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GMDSS
Signal Unit
POWER MONITOR

Type 806-003 NG001

OPERATOR MANUAL

3672/806-003.DOC010102

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Konformitätserklärung / Declaration of Conformity

gemäß / according to: ISO / IEC Guide 22

Nr. KE004.ISO_IEC.doc

Hersteller / Manufacturer:	Raytheon Marine GmbH
Produkt / Product:	Power Monitor
Typ / Type:	806-003 NG001
Das oben beschriebene Produkt ist konform mit / The above mentioned equipment complies with:	EU-Richtlinie 89/336EWG/ EC-Directive 89/336EWG

und wurde geprüft gemäß/
and was tested according to:

Document No.	Title	Edition	Test	Chapter
IEC60945	Maritime navigation and radiocommunication equipment and systems- General requirements- Methods of testing and required test results	08/2002	Dry heat Damp heat Cold Vibration Electromagnetic capability (EMC)	8.2 8.3 8.4 8.7 9./10.

Prüfprotokoll /Testreport: ET09-05-03, Raytheon Marine GmbH
EMV0022E.03, GEDIS GmbH

Prüfung durch / Tested by: Raytheon Marine GmbH, Environmental lab.
GEDIS GmbH, Edisonstr.3, 24145 Kiel, Germany

Kiel, 16.05.2003

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KE004.ISO_IEC.doc 1 / 1

1 General

The application for the GMDSS Signal Unit POWER MONITOR is, to prevent unnoticed discharging of the radio reserve battery in a GMDSS radio station.
The requirement was specified by the International Maritime Organisation (IMO) in COMSAR Circular 16 “GUIDELINES ON THE CONFIGURATION OF THE RESERVE SOURCE OR SOURCES OF ENERGY USED TO SUPPLY RADIO INSTALLATIONS ON GMDSS SHIPS”.
The GMDSS Signal Unit POWER MONITOR was developed to control the voltage of the radio reserve battery and displays the failure of

- power supply units with automatic switch-over to battery operation
- battery chargers
- other units,

which are used in a GMDSS radio station. Errors are signalsed by flashing light and an acoustic signal.

The system has two voltage supply inputs for 24V DC (battery and backup). In case of separate radio batteries for main and duplication equipment, it is possible to control a second battery.
The signal input of GMDSS Signal Unit POWER MONITOR can either be via voltage or a contact.
Additionally, the system has also a connection for an external dimmer and an external reset key.

Fig. 1-1: GMDSS Signal Unit POWER MONITOR, type 806-003 (with standard layout)

Operator Manual

This operator manual contains all operating instructions as well as a survey of possible warnings and alarms.

Service Manual

In addition to the operator manual a service manual is available. It contains information about installation and first putting into operation.

2 Operating Instructions

With switching-on the 24 V_{DC} supply voltage the GMDSS Signal Unit POWER MONITOR is set into operation.

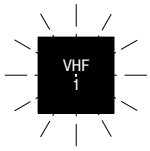
2.1 Notes on the operating instructions

Explanation of symbols:

Key operation

Signal or alarm position *out*

Signal or alarm position *on*



Alarm position *flshing*

LED *out*

LED *on*

LED *flashing*

Audible signal *on*

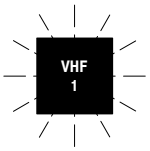
Audible signal *off*

2.2 Status Indications

Explanation of status indications

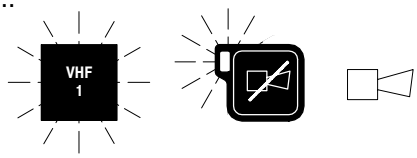
display panel has no function

display panel in normal status function

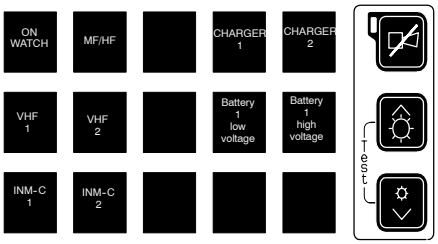
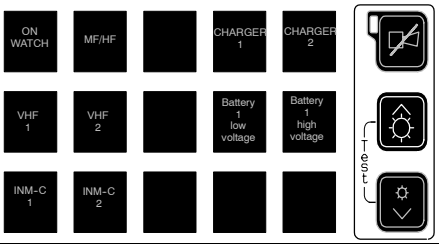


