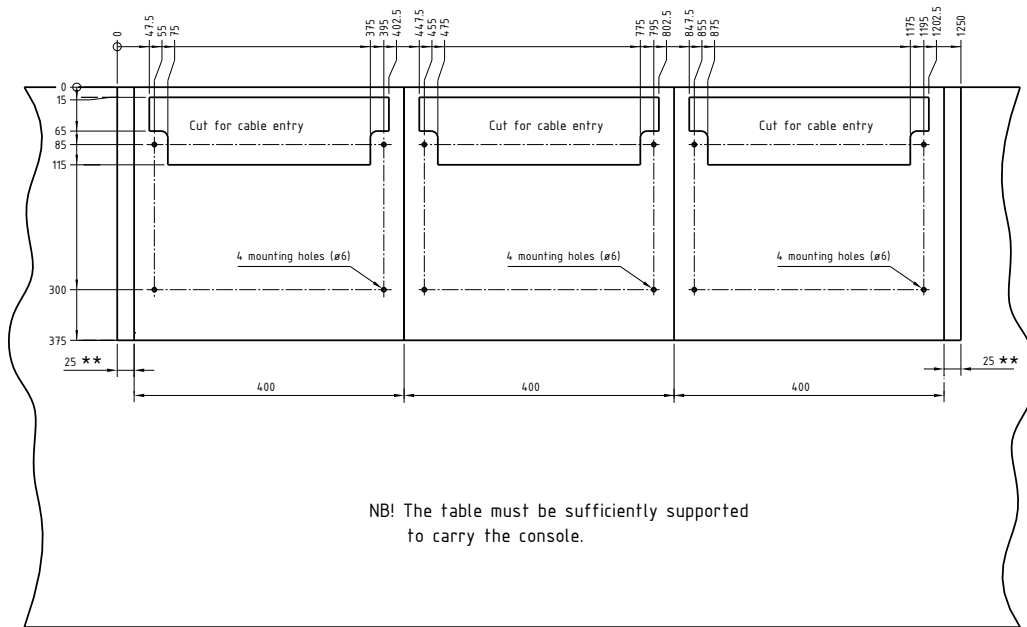
SAILOR 6330 Console connection box

**2.2 Drilling and cutting template**

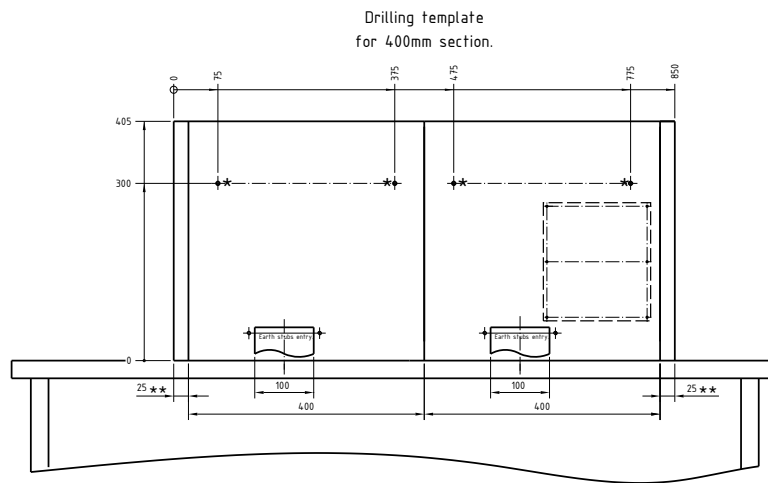
The console can be placed and mounted, in several different ways, to ensure optimal integration into the user environment.

2.2.1 Tabletop mounting for 2 x 400mm section

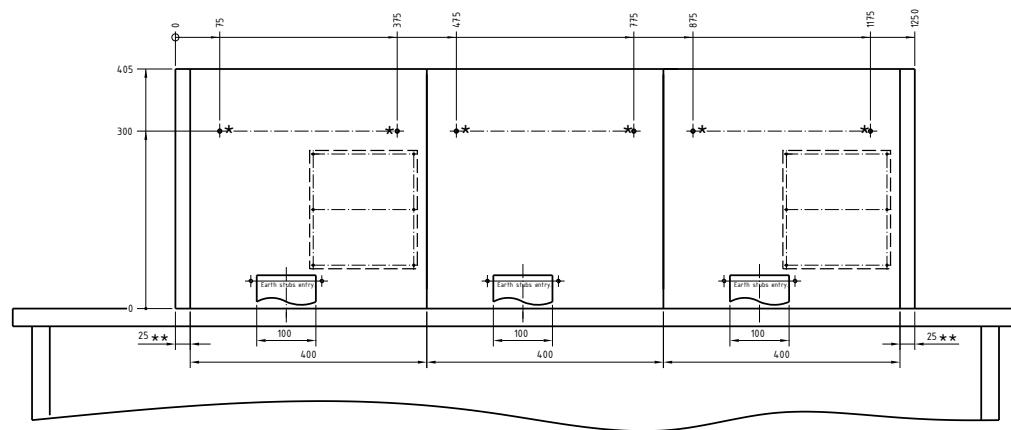
2.2.2 Tabletop mounting for 3 x 400mm section



2.2.3 Bulkhead mounting for 2 x 400mm section

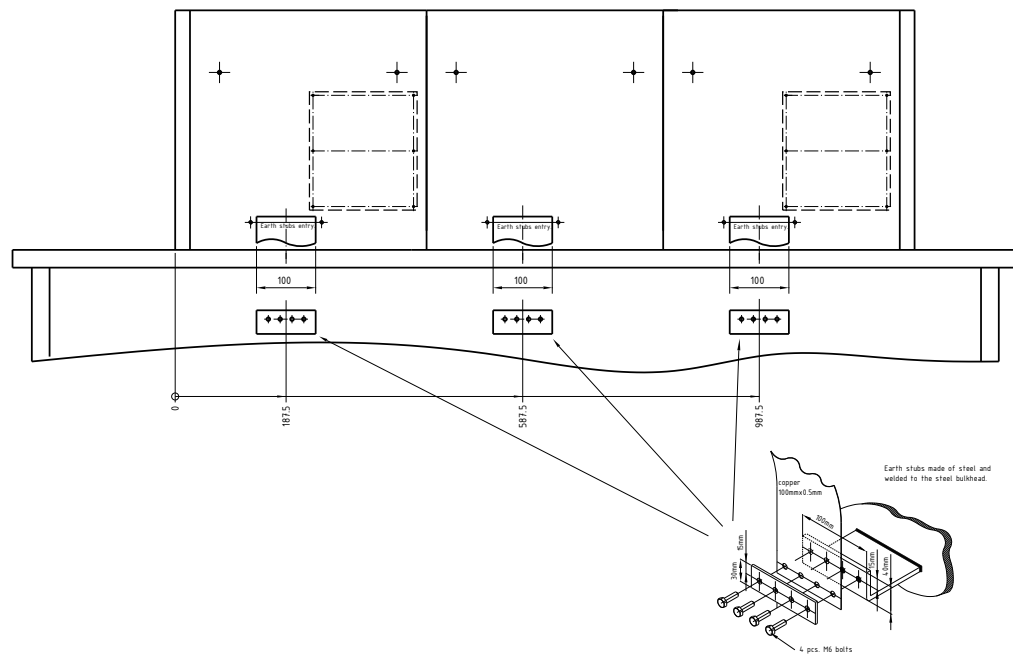


2.2.4 Bulkhead mounting for 3 x 400mm section

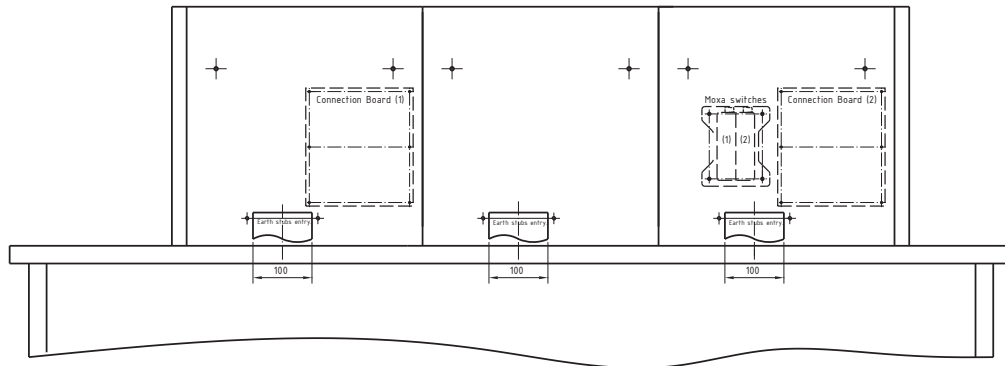


- * To avoid vibration noise, the console should be fastened with screws onto the bulkhead.
- ** Space from last left- and righthand section to wall.
(22.5 + spacing = 25mm)

2.2.5 Earth stubs mounting



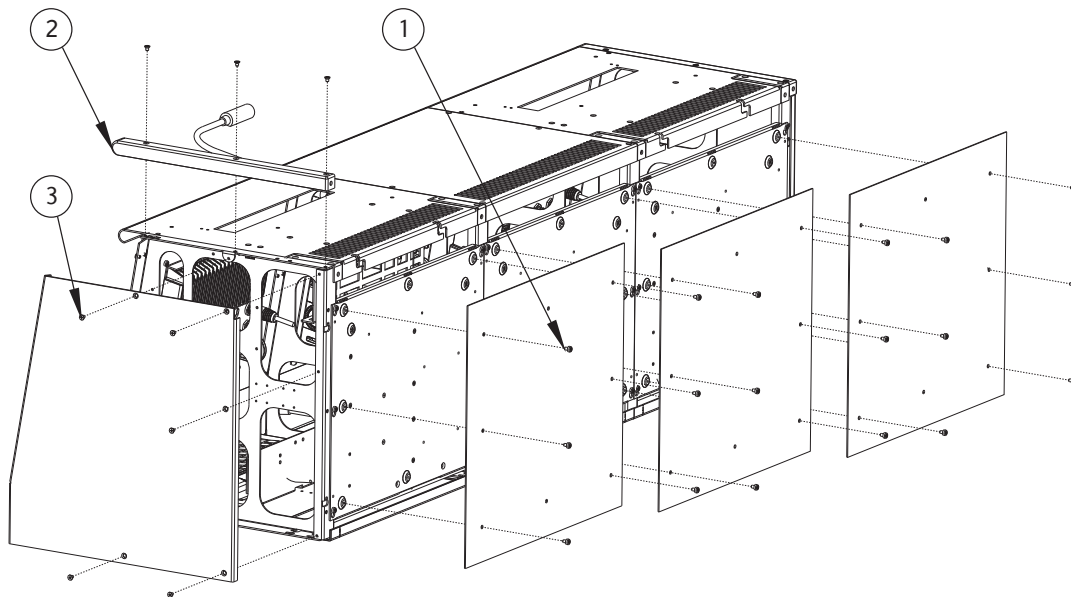
2.2.6 Placement of connection boards and moxa switches



