Data Processing Racks

Honeywell

TA3840

Maintenance Manual

Data Processing Racks
Maintenance Manual

TA3840

1st *Edition*
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INTRODUCTION

This manual is issued specifically for the data processing racks of the TA3840 or EMx40 system.
It contains instructions detailed for functioning, operation and cleaning of this system.

To use it in an optimal way, we advise you TO READ CAREFULLY THESE INSTRUCTIONS and to respect them throughout the life of the equipment.

Keep this manual to hand so that you can refer to it at any time. Ensure that it is complete and kept close to the equipment.

The racks TA3840C and TA3840S, as well as the TA3840R repeater module are integrated in the system for processing the tankers liquid cargo. Maintenance must be carried out by a qualified operator in communicating electronic systems.

We also draw your attention to the fact that the connection of equipments or the use of products other than those recommended by HONEYELL MARINE may present risks for which we will not be liable.

This manual must not be reproduced in any form whatsoever without the prior written approval of Honeywell Marine who cannot be held responsible for any use of the information contained in this manual.

As we want you to take advantage of the most of the latest technology and new equipment, as well as to benefit from our experience, our equipments may undergo technical or design changes. As a result, some of the features and information in this manual may change without prior notice and without any obligation to up-date it.

Should you encounter any problems or have any questions about your TA3840 or EMx40 system, please do not hesitate to contact your nearest Honeywell Marine customer service.

Other documents

The description and the operation of the racks TA3840C/R and TA3840S are described in the MT5008E technical manual.

The installation of the racks TA3840C/R and TA3840S is described in the MI5008E installation manual.

> **SAFETY PRECAUTIONS:**
>
> In order to avoid the electric shock or fire hazards, do not expose the equipments to water projections. Take care to switch the power off before proceeding to any disconnection or removal of the racks.
>
> Never introduce parts, in particular metal ones, in the air vents of the racks.
>
> Ensure that the racks are well ventilated and that the air vents are not covered.
> Take care to maintain the racks distant from all heat sources (heating appliances…).

Warning:

Our equipments are designed and manufactured in accordance with local safety regulations, and in particular European directives relative to reconciling member states' legislation:

- 89/336/EEC and 2004/108/EC   "Electromagnetic compatibility",

- ATEX 94/9/EC"Equipment and protective systems intended for use in potentially explosive atmospheres",

- 96/98/EC   "Marine equipment".

They are intended for professional use and must be installed, used and maintained by competent staff who is qualified in this type of equipment.

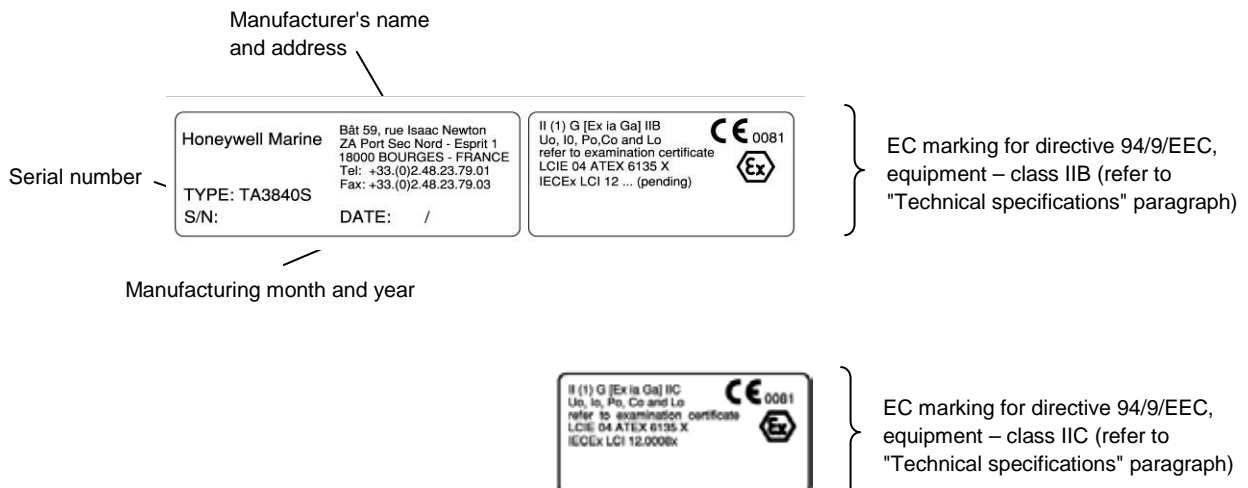In particular we wish to draw your attention to the fact that we cannot be held responsible if:

- Any technical alterations are made to our appliances without our written authorization,

- Our equipments are damaged by being operated in conditions other than the intended usage of their technical classification (power supply, temperature, environment, etc.).

The safety instructions given in this manual are merely given for guidance purposes to protect you and all those using and working on our equipments. Honeywell Marine cannot foresee all dangerous situations that might arise. This is why the owner and/or the operator is responsible for the operating safety of the system.

Regulations of the ship classification society may impose procedures (health and safety, fire prevention, handling of hazardous substances, etc.) which are stricter than those given in this manual. In this case, the regulations must be followed.

Regulation marking

The manufacturer and specifications plate of TA3840S rack is stuck on the rear face.

Manufacturer's name and address

Serial number

Honeywell Marine	Bât 59, rue Isaac Newton ZA Port Sec Nord - Esprit 1 18000 BOURGES - FRANCE Tel: +33.(0)2.48.23.79.01 Fax: +33.(0)2.48.23.79.03
TYPE: TA3840S	
S/N:	DATE: /

II (1) G [Ex ia Ga] IIB
Uo, I0, Po,Co and Lo
refer to examination certificate
LCIE 04 ATEX 6135 X
IECEx LCI 12 ... (pending)
CE 0081
Ex

EC marking for directive 94/9/EEC, equipment – class IIB (refer to "Technical specifications" paragraph)

Manufacturing month and year

II (1) G [Ex ia Ga] IIC
Uo, Io, Po, Co and Lo
refer to examination certificate
LCIE 04 ATEX 6135 X
IECEx LCI 12.0008x
CE 0081
Ex

EC marking for directive 94/9/EEC, equipment – class IIC (refer to "Technical specifications" paragraph)

TABLE OF CONTENTS

1. SYSTEM DESCRIPTION

Presentation

The racks TA3840C communication unit, TA3840R remote display unit, TA3840S safety unit are parts of the TA3840 system or EMx40 system, dedicated to monitor the tankers' liquid cargo parameters such as level, temperature and pressure, as well as all associated measurements, for the installed transmitters.