display panel in alarm function

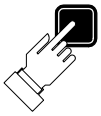
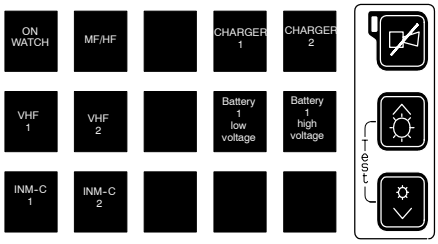
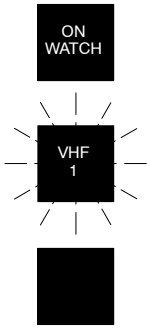
2.3 Alarm Indications

	**Indications**	**Comments, Notes**
	e. g.:   	When an alarm occurs: - corresponding display lights up brightly - alarm-LED flashes red - acoustic signal is emitted After alarm is acknowledged: - corresponding display lights up brightly - alarm-LED lights red (constant light) - acoustic signal stops sounding This indication remains until the error has been alleviated.

2.4 Dimming

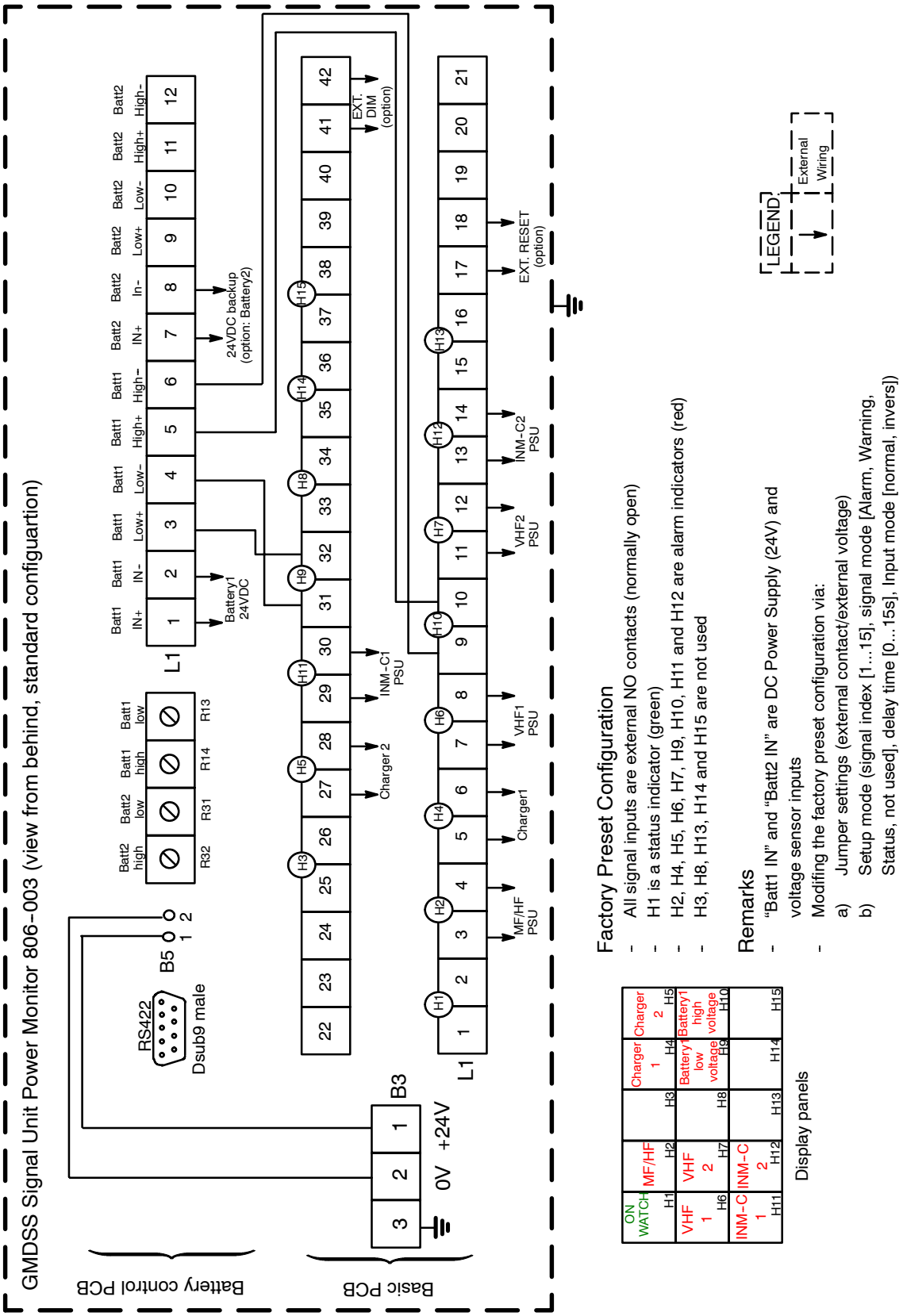
	**Indications**	**Comments, Notes**
 or: 	e. g.: ⇒  ⇒  	continuous brightness adjustment – of the keys – of the display The dimmer can not be used during an acoustic alarm.