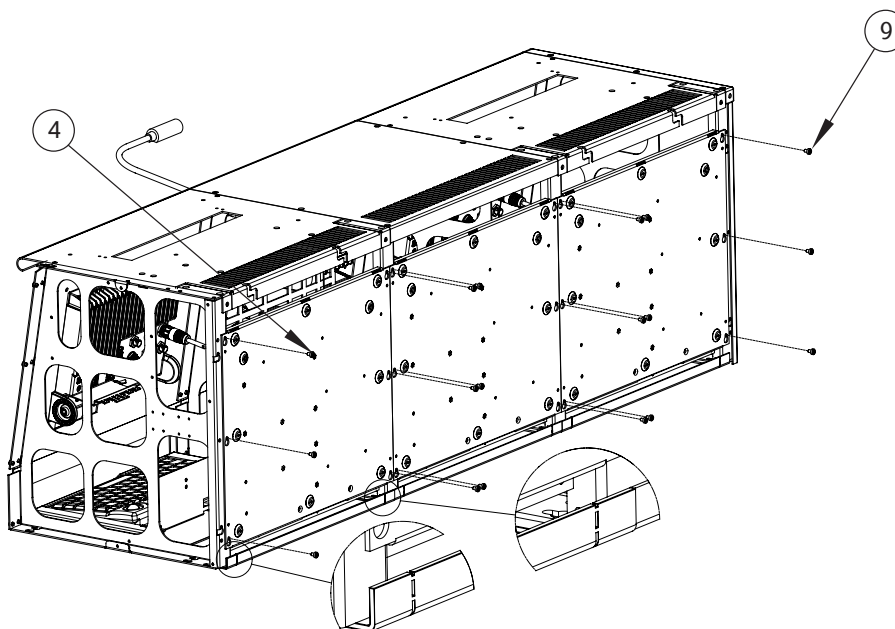
2.3 Mounting the console onto the bulkhead

When the console is placed on a table, the back of the console can be attached onto the bulkhead. This allows for free access to the connection board and wiring while installing.

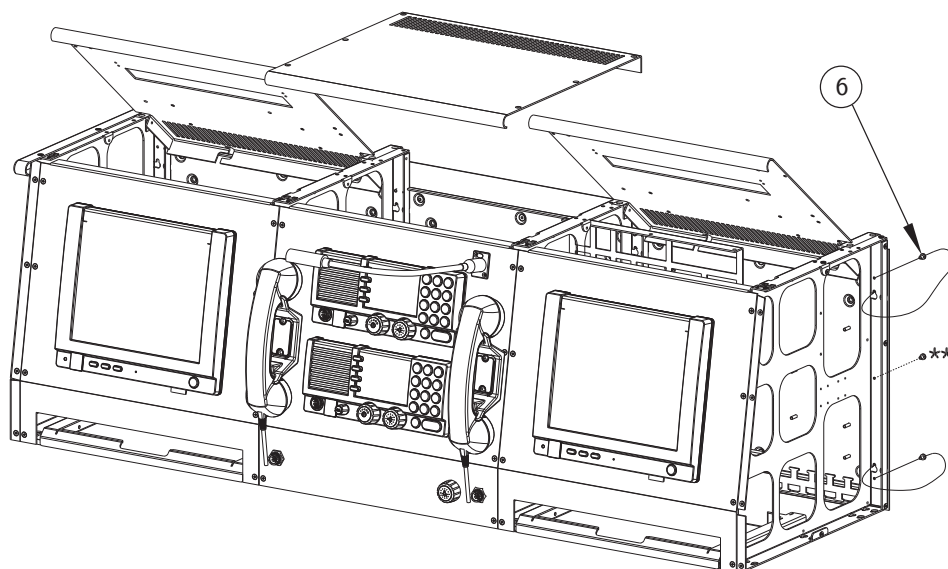
- 1 Remove the rear (back cover) panels, by removing all 6 screws in each panel. (These will not be needed further and may be discharged of).
- 2 Remove the edge-profile, from top of the right end of the console (3 screws).
- 3 Remove the plate on the right end of the console (5 screws).



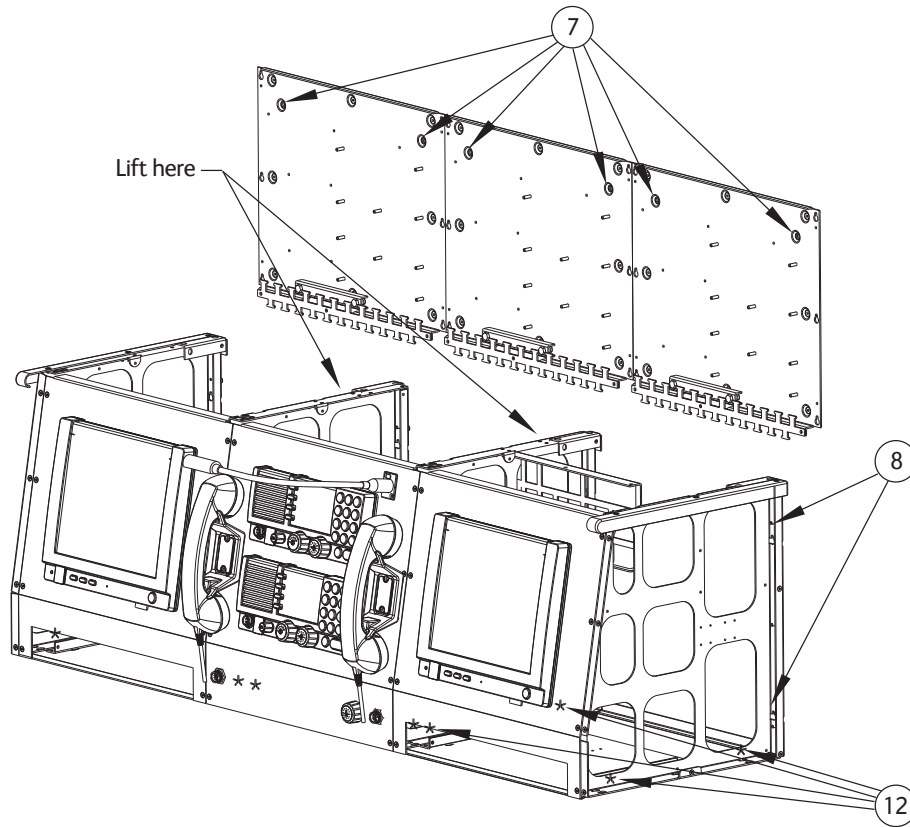
- 4 Remove all key-hole screws from the back.
- 5 Using a hacksaw, cut away the back part, of the bottom plate, by following the pre-cut lines. Do this on sections, where connection boards are fitted.



- 6 Mount all key-hole screws, from the inside of the console.

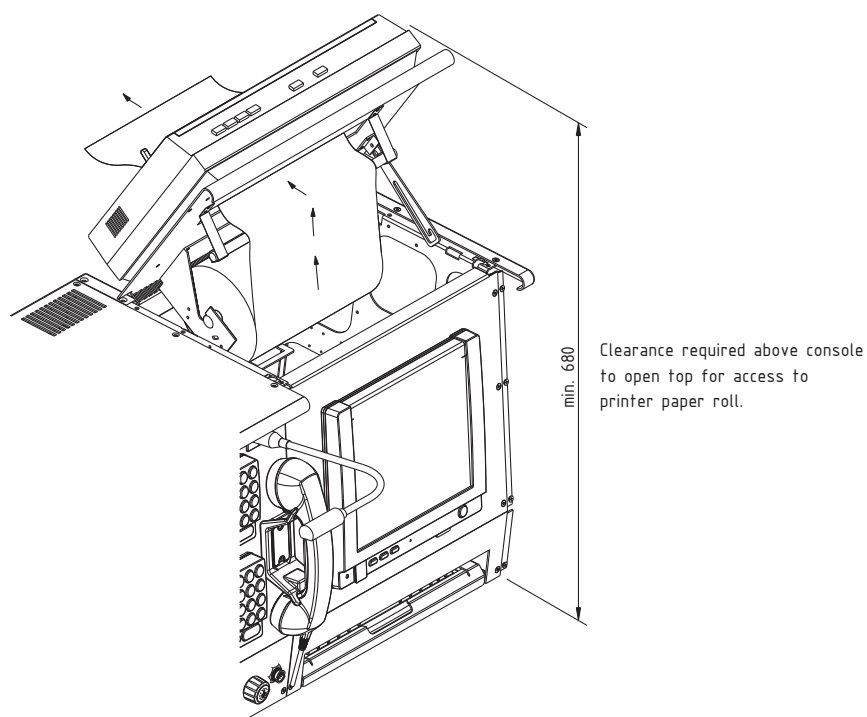


- 7 Fasten the console to the bulkhead, with 2 screws per section.
- 8 Loosen key-hole screws and lift up the front part.