The rack TA3840C A/D Analog data collection unit is part of the TA840 System.

The racks TA3840C, TA3840C A/D and TA3840S are installed in a 19" cabinet, whereas the panel TA3840R is installed in a wall mounting box or provided to be flush mounted in a console.

The general description and the operation of the system are described in the MT5008E technical manual.

— Communication

— Safety unit

— Additional safety

<table>
<tr><td>⚠</td><td>SAFETY PRECAUTIONS:
Maintenance intervention should be carried out on the connections and electronic boards with electrical power off.

The equipments must be wired up by a qualified electrician. The mains connection, grounding, circuit breaker and protection must conform to the standards and regulations in force (these parts are not included in those we supply). We cannot be held responsible for damage caused directly or indirectly by faulty installation.</td></tr>
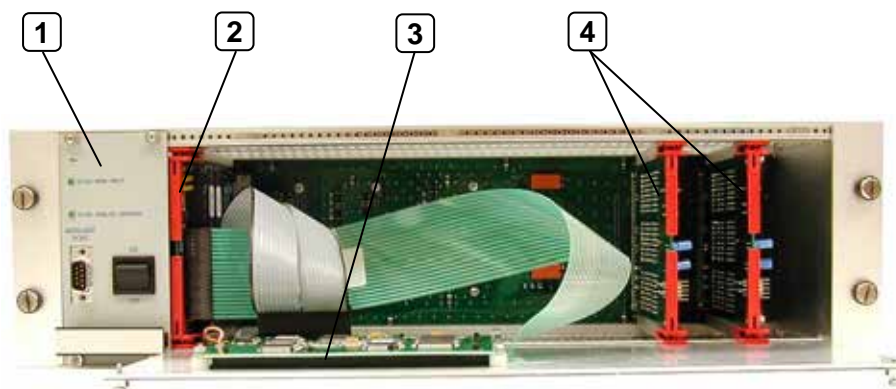</table>

Electronic boards

TA3840C - Communication unit

● Remove the 2 upper screws of the front panel.

Tilt the front panel while maintaining it to prevent that it goes out from its hinges - Risk of deterioration by falling.

1	Power supply and communication board
2	Control Processing Unit board
3	LCD display board
4	4-20 mA analog inputs boards, 48 channels each (option), or multifunction boards (option)

TA3840C A/D - Data collection unit

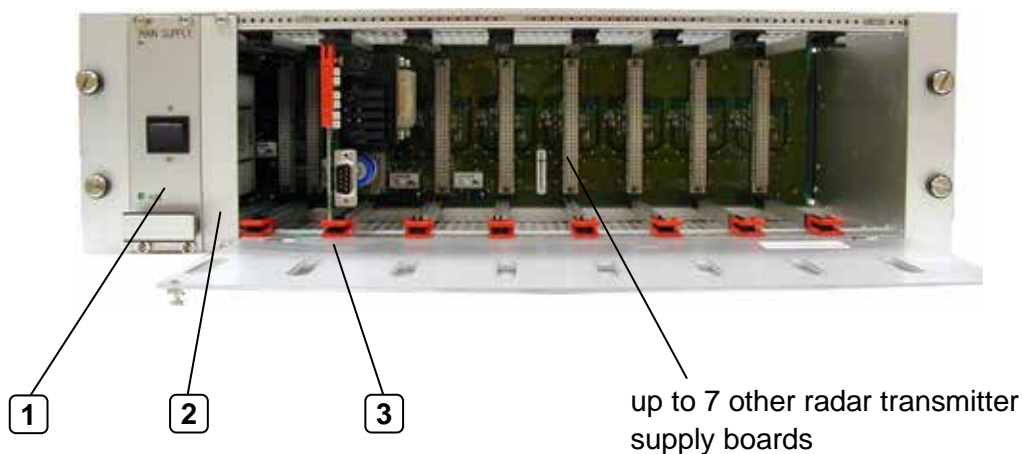Only the items 1 and 4 are present. The front panel is blind.

TA3840S - Safety unit

● Remove the 2 upper screws of the front panel.

Tilt the front panel while maintaining it to prevent that it goes out from its hinges - Risk of deterioration by falling.
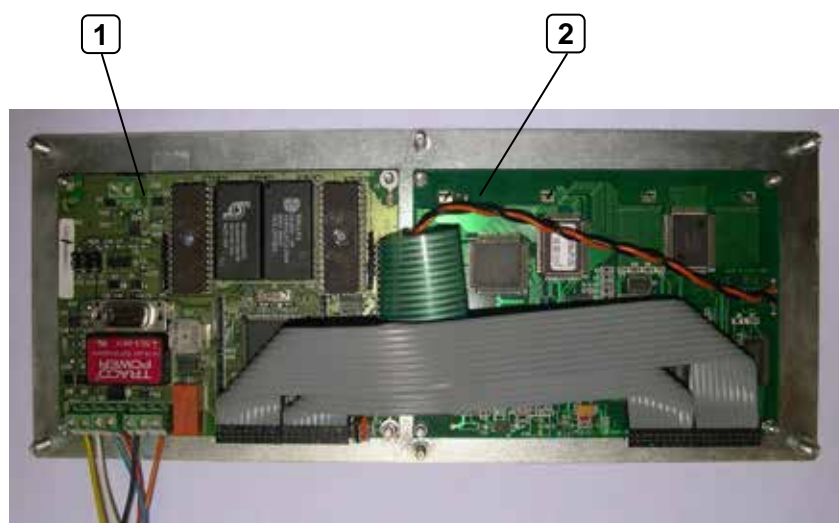
up to 7 other radar transmitter supply boards

1	Power supply board
2	Location of Control Processing Unit board (option)
3	Radar transmitter supply board

TA3840R - Remote display unit

- Remove from the back the 6 nuts fixing the front panel using a 7 mm spanner.

|	
1	Communication board
2	LCD display board

2. SYSTEM MAINTENANCE

Maintenance help

● From the main menu of the normal mode, select the UTILITIES menu, then MODE and MNT (main menu functions are described in the "OPERATION IN NORMAL MODE" chapter of the MT5008E technical manual).

● Enter the "6854" password or another code chosen at the system definition.

● Push [ENTER], the maintenance mode menu is open.

Maintenance menu functions

Following functions are available from the maintenance menu.