2.5 Test

	**Indications**	**Comments, Notes**
 simultaneously	 e. g.:  	The self-test runs for approx. 10 secs after pressing the key: – each of three signal lams lights up (vertical) one after the other from left to right at their brightest setting (displays with no function remain dark) – alarm-LED lights up yellow. The configuration is then displayed: – Lamps light up brightly in conriguration of ”normal status” and ”warning”. – Lamps flash brightly in ”alarm” configuration. – displays with no function remain dark The test can not be carried out when the alarm is active.

2.6 Switching off

The unit is set out of operation by switching-off the 24 V_{DC} supply voltages.


GMDSS Signal Unit Power Monitor 806-003 (view from behind, standard configuartion)
Battery control PCB
Basic PCB
RS422
Dsub9 male
B5
B3
0V +24V
Batt2 high
Batt2 low
Batt1 high
Batt1 low
R32
R31
R14
R13
L1
Batt1 IN+
Batt1 IN-
Batt1 Low+
Batt1 Low-
Batt1 High+
Batt1 High-
Batt2 IN+
Batt2 In-
Batt2 Low+
Batt2 Low-
Batt2 High+
Batt2 High-
Battery1 24VDC
24VDC backup (option: Battery2)
EXT. DIM (option)
INM-C1 PSU
Charger 2
Charger1
MF/HF PSU
VHF1 PSU
VHF2 PSU
INM-C2 PSU
EXT. RESET (option)
Factory Preset Configuration
- All signal inputs are external NO contacts (normally open)
- H1 is a status indicator (green)
- H2, H4, H5, H6, H7, H9, H10, H11 and H12 are alarm indicators (red)
- H3, H8, H13, H14 and H15 are not used
Remarks
- "Batt1 IN" and "Batt2 IN" are DC Power Supply (24V) and voltage sensor inputs
- Modifing the factory preset configuration via:
a) Jumper settings (external contact/external voltage)
b) Setup mode (signal index [1...15], signal mode [Alarm, Warning, Status, not used], delay time [0...15s], Input mode [normal, invers])
c) Lamp colour and inscription
ON WATCH
MF/HF
Charger 1
Charger 2
VHF 1
VHF 2
Battery1 low voltage
Battery1 high voltage
INM-C 1
INM-C 2
Display panels
LEGEND
External Wiring