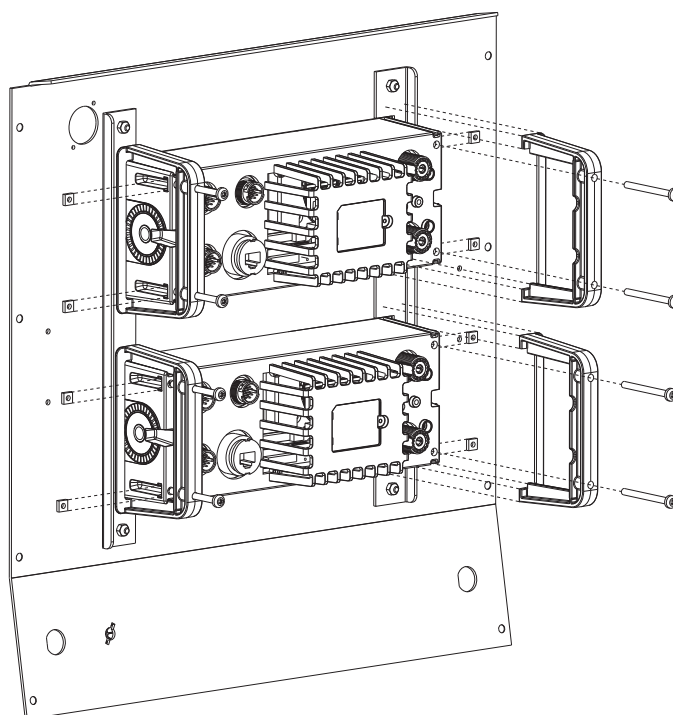


- 9 At this point connection board wiring may be done while having free access to the connection boards.
- 10 Fit the front part back onto the key-hole screws.
- 11 Fasten key-hole screws.
- 12 Fasten the console to the table, with four screws per section
- 13 Reinstall the plate, removed in step 3.
- 14 Reinstall the edge-profile, removed in step 2.

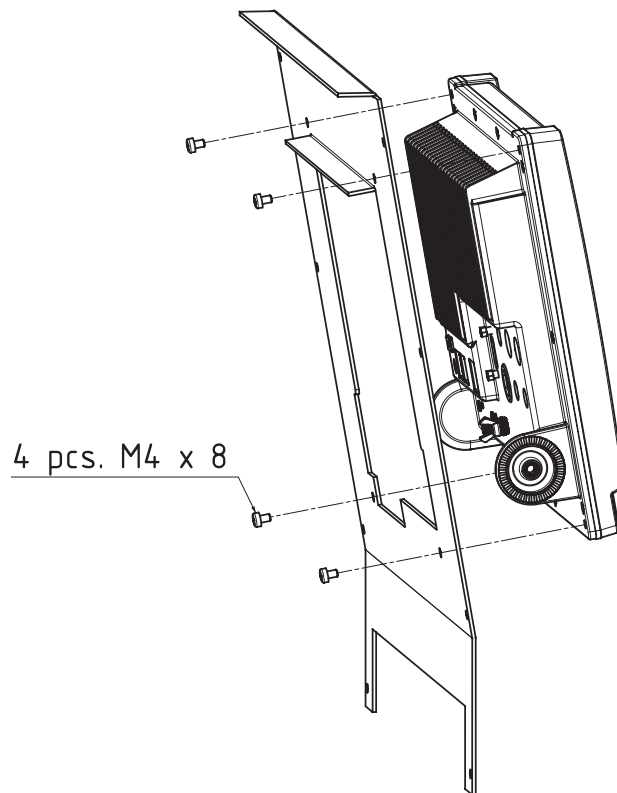
2.4 Paper roll



2.5 Control units

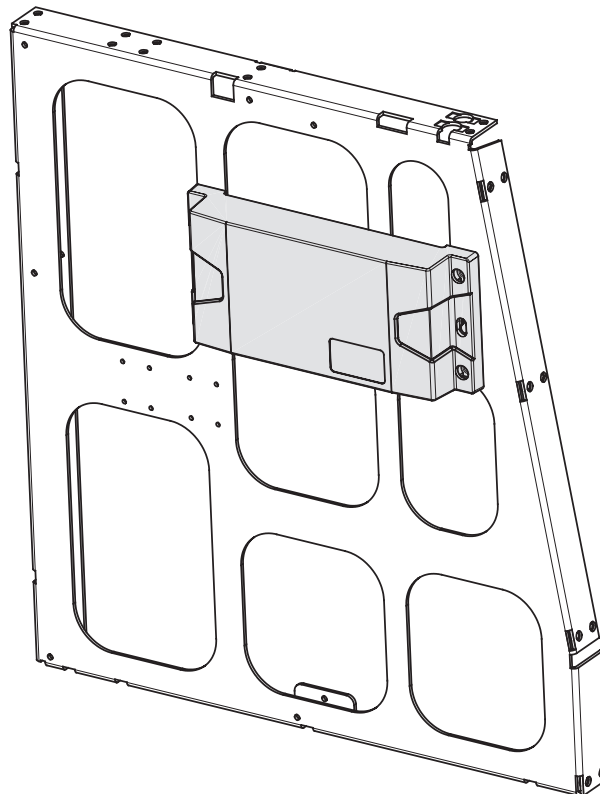


2.6 Message Terminal



2.7 Power Converter

Install the SAILOR 6090 Power Converter on the dividing support frame in the console.



2.8 Factory configuration of the console

When the 6000 GMDSS Console system is ordered along with the relevant equipment sets and Service Pack part number (Service Pack denotes factory installation of units in console) the configuration of the equipment will be as per the following notation:

In consoles with two handsets and hence two radio control units, the left side handset is always associated with the upper most control unit (MF/HF CU).

Supplied with the Console accessory kit are self adhesive labels which may be used to mark the respective handsets for MF/HF and VHF, for ease of identification (Fig. 1).

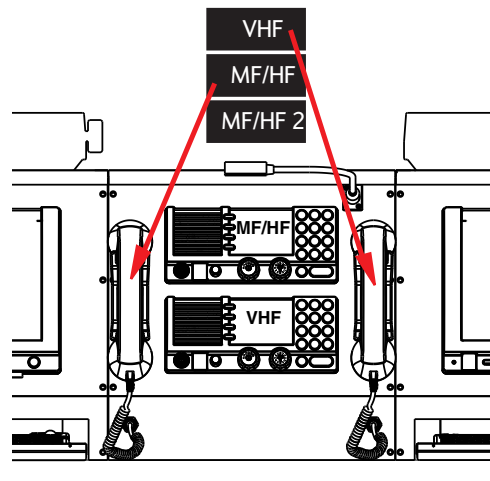


Fig.1

Equipment configuration:

With two 6006 mini-C installed (Fig. 2) the printer and Message Terminal/keyboard associated with #1 mini-C (part of primary GMDSS equipment) is installed in the left hand side of the console. The #2 mini-C equipment (part of duplication GMDSS equipment) is installed in the right hand side. Both Message Terminals will be configured with the Capsat application software program.

The MF/HF controller is installed as the upper most unit (as part of System #1 or primary GMDSS equipment) and the #1 VHF installed below the MF/HF Control Unit also as part of the #1 System or primary GMDSS equipment.

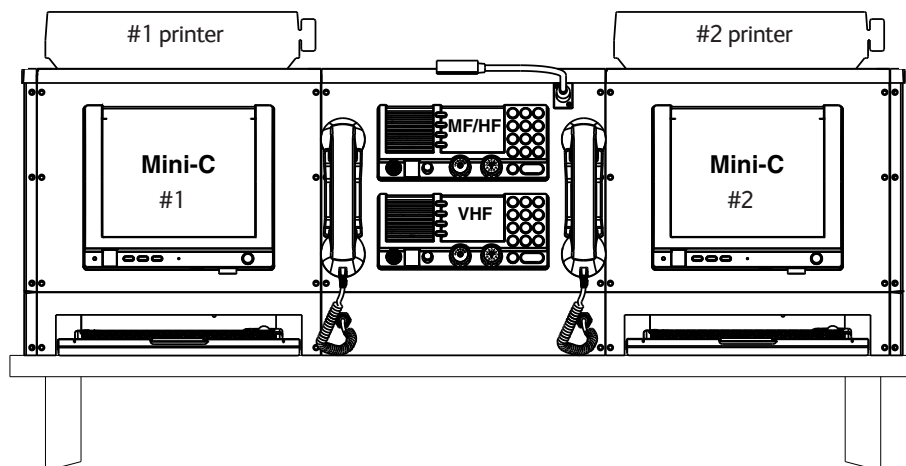


Fig.2

With one 6006 mini-C and the full MF/HF Radiotelex installed (Fig. 3) the MF/HF Control unit is installed as the upper most unit being part of System #1 or primary GMDSS equipment with associated Radiotelex Message terminal/keyboard and printer installed in the left hand side of the console.

The #1 VHF is installed below the MF/HF Control Unit as part of the #1 System or primary GMDSS equipment. The 6006 mini-C is installed in the right hand side of the console being part of System #2 or duplication GMDSS equipment. The two Message Terminals (Fig. 3) are configured with the Radiotelex application software program and the Capsat application software program respectively.