⊞	UP	Go to the previous page
⊞	DOWN	Go to the following page
⊞	RAW	Display of the raw values for a transmitter of the current page
⊞	HIST	Historic of the system faults
⊞	RTN	Return to the main menu after confirmation by "Yes" or "No"

MAINTENANCE menu

RAW menu
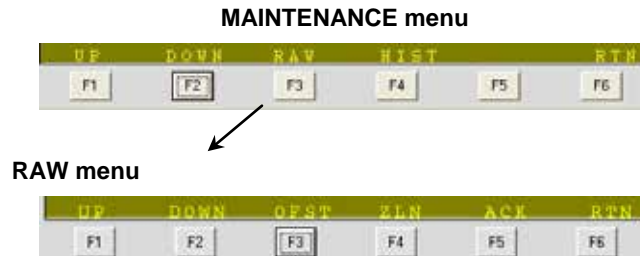
⊞	UP	Go to the previous line
⊞	DOWN	Go to the following line
⊞	OFST	Offset modification for the displayed transmitter (group 1 and 2 only)
⊞	ZLN	Zero line modification for the displayed transmitter
⊞	ACK	Acknowledgment of an alarm started during intervention in maintenance mode (1 push for each alarm)
⊞	RTN	Return to the current page or maintenance menu

> **NOTES:**
>
> The function keys of certain sub-menus are for transmitter or option selection shown in this document by the following symbols.
>
> ñ   PREV   ò   NEXT
>
> *Reminding: [ENTER] key of the numeric keypad appears in this manual under the symbol Ã.*
>
> Pushing a forbidden key causes a short beep from the buzzer (if activated).

RAW menu

The RAW menu allows to display the raw values measured by each transmitter and to modify its measure reference from bottom (zero line). For each radar transmitter of 1 and 2 groups, it is also possible to modify its measure reference from top (OFFSET).

● From the MAINTENANCE menu, select the page group for the transmitter to be displayed with UP or DOWN.

● Push RAW, a sub-menu and a dedicated screen for the first transmitter of the group are displayed.

● Consult the raw values of a transmitter in particular by selecting it with UP or DOWN.

Two types of intervention are then possible, modification of the offset and the zero line.

Various types of displays

Each type of transmitter has its specific display:

● Radar transmitters,

Name	Addr	Dist mm	H max mm	Ofst mm	Zln mm	
TA01	1	3500	10600	-600	5	
Transmitter name	MODBUS slave No	Distance measured by the radar	Maximum height of the tank upright the radar	Offset (changeable parameter)	Distance zero line (changeable parameter)	

	TmpH ^{o}C	TmpM ^{o}C	TmpL ^{o}C	ADC IG	Zln mBAR
	210	220	230	1220	50
	Individual Temperatures			Pressure code	Pressure zero line (changeable parameter)

- Analog transmitters associated to the radar,

Name	Addr	ADC	Zln mm	Sp.Gr hg/m3
A201	1	1502	12	10100
Transmitter name	MODBUS slave No	Digital measurement	Zero line (changeable parameter)	Product specific gravity

Note: Sp.Gr. only available for level measurement.

- 4-20 mA analog transmitters.

Name	Addr	Curt µA	Zln mm	Sp.Gr hg/m3
AN01	101	11558	50	10050
Transmitter name	MODBUS slave No	Current sent by the transmitter	Zero line (changeable parameter)	Product specific gravity

Note: Sp.Gr. only available for level measurement.

RAW menu functions

OFST

Function available for 1 and 2 groups.

- Push OFST. The following key-in line is displayed.

| Offset ? mm[+-5000]=XXXXX |

- Enter a value between the suggested limits.

Ã

Back to the RAW menu   *The new offset value is applied to the concerned transmitter.*

ZLN

- Push ZLN for 1 and 2 groups. The following key-in line is displayed.

| Zero line ? mm[+-32767]=XXXXXX |

- Enter a value between the suggested limits.

Ã

The new Distance zero line value is applied to the relevant transmitter.

```
Zero line ? mBar[+-32767]=XXXXXX
```

● Enter a value between the suggested limits.

Ã

Back to the RAW menu

The new Inert Gas pressure zero line value is applied to the relevant transmitter.

● Push ZLN for other groups. The following key-in line is displayed, for Inert Gas pressure zero line.

```
Zero line ? xx[+-32767]=XXXXXX
```

● Enter a value between the suggested limits, in unit related to the measurement.

Ã

Back to the RAW menu

The new zero line value is applied to the relevant transmitter.

HISTORIC menu

The TA3840C communication unit save the last 100 system fault events with date, hour, slave No, error code (refer to the table), description of the failure.

The HISTORIC menu allows showing the list of the system faults since the oldest.

Example of display

```
06/04/05 15:04:20
ATM: 993.8 mbar TRIM/PERPENDICUL: -0.74m
                01           HEEL: -2.02°
  Date      Time    Adr      Event

03/08/04  16:26:16  01   107  Scale distance
03/08/04  16:46:07  103  014  Scale measure
03/08/04  16:49:03  103  114  Scale measure
03/08/04  16:54:34  103  014  Scale measure
03/08/04  16:58:29  103  114  Scale measure
03/08/04  17:19:28  03   007  Scale distance
03/08/04  17:19:36  03   107  Scale distance
03/08/04  17:43:48  102  014  Scale measure


  UP    DOWN                        RTN
```

Error codes

| Beginning code	End code	Default
001	101	Radar transmitter communication
002	102	Radar transmitter location (not used)
003	103	Autotest fault when the radar transmitter is powered up (not used)
004	104	MW board failure (not used)
005	105	Too low signal from radar transmitter (not used)
006	106	Radar transmitter wrong distance measurement
007	107	Radar transmitter distance invalid measurement
008	108	Radar transmitter high temperature invalid measurement
009	109	Radar transmitter medium temperature invalid measurement
010	110	Radar transmitter low temperature invalid measurement
011	111	Radar connected analog transmitter 1 invalid measurement
012	112	Radar connected analog transmitter 2 invalid measurement
013	113	Radar connected analog transmitter 3 invalid measurement
014	114	4-20 mA analog transmitter invalid measurement
015	115	Monitoring 1 communication fault
016	116	Monitoring 2 communication fault

Software updating

In case of updating, Honeywell Marine can provide a set of 2 EPROM'S per soft, one "EVEN" and one "ODD".

The EPROM'S have to be inserted on relevant electronic boards at the same location than the old one's, taking care not to damage the pins of each EPROM.

● The TA3840C soft is called SOFT 1024.