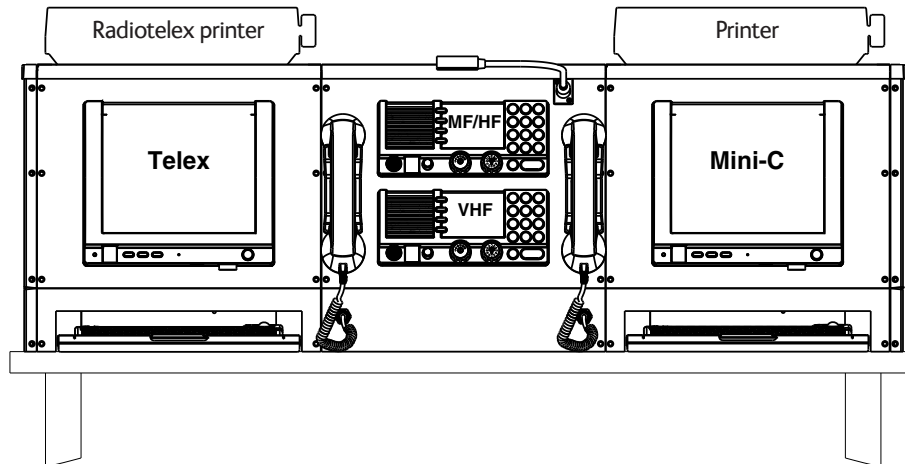


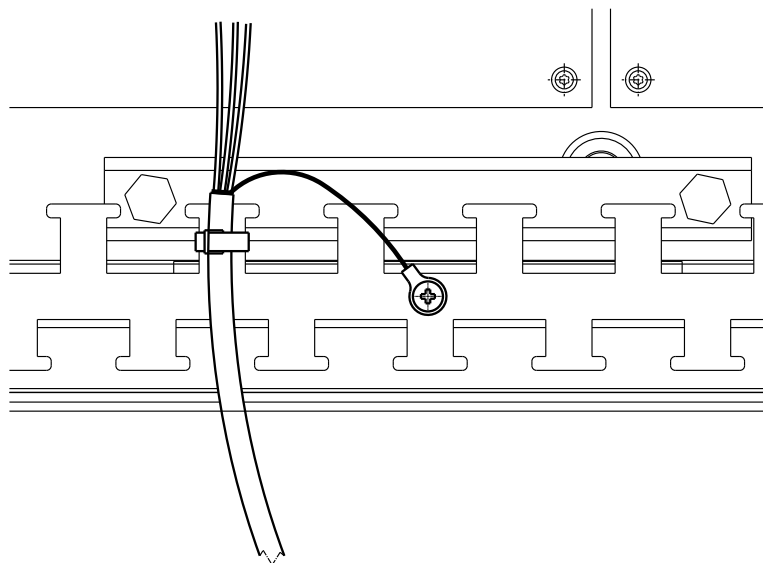
Fig. 3

3 Electrical installation

3.1 Grounding cables

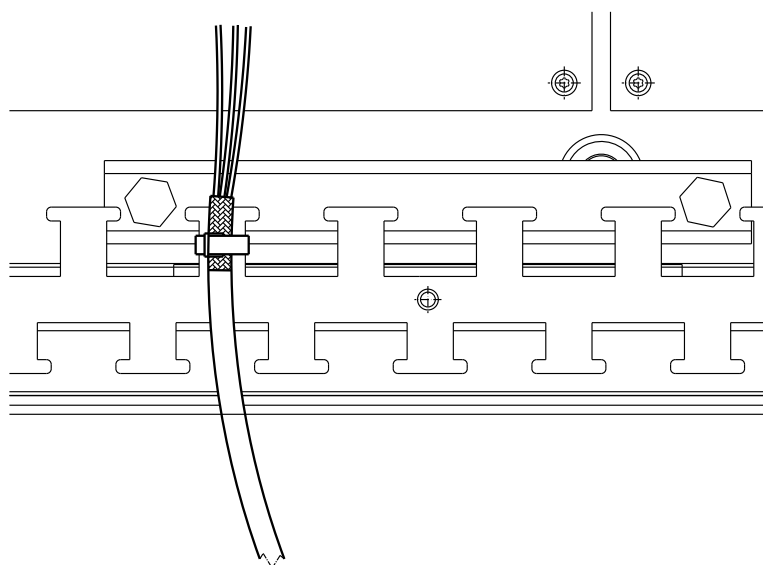
Grounding of all external cable screens to the console is important in order to reduce risk of noise and interference in the GMDSS installation.

The screen of each external cable must be properly terminated to the support bracket by means of a cable lug properly secured to the support bracket with a screw.



Electrical installation

All internal cable screens are grounded to the support bracket using tie wraps.



3.2 Console light

The intention is to supply the console workplace, with sufficient ambient light for working. If desired, the light can be turned off completely, so that it does not distract the ship operator, for example during night time. However when required the light can be turned on quickly, by means of a switch.

By turning the dimming potentiometer clockwise, the light intensity increases, and correspondingly turning the potentiometer counter clockwise decreases the light intensity.

The light can be switched off, by turning the potentiometer fully counter clockwise past the click.

The gooseneck lamp is fed by a regulated DC voltage. The max. voltage supplied to the gooseneck lamp is around 12VDC.

The gooseneck lamp comprise a 3 pin XLR-plug with a release button. Pin 2 carries positive supply voltage (+), pin 3 is connected to DC-. Pin 1 is not connected.

The gooseneck lamp supplied with the console is of the type providing white light. A gooseneck lamp of red light type is available from the Thrane & Thrane eShop identified as P/N S-29-127565-A.

3.3 Console Connection Box

The Console Connection Board is available build into a box, the SAILOR 6330, for use in installations not featuring a SAILOR console. Providing the same connection possibilities the application of the SAILOR 6330 Console Connection Box will be similar to the application of the connection board in the SAILOR consoles, i.e. one Connection Box for the primary side and one for the duplication side etc.

The Connection Box is supplied with the following interconnection cables, all of a length of 1 meter.

Identification	Description	Pcs
37-131079	Connection cable, 1x10 pole LTW	2
37-131080	Connection cable, 1x12 pole LTW	2
37-131081	Connection cable, 1x10 pole LTW	2
37-131510	NMEA 2K Micro Device Cable	2

Please refer to chapter 4 in this manual for details on how to connect the equipment using the SAILOR 6330 Console Connection Box.

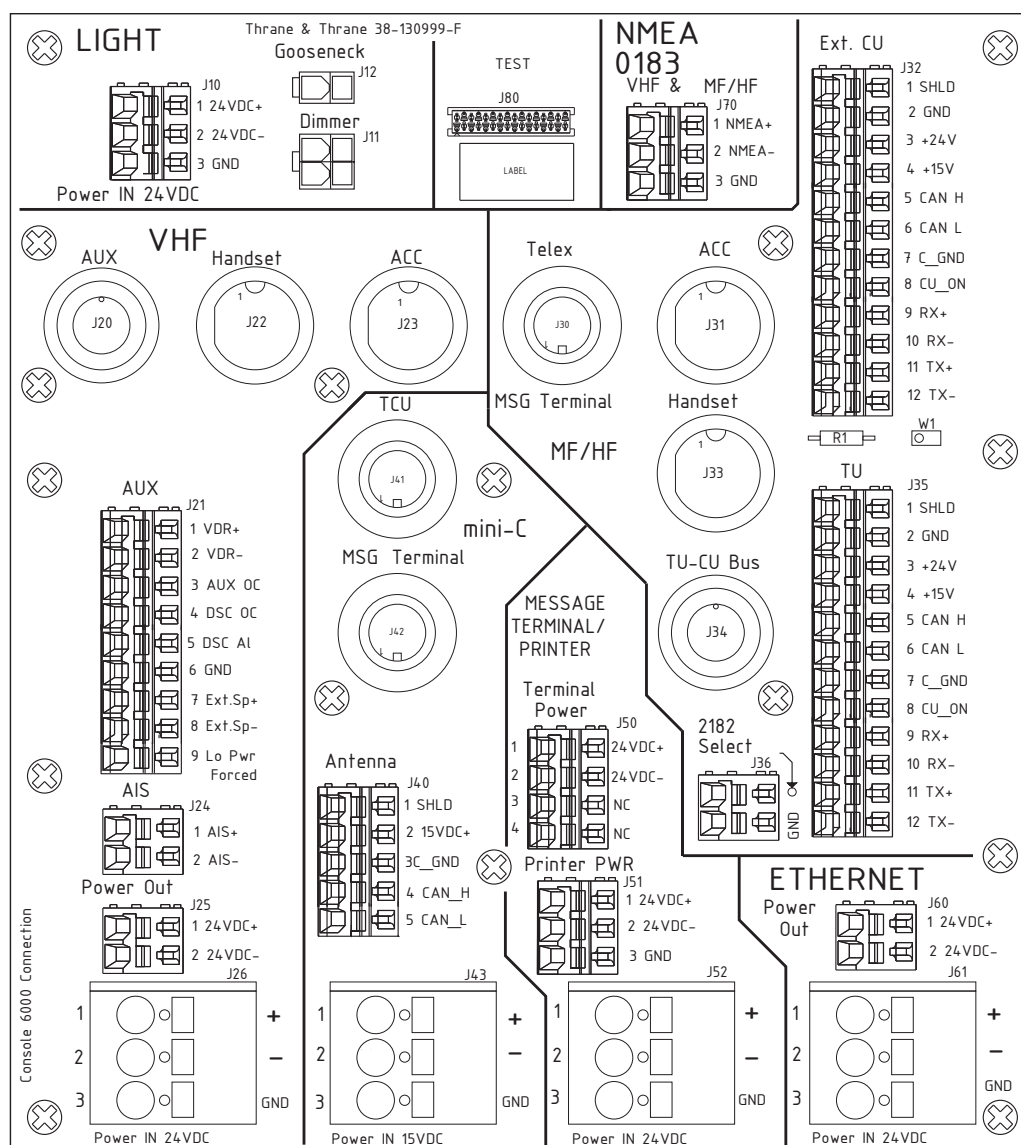
3.4 Connection board

The connectors on the Connection board are grouped in relation to products.

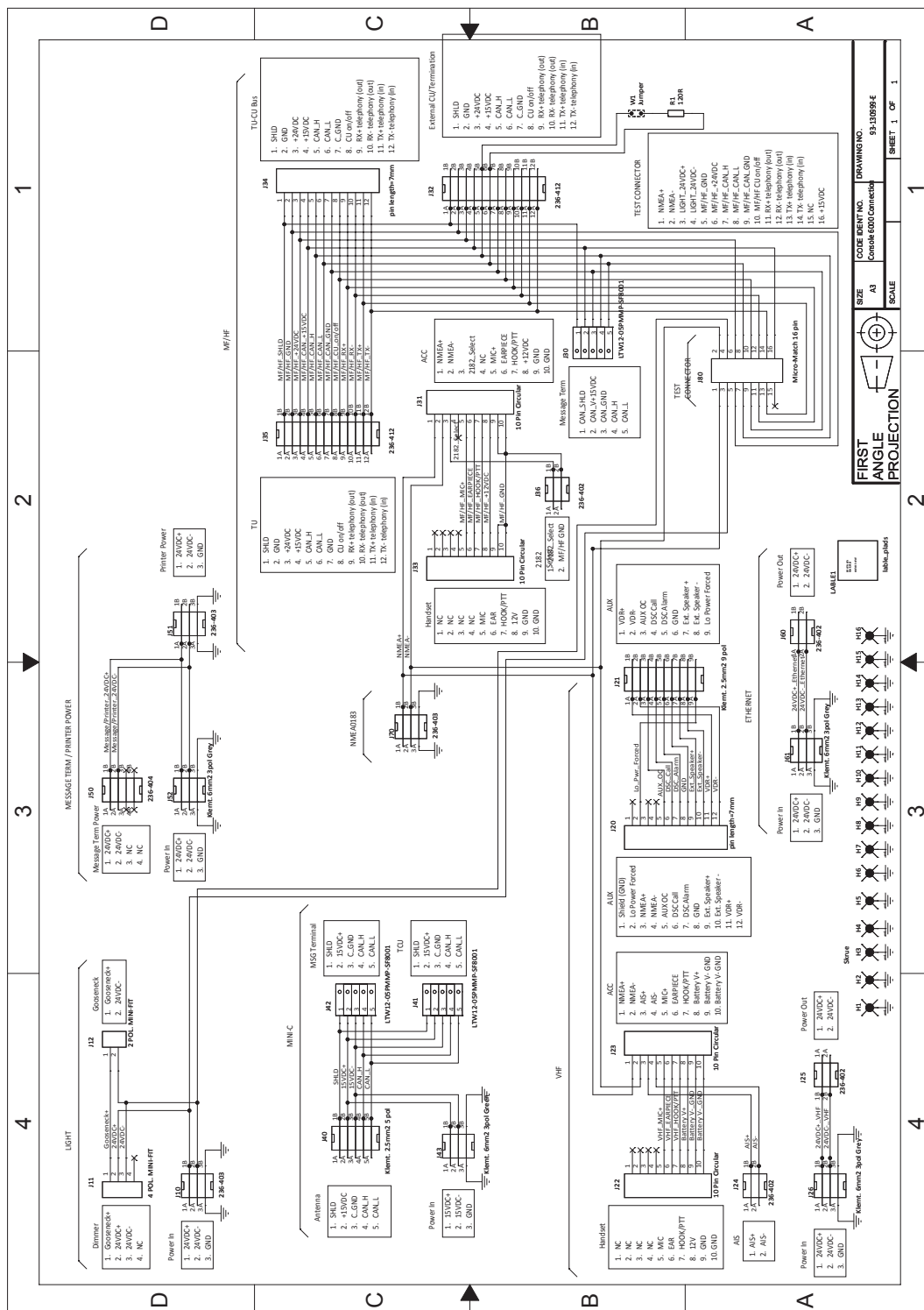
Each connector has been given a unique name and designator in order to clearly identify the connector. Also where the wires are mounted into terminal strips, each connection has been named. The first digit of a designator, is a consecutive number, and the second digit is a digit only used for connections belonging to that group. Every designator starts with a „J“, to indicate that this is a type of connector. For example, the first connector for VHF connection carries the designator „J20“, the second connector „J21“ and so on.

Consoles with two connection boards, the primary equipment connects to the left connection board. The duplication equipment connects to the right connection board. This means that for example in communications systems with two VHF radios, the primary VHF is the one located in the console and connects to the left connection board. The duplication VHF will, if connected through the console connect to the right hand side connection board.

Component location connection board

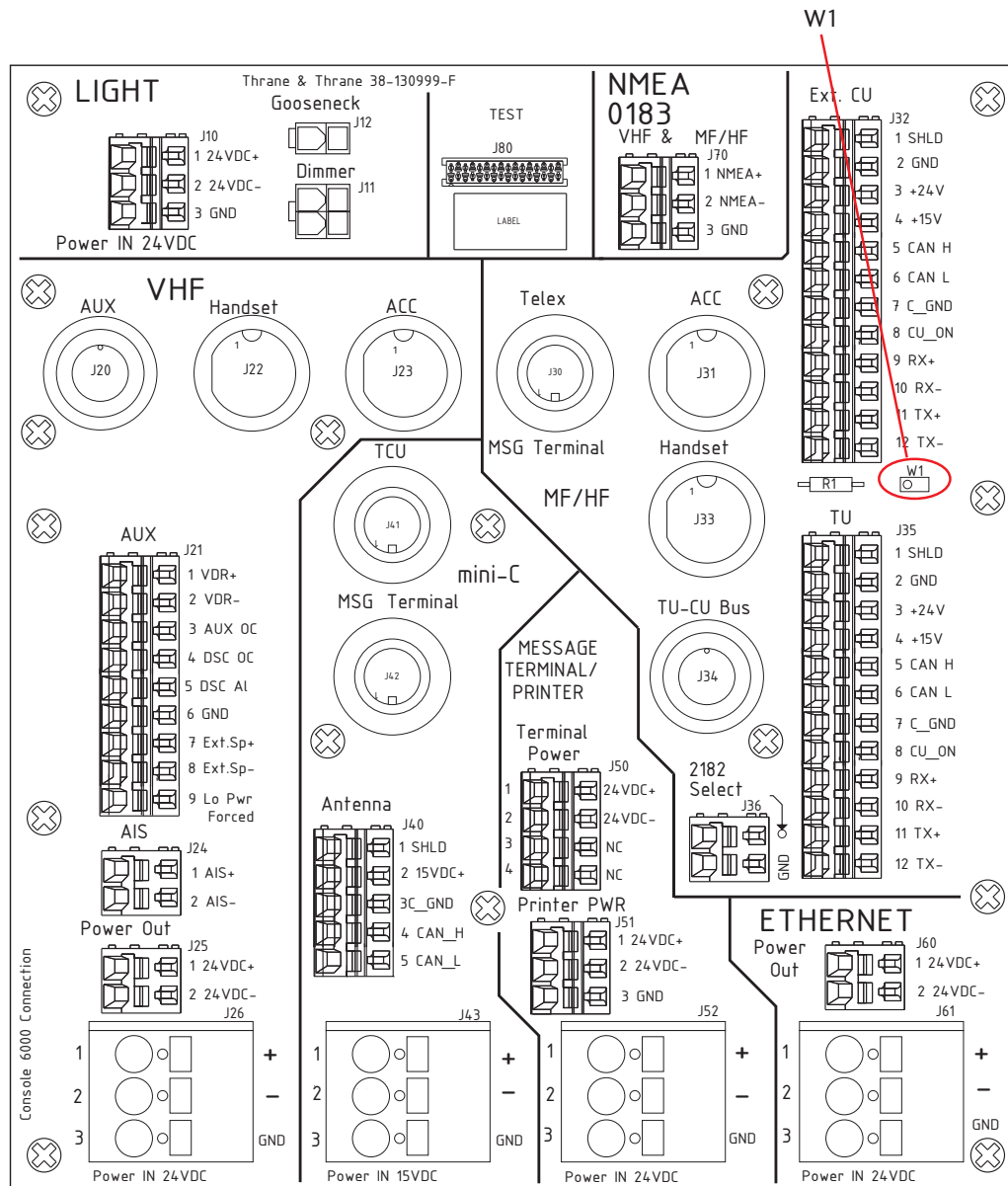


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3.6 MF/HF CAN-bus termination

The jumper W1 terminates the MF/HF CAN-bus. If an external CU is connected to the console connection board and the cable is more than 6 m long, remove the jumper W1. The termination must then be connected to the CU at the most distant point from the transceiver.



Electrical installation

3.7 mini-C CAN-bus termination

In case the mini-C CAN-bus is to be terminated in the console, i.e. no TCU (6194) connected install inline termination connector at J41.

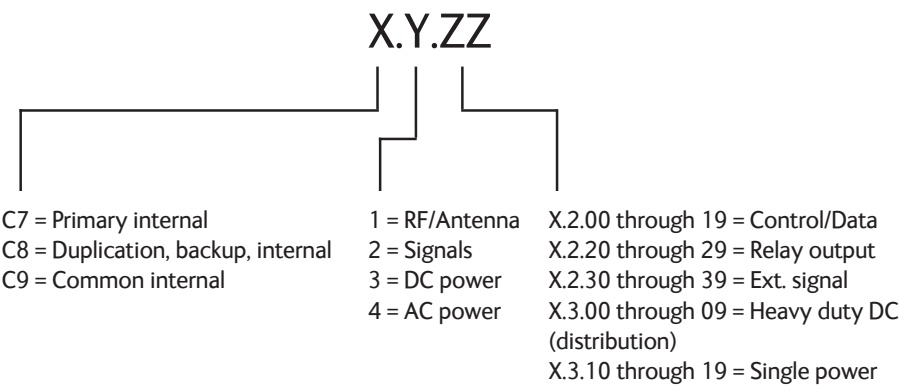
Inline Micro termination connector is available from Thrane & Thrane, identified as P/N 406100-932.

4 Installation cables

4.1 Console wiring system

The internal wiring of the console has been grouped and numbered in the following drawings, so that each cable is easily identified by its unique identifier.

Numbering
The numbering is grouped in three digits, as indicated below. The type of signal carried is also indicated in the table listing the internal cables.