● The TA3840R soft is called SOFT 1025.

● The TA3840S soft (CPU board optional) are called:

- SOFT 1004 for the CPU board standard (ref. M11555),

- SOFT 1007 for the CPU board protocol P-Net (ref. M12922).

TA3840C CPU board

EPROM even   EPROM odd
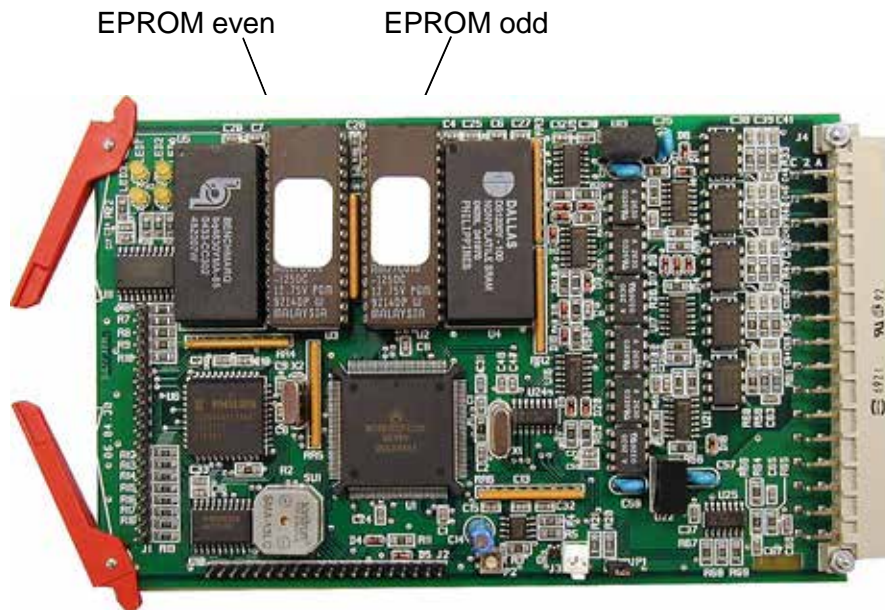
TA3840R communication board

EPROM even   EPROM odd

TA3840S CPU board (optional)

EPROM even   EPROM odd

3. TROUBLESHOOTING GUIDE

In case of system failure, the first rule to be applied consists in eliminating any possible cause originating outside the system itself. For this, the following preliminary checks must be carried out.

● Check the condition of the system electrical protection.

● Check the presence of the 24 Vdc power supply on the terminal block of the TA3840C.

● Check the presence of the main supply on the terminal block of the TA3840S.

> ⚠️ The voltage marked next to the terminal block must be the same as that of the mains system.

● Check the connection of the cables and their condition.

Where the preliminary checks did not provide a solution to the problem, each of the system racks will need to be checked following the instructions in the table below.

☞ ***When the cause of an incident is a blown out fuse, it is necessary to search the reason of the possible short circuit.***

TA3840S Safety unit

Observation		Likely cause	Remedy
Indicator 5 Vdc off, radar supply indicators off, despite power supply switch on.		- Main 115/230 Vac power supply not connected on TA3840S rack.	- Check the connection of the 115/230 Vac on the terminal block on rear face. - Check the EMC filter.
Indicator 5 Vdc off, despite power supply switch on and radar supply indicators on.		- Power supply board's fuse blown out.	- Replace the fuse F1 on power supply board (*).
		- Power supply board out of service, if the fuse F1 is not blown out.	- Replace the power supply board (*).
Indicator of radar power supply off on some radar transmitter supply board.		- Radar transmitter supply board's fuse blown out.	- Replace the fuse F1, F2, F3 or F4 on radar transmitter supply board (*).
		- Radar transmitter supply board out of service, if the fuse is not blown out.	- Replace the radar transmitter supply board (*).
Communication fault message for all radars on TA3840C display screen and no radar communication indicators flashing.		- Wrong digital connection with TA3840C rack.	- Check and secure the cable of interconnection with TA3840C rack.
Communication fault message for some radars on TA3840C display screen and	no radar communication indicators flashing,	- Transmitter radar supply board out of service.	- Replace the radar transmitter supply board (*)..
	radar communication indicator Tx is flashing and not Rx.	- Default of connection with the radar or configuration of the radar.	- Check the connection with the radar, check the configuration of the radar.

(*) refer to the relevant paragraph in "REMEDIAL MAINTENANCE" chapter.

TA3840C Communication unit

Observation		Likely cause	Remedy
No display, indicator 5 Vdc off, despite power supply switch on and	green LED 24 Vdc main input off,	- 24 Vdc Power supply not connected on TA3840C.	- Check the presence of the 24 Vdc on the terminal block on rear face. - Check the EMC filter.
	green LED 24 Vdc main input on,	- Power supply board's fuse blown out.	- Replace the fuse F1 on power supply board (*).
	green LED 24 Vdc main input on, power supply board's fuse not blown out.	- Power supply board out of service.	- Replace the power supply board (*).
No display or display erratic, despite indicator 5 Vdc on.		- Ribbon cable connectors badly engaged on LCD display or CPU board.	- Check that the ribbon cable connectors are well engaged.
		- LCD display board out of service.	- Replace the LCD display board (*).
Some key on keyboard inefficient.		- Ribbon cable connector from front face badly engaged on CPU board.	- Check that the green ribbon cable connector is well engaged on CPU board.
		- Front face keyboard out of service.	- Replace the front face (*).
Some indicators inefficient : communications in order and Rx or Tx not flashing, system fault on display and indicator not flashing, display in order and 5 Vdc indicator not lit.		- Ribbon cable connector from front face badly engaged on CPU board.	- Check that the green ribbon cable connector is well engaged on CPU board.
		- Front face indicators out of service.	- Replace the front face (*).
Erratic working, no communication with all sensors, no communication with external application.		- Not correct operation.	- Replace the CPU board (*).
Communication fault message for all radars and	sensor port Tx flashing but not Rx,	- Wrong digital connection with TA3840S rack.	- Check and secure the cable of interconnection with TA3840S rack. - Refer to TA3840S rack troubleshooting.
	no sensor port indicators flashing.	- CPU board out of service.	- Replace the CPU board (*).
Communication fault message for some radars.		- No communication through TA3840S rack for some channels.	- Refer to TA3840S rack troubleshooting.