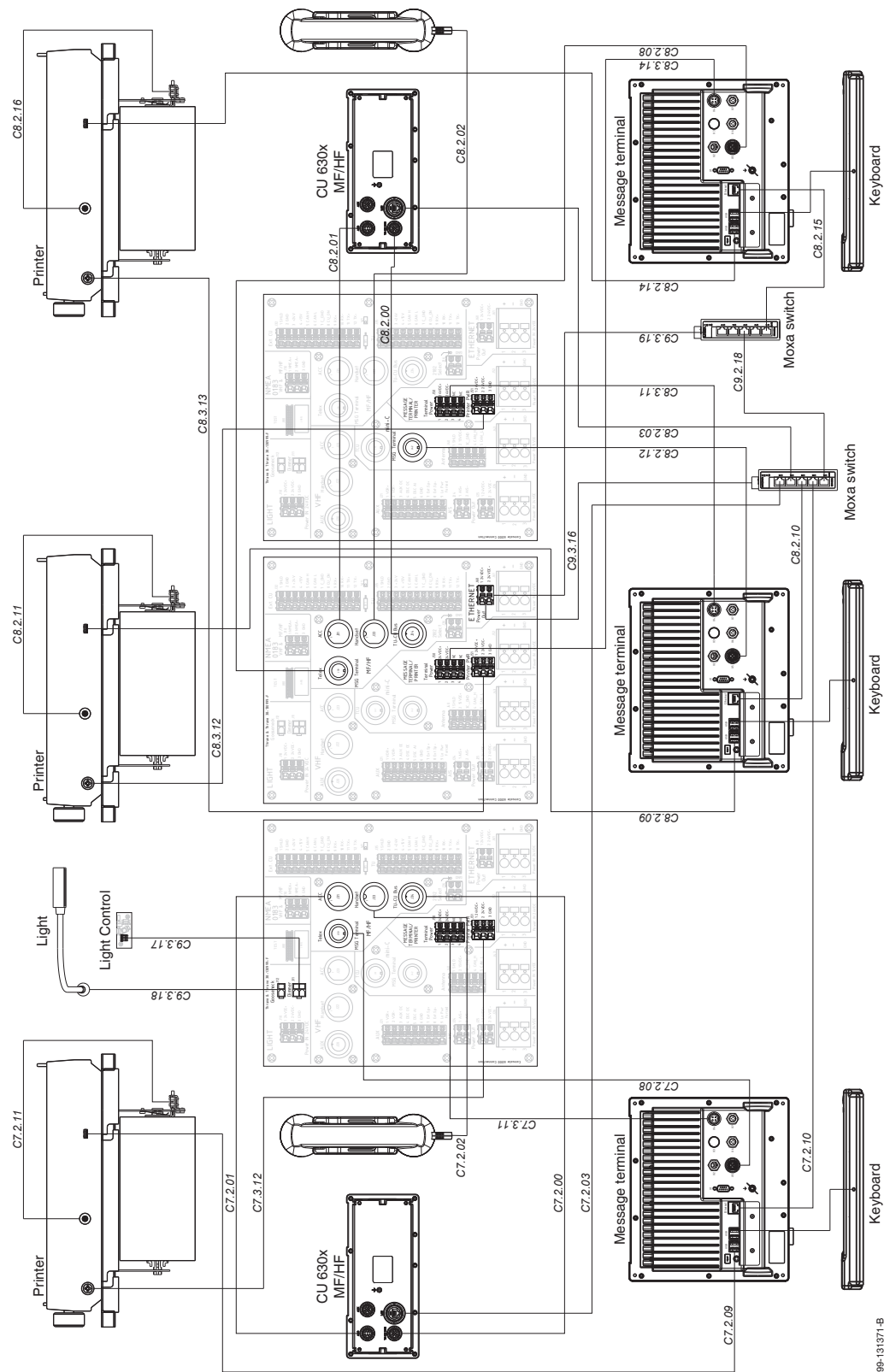


4.2 Internal cable overview

Cable No.	Cable type	From/To	From/To	Part No.	Signal	Conn.
C7.1.00	PL-PL	62xx VHF	RF-Plug	527830	VHF Main RF	1:1
C7.1.01	PL-PL	62xx VHF	RF-Plug	527830	VHF DSC RF	1:1
C7.2.00	12-12 pole LTW	CU 630x MF/HF		37-131080	CANBUS	1:1
C7.2.01	10-10 pole LTW	CU 630x MF/HF		37-131079	ACC	1:1
C7.2.02	10-10 pole LTW	Handset Bulk Plug		37-131081	AF / PTT	1:1
C7.2.03	Ethernet CAT5E	CU 630x MF/HF	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C7.2.04	12-12 pole LTW	62xx VHF		37-131080	AUX	1:1
C7.2.05	10-10 pole LTW	62xx VHF		37-131079	ACC	1:1
C7.2.06	10-10 pole LTW	Handset Bulk Plug		37-131081	AF / PTT	1:1
C7.2.07	Ethernet CAT5E	62xx VHF	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C7.2.08	NMEA2000	Message Terminal		37-131510	CANBUS	1:1
C7.2.09	USB	Message Terminal	Printer	Supplied	Data	1:1
C7.2.10	Ethernet CAT5E	Message Terminal	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C7.2.11	8 pole mine DIN	Printer	Printer switch	Supplied	Control	2
C7.3.10	Power Cable	62xx VHF		Supplied	DC supply	M
C7.3.11	Power Cable	Message terminal		Supplied	DC supply	M
C7.3.12	Power Cable	Printer		Supplied	DC supply	M
C7.3.13	Power Cable	6090 Power Conv.		37-133053		
C8.2.00	12-12 pole LTW	CU 630x MF/HF		37-131080	CANBUS	1:1
C8.2.01	10-10 pole LTW	CU 630x MF/HF		37-131079	ACC	1:1
C8.2.02	10-10 pole LTW	Handset Bulk Plug		37-131081	AF / PTT	1:1
C8.2.03	Ethernet CAT5E	CU 630x MF/HF	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C8.2.06	10-10 pole LTW	Handset Bulk Plug		37-131081	AF / PTT	1:1
C8.2.08	NMEA2000	Message Terminal		37-131510	CANBUS	1:1
C8.2.09	USB	Message Terminal	Printer	Supplied	Data	1:1
C8.2.10	Ethernet CAT5E	Message Terminal	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C8.2.11	8 pole mine DIN	Printer	Printer switch	Supplied	Control	
C8.2.12	NMEA2000	Message Terminal		37-131510	CANBUS	1:1
C8.2.14	USB	Message Terminal	Printer	Supplied	Data	1:1
C8.2.15	Ethernet CAT5E	Message Terminal	SAILOR 6197 Switch	37-206122-150	Ethernet	1:1
C8.2.16	8 pole mine DIN	Printer	Printer switch	Supplied	Control	2
C8.3.11	Power Cable	Message Terminal		Supplied	DC supply	M
C8.3.12	Power Cable	Printer		Supplied	DC supply	M
C8.3.13	Power Cable	Printer		Supplied	DC supply	M
C8.3.14	Power Cable	Message Terminal		Supplied	DC supply	M
C9.2.18	Ethernet CAT5E	SAILOR 6197 Switch	SAILOR 6197 Switch	37-206570-025	Ethernet	1:1
C9.3.16	Power Cable	SAILOR 6197 Switch		37-131395	DC supply	M
C9.3.17	Cable, 4 pole	Light Control		37-126772	DC supply	4
C9.3.18	Cable, 2 pole	Light / Gooseneck		37-126773	DC supply	3
C9.3.19	Power Cable	SAILOR 6197 Switch		37-131395	DC supply	M

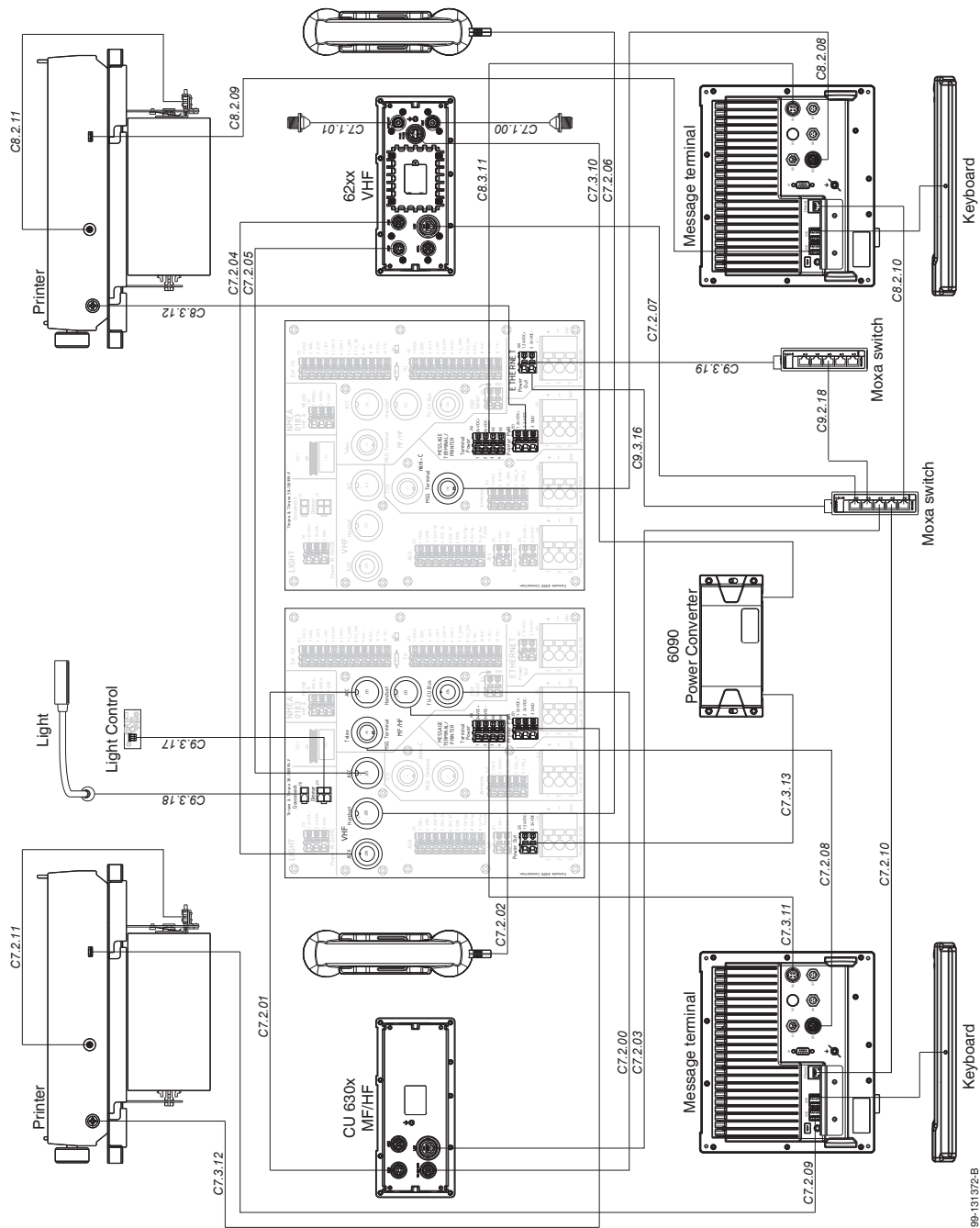
Additional cables can be ordered at Cobham SATCOM eshop.