Communication fault message for all analog 4-20 mA channels from one analog 4-20 mA inputs board (channels 1 to 48 or 49 to 96).	- No communication with the relevant board.	- Replace the analog 4-20 mA inputs board (*).
Communication fault message for all analog 4-20 mA channels or On/Off inputs or On/Off outputs from one multifunction board (channels 1 to 48 or 49 to 96).	- No communication with the relevant board.	- Replace the multifunction board (*).
Fail message for all analog 4-20 mA channels from one analog 4-20 mA input board (channels 1 to 48 or 49 to 96).	- Relevant analog transmitters not powered, green LED 24 Vdc Analog Sensors off.	- Switch on (toward bottom) the switch on relevant board.

Observation	Likely cause	Remedy
Communication failure with any external application, relevant Rx and Tx indicators don't flash.	- No communication from the external application.	- Check and secure the cable of connection with the external application.
		- Check the configuration of the supply and communication board (refer to the installation manual).
		- Replace the power supply board (*).
Communication failure with any external application, relevant Rx indicator flash but not Tx.	- No communication from the external application.	- Check the TA3840C rack address setting in the external application.

(*) refer to the relevant paragraph in "REMEDIAL MAINTENANCE" chapter.

TA3840C A/D Communication unit

Observation		Likely cause	Remedy
Indicator 5 Vdc off, despite power supply switch on and	green LED 24 Vdc main input off,	- 24 Vdc Power supply not connected on TA3840C.	- Check the presence of the 24 Vdc on the terminal block on rear face.
			- Check the EMC filter.
	green LED 24 Vdc main input on,	- Power supply board's fuse blown out.	- Replace the fuse F1 on power supply board (*).
	green LED 24 Vdc main input on, power supply board's fuse not blown out.	- Power supply board out of service.	- Replace the power supply board (*).
No communication for all analog 4-20 mA channels from one analog 4-20 mA inputs board (48 first channels or 48 further channels).		- No communication with the relevant board.	- Replace the analog 4-20 mA inputs board (*).

(*) refer to the relevant paragraph in "REMEDIAL MAINTENANCE" chapter.

TA3840R Remote display unit

Observation	Likely cause	Remedy
No display, indicator 5 Vdc off.	- No proper connection with the TA3840C rack.	- Check and secure the cable of connection with the TA3840C rack.
No display or display erratic, despite indicator 5 Vdc on.	- Ribbon cable connectors badly engaged on LCD display or CPU board.	- Check that the ribbon cable connectors are well engaged.
	- LCD display board out of service.	- Replace the LCD display board (*).
Some key on keyboard unefficient.	- Ribbon cable connector from front face badly engaged on CPU board.	- Check that the green ribbon cable connector is well engaged on CPU board.
	- Front face keyboard out of service.	- Replace the front face (refer to "Electronic boards" paragraph in this manual).
Some indicators unefficient : communications in order and Rx or Tx not flashing, system fault on display and indicator not flashing, display in order and 5 Vdc indicator not lit.	- Ribbon cable connector from front face badly engaged on CPU board.	- Check that the green ribbon cable connector is well engaged on CPU board.
	- Front face indicators out of service.	- Replace the front face (refer to "Electronic boards" paragraph in this manual).
Erratic working, no communication with all sensors, no communication with external application.	- Not correct operation.	- Replace the communication board (*).

(*) refer to the relevant paragraph in "REMEDIAL MAINTENANCE" chapter.

4. REMEDIAL MAINTENANCE

Recommended spare parts

Two standard fuses kit are supplied by Honeywell Marine with the TA3840 system.

- Fuses kit for TA3840C and TA3840S class IIB: code 34766.
- Fuses kit for TA3840C and TA3840S class IIC: code 34767.

In case of other spare parts request, refer to "Spare parts list" chapter.

Repair procedures

In case of intervention on the electronic boards and if the jumpers are removed, refer to the MI5008E installation manual to check their location.

TA3840C - Power supply and communication board - Removing/installing/fuse replacement

- Unscrew the 4 screws, then pull the handle to extract the electronic board from the rack.
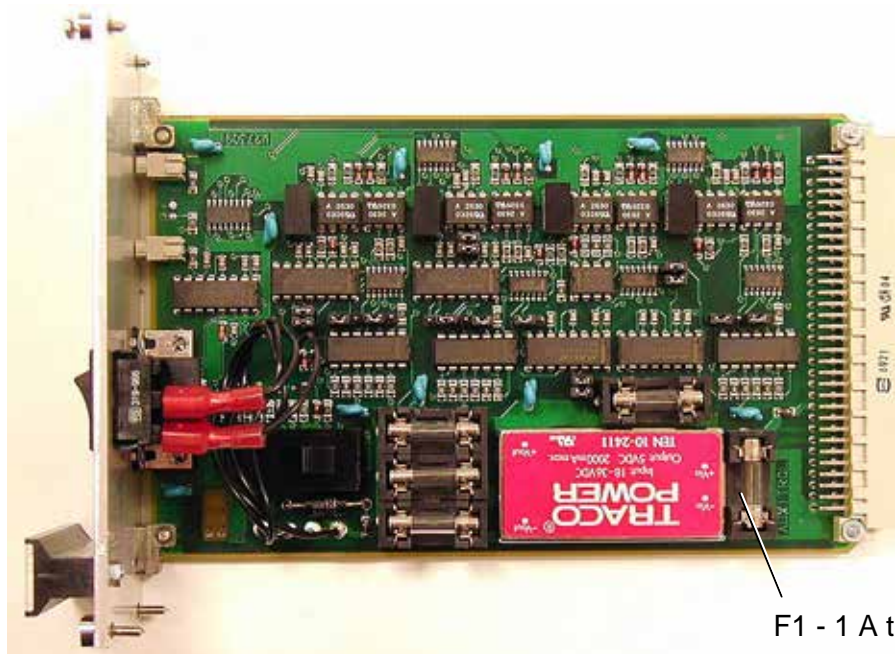
F1 - 1 A temporised

NOTE : the other fuses are absent or not used.

TA3840C - 4-20 mA analog inputs or multifunction board - Removing/installing

- Raise the 2 extractor levers and pull them to extract the electronic board from the rack.

- When re-installing the board, place the extractor levers in horizontal position, slide the board in its runners, push it until it is engaged, then lower the levers.

> *Take care that the electronic board is in its dedicated slot in order to respect the channel identification depending on JP8 position (refer to "CONFIGURATION OF THE BOARD" chapter of the MI5008E installation manual).*

TA3840C - LCD display board and CPU board - Replacement

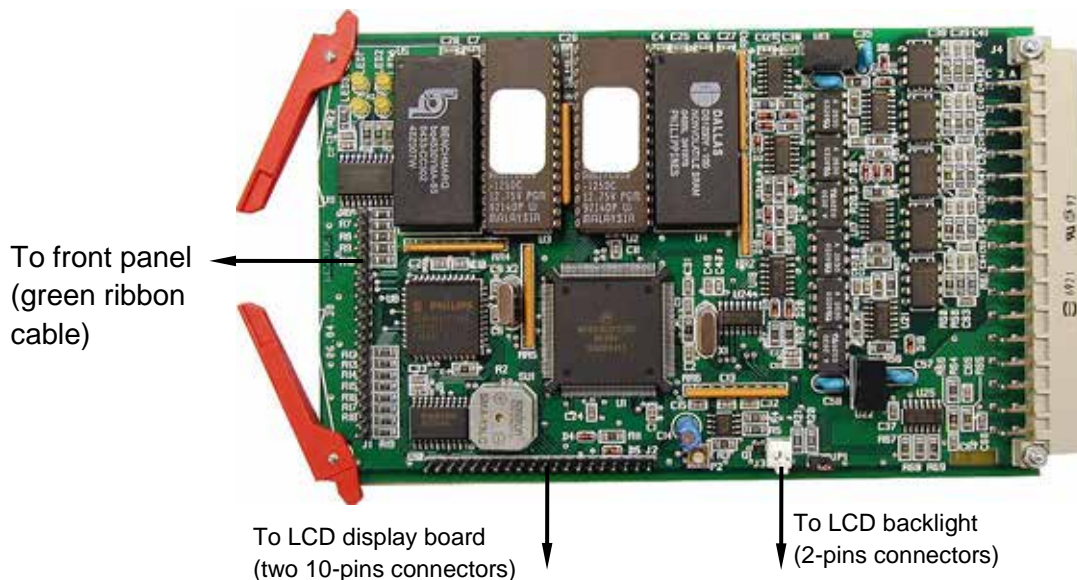### CPU board - Removing/installing

- Disconnect the green ribbon cable connector (A).

- Disconnect the two 10-pins connectors (B).

- Disconnect the 2-pins connectors (C).

- Raise the 2 extractor levers and pull them to extract the CPU board from the rack.

- When re-installing the CPU board, place the extractor levers in horizontal position, slide the board in its runners, push it until it is engaged, then lower the levers.

- Reconnect all connectors in the reverse order.

LCD display board - Removing/installing

● Remove the 4 nuts (F) and washers fixing the LCD display board (E) using a 5.5 mm spanner.

● Disconnect the two 10-pins connectors (D).

● Disconnect the 2-pins connectors (C); unsolder the two wires, and solder them on the new electronic board taking care with their color: orange (+) towards top, black (-) towards bottom and 10-pins connectors.

● Install the new LCD display board and reconnect in reverse order.

A   B   C   D   E   F
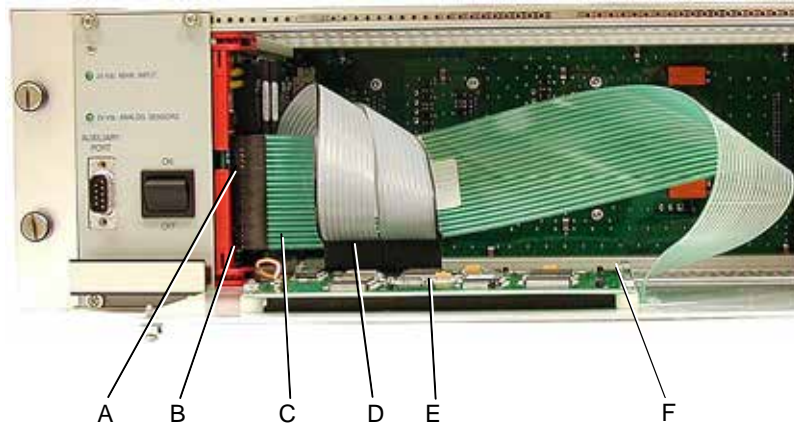
Note: for a correct installation of the 2 ribbon cables on the CPU board, take care to respect the connectors location (refer to the figure below).

To front panel (green ribbon cable)

To LCD display board (two 10-pins connectors)

To LCD backlight (2-pins connectors)

TA3840C - Front face - Replacement

- Remove the 2 upper screws (A) of the front panel.

- Tilt the front panel until it goes out from its hinges.

- Disconnect the green ribbon cable connector (C) from the CPU board.

- Disconnect the two 10-pins connectors (B) from the CPU board.

- Disconnect the 2-pins connectors (D)

- Remove the front panel.

- Install the new front panel and reconnect in reverse order (see the operating mode previous for a correct installation of the 2 ribbon cables on the CPU board).

A   B   C   D
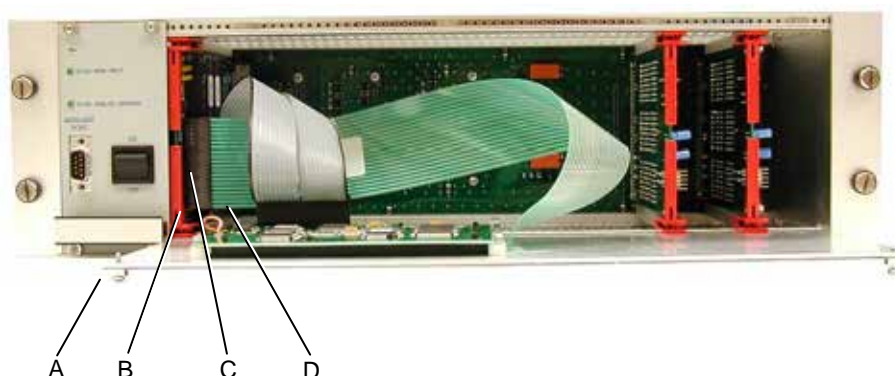
TA3840S - Power supply board - Removing/installing/fuse replacement

- Unscrew the 4 screws, then pull the handle to extract the electronic board from the rack.