4.2.1 Internal cables 4 section console w/2 x MF/HF Radiotelex and mini-C (sea area A4)



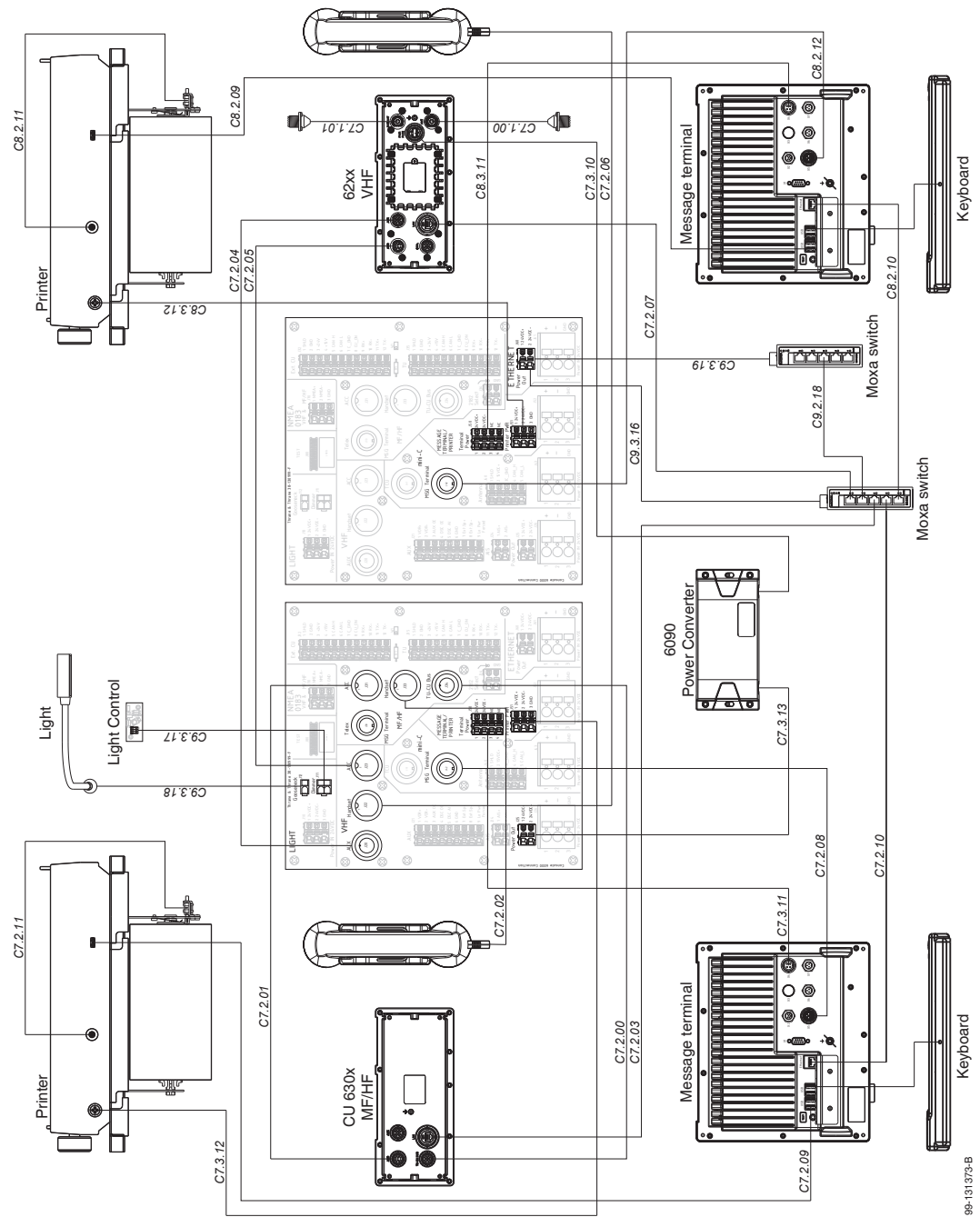
Installation cables

4.2.2 Internal cables 3 section console w/MF/HF Radiotelex, mini-C and VHF



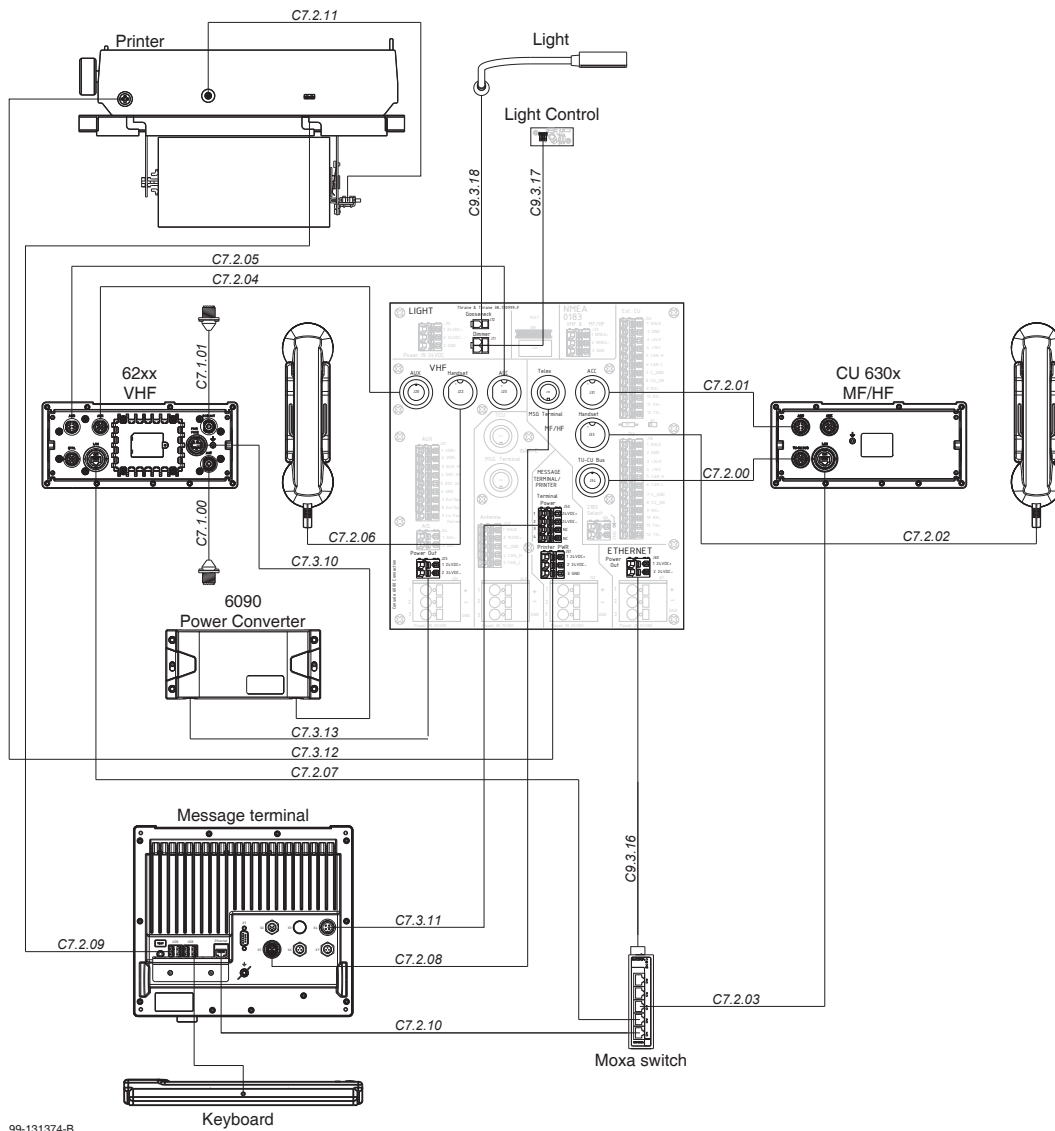
98-131372-B

4.2.3 Internal cables 3 section console w/ MF/HF, 2 x mini-C and VHF

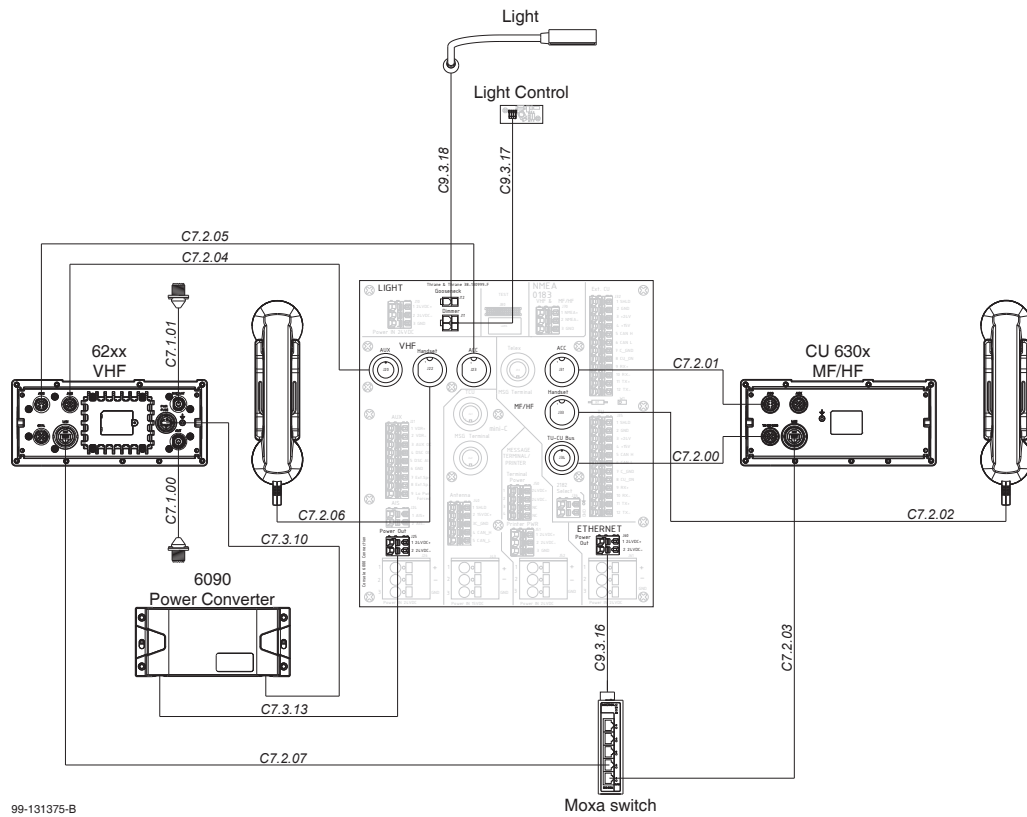


Installation cables

4.2.4 Internal cables 2 section console w/ MF/HF Radio Telex and VHF



4.2.5 Internal cables 1 section console w/ MF/HF and VHF



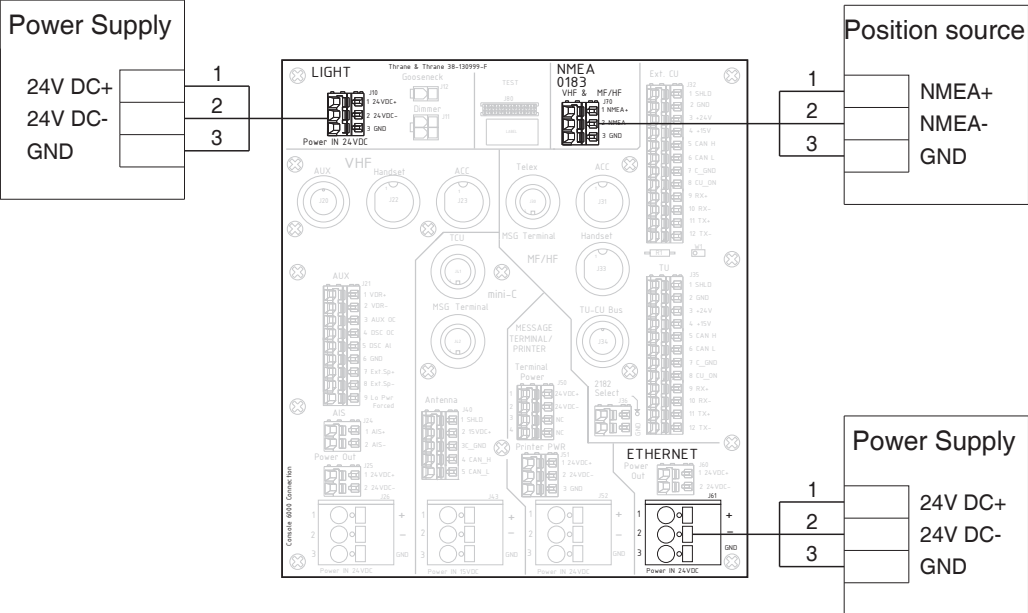
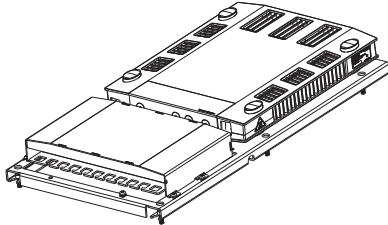
99-131375-B

Installation cables

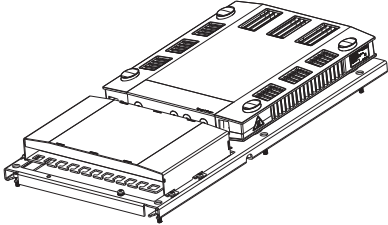
4.3 External cabling

4.3.1 External cabling - Light, Ethernet switch and position source

SAILOR 6081 (Optional up to 3 additional 6080)
Power Supply & Charger



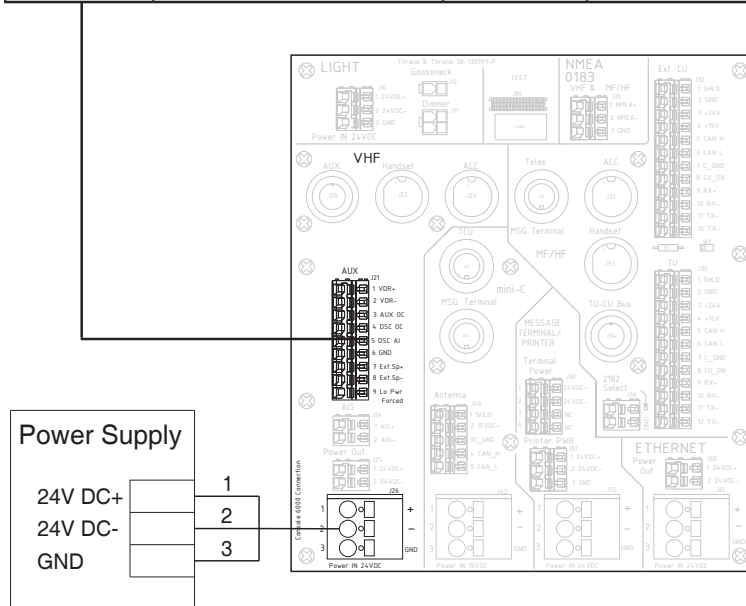
SAILOR 6081 (Optional up to 3 x 6080)
Power Supply & Charger



99-132821-B

4.3.2 External cabling - VHF

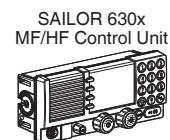
Connection Board J21	Description	Wire color	CU - AUX Connector LTW 12 pin
Pin			Pin
1	VDR+ Mixed Rx/Tx for record	Violet	11
2	VDR- Mixed Rx/Tx for record	Cyan	12
3	AUX 0C	Yellow	5
4	DSC Call	Grey	6
5	DSC Alarm	Pink	7
6	-Battery	Red	8
7	External Speaker +	Black	9
8	External Speaker -	Orange	10
9	Lo Power forced control	Blue	2
	Shield (GND)	Brown	1
	NC	White	3
	NC	Green	4



99-132822-B

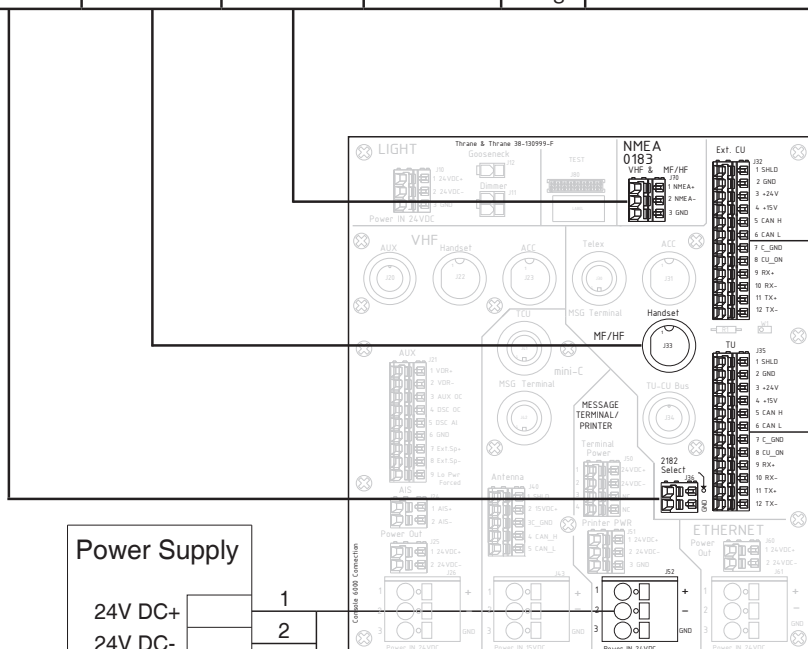
4.3.3 External cabling - MF/HF