F1 - 1 A temporised
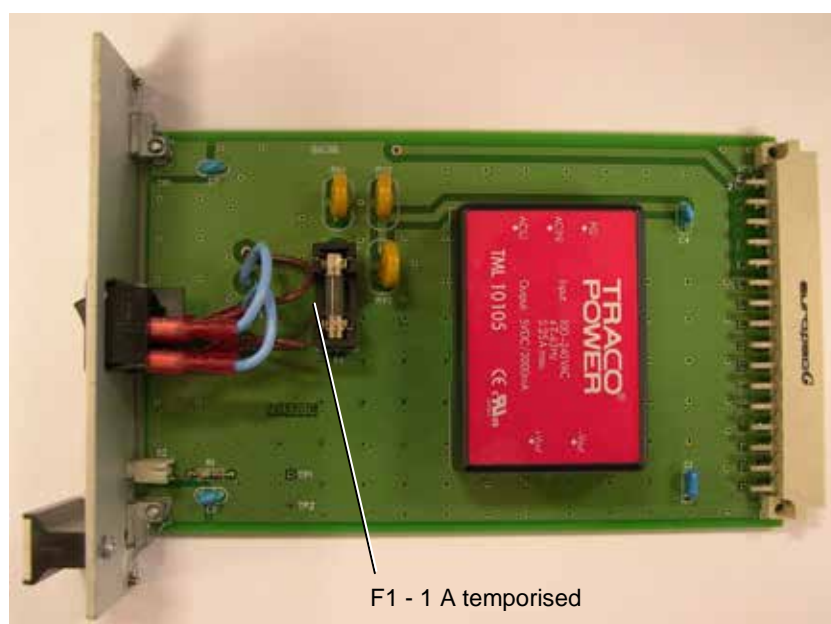
## TA3840S - Radar transmitter supply board - Removing/installing/fuse replacement

Category IIB and IIC

● Push in the lower lock to disengage the board, then raise and pull the upper extractor lever to extract the board.

● When re-installing the board, place the upper extractor lever in horizontal position, slide the board in its runners, push it until it is engaged, then lower the lever.

F4 - 250 mA temporised
F3 - 250 mA temporised
F1 - 200 mA D1TD
F2 - 200 mA D1TD
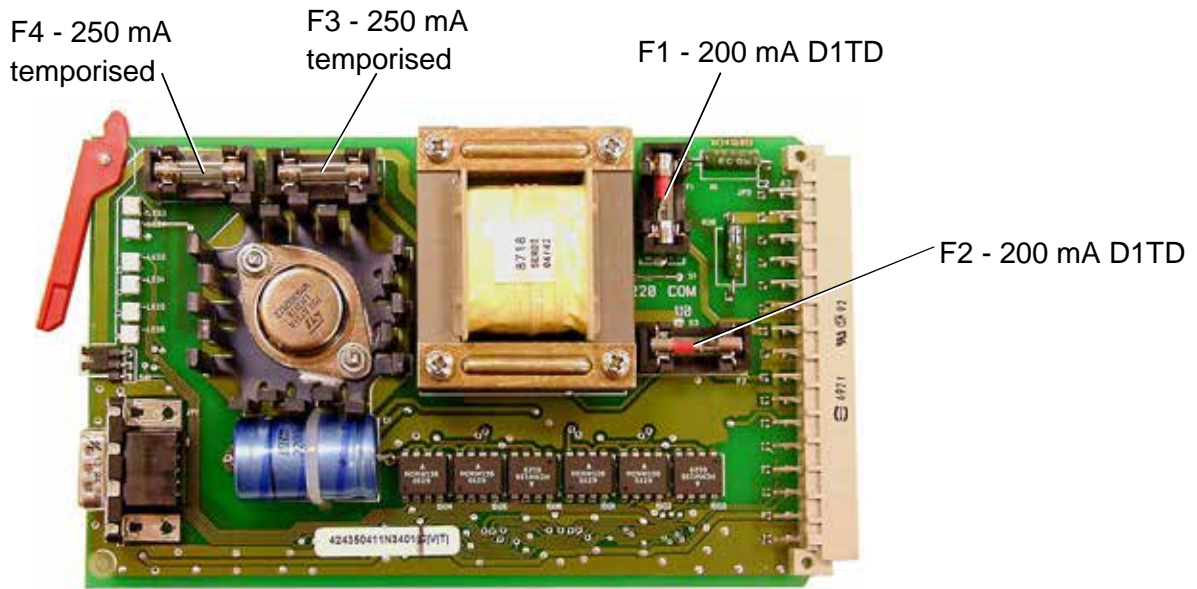
TA3840R - LCD display board and Communication board - Replacement

● Remove the front face (refer to "Electronic boards" paragraph in this manual).

Communication board
LCD display board

F

D   B C A   E
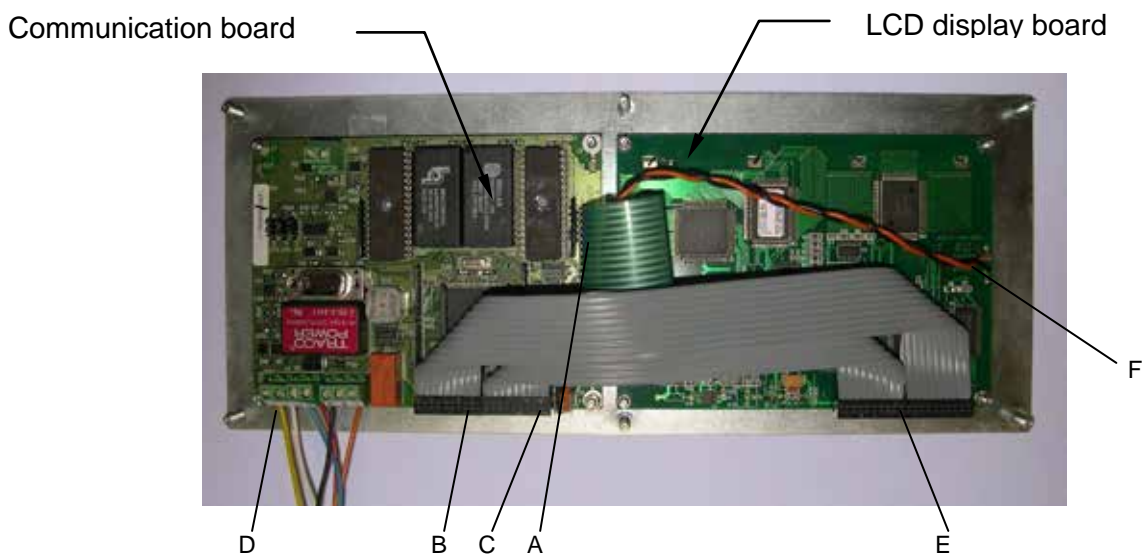
Communication board - Removing/installing

- Disconnect the connector from the front panel (A).