Connection Board J36	Connection Board J33	Connection Board J70	Description	Wire color	CU - AUX Connector LTW 10 pin
Pin	Pin	Pin			Pin
		1	NMEA+	Brown	1
		2	NMEA-	Blue	2
1			2182 Select	White	3
			NC	Green	4
	5		MIC	Yellow	5
	6		EAR	Grey	6
	7		HOOK_PTT	Pink	7
	8		12V DC	Red	8
2	9		GND	Black	9
2	10		GND	Orange	10



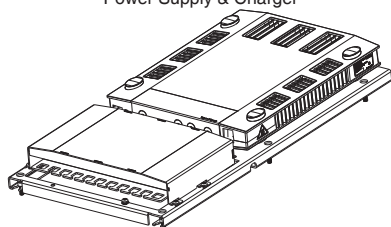
Ext. CU

1	SHLD
2	GND
3	+24V
4	+15V
5	CAN H
6	CAN L
7	GND
8	CU on/off
9	RX+ tel
10	RX- tel
11	TX+ tel
12	TX- tel



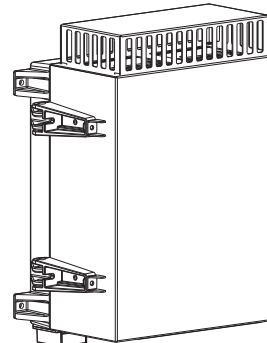
Power Supply

24V DC+	1
24V DC-	2
GND	3

SAILOR 6081 (Optional up to 3 x 6080)
Power Supply & Charger

TU

1	SHLD
2	GND
3	+24V
4	+15V
5	CAN H
6	CAN L
7	GND
8	CU on/off
9	RX+ tel
10	RX- tel
11	TX+ tel
12	TX- tel

SAILOR 636x
MF/HF Transceiver Unit

4.3.4 External cabling - mini-C and Power Supply

SAILOR 6194
Terminal Control Unit

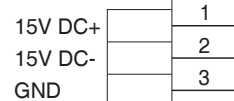


Terminal
Control Unit

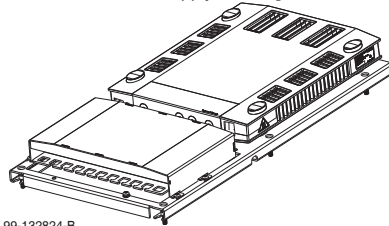


Note: If no TCU connected install inline micro termination connector to J41

Power Supply

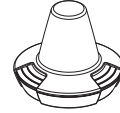


SAILOR 6081 (Optional up to 3 x 6080)
Power Supply & Charger

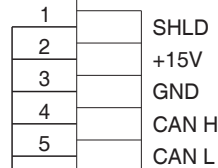


99-132824-B

SAILOR 3027
mini-C Antenna



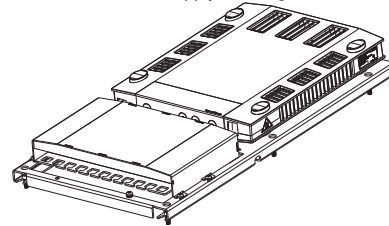
Antenna



Power Supply



SAILOR 6081 (Optional up to 3 x 6080)
Power Supply & Charger



For further installation details, please refer to individual product manuals and cable plans available for download at the Cobham SATCOM extranet.