- Disconnect the two 10-pins connectors (B) from the LCD display board and the backlight 2-pins connector (C).

- Disconnect the power supply 24 Vdc and communication port (Terminal 4 wires, D).

- Remove the 4 nuts and washers fixing the communication board using a 5.5 mm spanner.

- Install the new communication board and reconnect in reverse order (refer to "CONNECTION" chapter of the MI5008E installation manual).

LCD display board - Removing/installing

- Disconnect the two 10-pins connectors from the communication board (E).

- Disconnect the 2-pins connector (F), unsolder the two wires, and solder them on the new electronic board, taking care with their color: orange (+) towards top, black (-) towards bottom and 10-pins connectors.

- Remove the 4 nuts and washers fixing the LCD display board using a 5.5 mm spanner.

- Install the new LCD display board and reconnect in reverse order.

Front face replacement

- Disconnect the green ribbon cable connector (A) from the Communication board.

- Disconnect the two 10-pins connectors (B) from the Communication board.

- Disconnect the 2-pins connectors (C)

- Remove the communication board and the LCD board using a 5.5 mm spanner.

- Install in reverse order the boards on the new front panel and reconnect in reverse order.

5. SPARE PARTS LIST

TA3840C

Communication unit components, with ordering codes:

Code	Designation
34765	Fuse for power supply and communication board
34278	EMC filter
34262	Power supply and communication board
34263	CPU board
35237	4-20 mA analog inputs board
35233	Multifunction board
34291	Interconnection board
25720 + 27209	LCD display board
26994	Front face

TA3840S

Safety unit components, with ordering codes:

Code	board
34658	Fuse kit for radar power supply Class IIB
965417	Fuse kit for radar power supply Class IIC
34278	EMC filter
34331	Rack power supply board 230/115 Vac
34162	Radar power supply board EEx IIB 230 Vac, for TA840 Radar
34162-1	Radar power supply board EEx IIB 115 Vac, for TA840 Radar
34864	Radar power supply board EEx IIB 230 Vac, for EMx40 Radar
34864-1	Radar power supply board EEx IIB 115 Vac, for EMx40 Radar
35155	Radar power supply board EEx IIC 230 Vac
35155-1	Radar power supply board EEx IIC 115 Vac
M11555	Optional CPU board MODBUS communication
M12922	Optional CPU board P-Net communication
34260	Interconnection board

TA3840R

Remote display unit components, with ordering codes:

Code	Designation
35148	Communication board
25720 + 27209	LCD display board
26996	Front face

6. INFORMATIONS

Claim report

The target is : help us to help you !

Despite the troubleshooting guide and the repair procedures, in case of spare part need or of request for service, the claim report in annex A needs to be fulfilled and transmitted by fax to Honeywell Marine. This will help us to confirm the nature of failure and remedies, for better service.

This report will be requested before any other intervention.

Return for repair

The return for repair form in annex B needs to be fulfilled and transmitted to Honeywell Marine together with the defective equipment in purpose. This will help us to identify the defect and the action to carry out, for better service.

Reference of Honeywell Marine customer service

Address :

Honeywell Marine SAS

9, rue Isaac Newton

Z.A. Port Sec Nord

18000 BOURGES

Telephone : +33 2 48 23 79 18

Fax :   +33 2 48 23 79 02

E-mail :   service.marine@honeywell.com

APPENDIX A - TA3840 SYSTEM / CLAIM REPORT

Vessel:.. Hull number:...

Owner or Shipyard: ....

TA3840C rack   P/N: .... S/N: .... Soft version:.......................

TA3840S rack   P/N: .... S/N: .... Soft version:.......................

TA3840C A/D rack   P/N: .... S/N: .... Soft version:.......................

TA3840R rack   P/N: .... S/N: .... Soft version:.......................

1) Description of trouble, with read values, messages, indicators status, alarms status, etc…:

2) Result of troubleshooting item applied, observations:

3) Carried out remedies:

4) Requested spare parts:

NAME:	DATE:
QUALITY:	SIGNATURE:

APPENDIX B - TA3840 SYSTEM / RETURN FOR REPAIR FORM

Return Material Authorization Form

Honeywell

Ship to:	**Honeywell Marine**
	9, rue Isaac Newton
	ZA Port Sec Nord
	18000 Bourges (FRANCE)

Formulaire S-SOP-FR1F-SRV-1-F01

Est. shipping date:

Handled by:	
E-mail:	
Tel: +33 (0) 248237918	
Fax: +33(0) 248237902	

RMA #:

RMA # only issued by Honeywell Marine factory.

Return shipment details		Customer order details	
Company name		**Customer order ref #**	
Attention		**Quotation required?**	☐ Yes ☐ No
Adress		**Warranty claim details**	
Postal code / City		**Warranty claimed?**	☐ Yes ☐ No
Country		**Reason of claim:**	
Phone / Fax		**Original order #:**	
E-mail		**Delivery date:**	
Return shipment by:		**Claim acceptance**	☐ Yes ☐ No

End user info			
End user same as Return shipment consignee?	☐ Yes ☐ No If not, provide end user company and description of end use:	**End user company:**	
		End use:	

Instrument / Item details			
Instrument description:			
Model # / Type #:			
Serial #:			
Part #:		**Description:**	
Installation date:		**Commissioning date:**	
Problem description:			
Goods are returned for:	☐ Repair ☐ Replacement ☐ Model # Change ☐ (Re) Calibration ☐ Return on Advanced Replacement ☐ Upgrade / Modify ☐ Other:		
Required modification/ calibration/change/etc.:			

Application details (applicable for wetted parts only)					
Product:					
Operating temperature:	**min.:**		**normal:**		**max.:**
Operating pressure:	**min.:**		**normal:**		**max.:**

By signing and returning this RMA Form I confirm that the equipment has been cleaned and decontaminated in accordance with good industrial practices and in compliance with all regulations. This equipment poses no health or safety risk due to contamination. If applicable, I attach corresponding International Chemical Safety Cards for the media the equipment was exposed to.

Also I agree that by returning above mentioned goods I will at least be charged with examination costs of EUR ,,,,, per item.

Name:	**Signature:**
Department:	
Date:	

In order to avoid delays please ensure that all applicable fields are completed. Completed forms (one per instrument, spares can be itemized on a separate list) to be mailed to service.marine@honeywell.com. Equipment to be sent to above mentioned "*Ship To:*" address with a copy of the completed form(s) on the packaging.
Do not send equipment before receiving a RMA number.

Honeywell