

How to install Magelis operator terminals and iPC for Merchant Navy applications

Schneider Electric
06516 Carros - France

DISCLAIMER

Instructions provided in this Technical Resolution do not substitute to Merchant Navies Rules applicable in ship manufacturing or ship maintenance & installation.

RELEVANT STANDARDS

These devices have been manufactured in accordance with:

- IACS-E10
- IEC 60945 with selection of applicable sections
- IEC 60092-504 with selection of applicable sections
- IEC 61174 with selection of applicable sections

We cannot accept any responsibility for failure to observe these regulations.

RELEVANT PRODUCTS

These recommendations relate to matrix, graphic, touch screen terminals and Industrial PC intended for installation for Merchant Navies applications

GENERAL INSTALLATION INSTRUCTIONS

Make sure that you follow all the recommendations in the User Manuals and especially those listed below

MERCHANT NAVIES INSTALLATION INSTRUCTIONS

General

Only analogue, digital and telecommunication signal pairs can be bound one against the other in one bundle or run in the same bundled cable.

The relay, variator, supply and power circuits must be separated from the pairs above.

Take special care when setting up the speed variators to separate the power connections from the data connections.

Check IP Code (Degrees of protection provided by enclosures) compliance of your installation

INSTRUCTION SHEET

XBT N/R MATRIX TERMINALS

For installation in GENERAL POWER DISTRIBUTION ZONE

To comply with EMC requirements in GENERAL POWER DISTRIBUTION ZONE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
All XBT N All XBT R	Serial link cable, Printer cable and Power supply cable must be fitted with Würth 74271222 type snap ferrite

For installation on BRIDGE

- Terminal must be installed not less than 5m away from magnetic compass as required in 11.2 of IEC60945.

To comply with EMC requirements for BRIDGE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
All XBT N All XBT R	Serial link cable, Printer cable and Power supply cable must be fitted with Würth 74271222 type snap ferrite
24VDC power supplied terminals : XBT R 410 XBT R 411 XBT N 401 XBT N 410 XBT NU 400	Power supply cable fitted (in series with supply terminals) with Schaffner FN680-1/06 type filter.

INSTRUCTION SHEET

GRAPHIC TERMINALS XBT GT, HMI STU and HMI STO

For installation in GENERAL POWER DISTRIBUTION ZONE

To comply with EMC requirements for GENERAL POWER DISTRIBUTION ZONE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
XBT GT 1100 / 1130	No specific instruction
XBT GT 2330 / 2340 XBT GT 4330 / 4340 XBT GT 5330 / 5340 XBT GT 6330 / 6340 XBT GT 7340	- Power supply cable must be fitted (in series with supply terminals) with Schaffner FN2070-1/06 type filter. - Product must be mounted in a grounded metallic enclosure. - Shield of Power supply cable, AUX cable and USB cables must be grounded

For installation on BRIDGE

- Terminal must be installed not less than 5m away from magnetic compass as required in 11.2 of IEC60945.
- HMI application must be designed to not degrade the night vision of the officer of the watch
Configuration software offers the possibility to tune brightness/contrast and application panel colours to comply with Ergonomic requirements based on IEC60945 for Bridge.

To comply with EMC requirements for BRIDGE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
XBT GT 1100 XBT GT 1130	Power supply cable must be fitted (in series with supply terminals) with Schaffner FN680-1/06 type filter.
HMI STU 655 HMI STU 855	Power supply cable must be fitted (in series with supply terminals) with Schaffner FN2010 type filter.
HMI SCU 8B5 HMI SCU 8A5 HMI SCU 6B5 HMI SCU 6A5	- Power supply cable must be fitted (in series with supply terminals) with Schaffner FN2010-3-6 type filter. - Shield of IO and USB cables must be grounded.
HMI STO 501 HMI STO 511 HMI STO 512	Power supply cable must be fitted (in series with supply terminals) with Schaffner FM2070-3-06 type filter.
HMI STO 705 HMI STO 715 HMI STO 735	No specific instruction

INSTRUCTION SHEET

GRAPHIC TERMINALS HMIGTO

For installation on GENERAL POWER DISTRIBUTION ZONE

To comply with EMC requirements for GENERAL POWER DISTRIBUTION ZONE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
HMI GTO 1300 /1310 HMI GTO 2300 / 2310 HMI GTO 3510 HMI GTO 4310	A filter of Schaffner type FN2070-3-06 or equivalent is to be installed inside the 24VDC power line.
HMI GTO 5310 HMI GTO 6310	No specific instruction

For installation on BRIDGE

- HMI application must be designed to not degrade the night vision of the officer of the watch
Configuration software offers the possibility to tune brightness/contrast and application panel colours to comply with Ergonomic requirements based on IEC60945 for Bridge.
- Terminal must be installed not less than 5m away from magnetic compass as required in 11.2 of IEC60945.

To comply with EMC requirements for BRIDGE, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
HMI GTO 1300 /1310 HMI GTO 2300 / 2310 HMI GTO 3510 HMI GTO 4310	- A filter of Schaffner type FN2070-3-06 or equivalent is to be installed inside the 24VDC power line. - The product is to be placed inside the metal enclosure.
HMI GTO 5310 HMI GTO 6310	The product is to be placed inside the metal enclosure.

INSTRUCTION SHEET

GRAPHIC HMIGTU TERMINALS

For installation on the GENERAL POWER DISTRIBUTION ZONE and BRIDGE

To comply with EMC requirements, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
HMIDT542 HMIDT642 HMIDT643 HMIDT732 HMIDT752 HMIDT952 HMIDT351 HMIDT551 HMIDT651 HMIG3U HMIG5U HMIG5U2	- The product is to be placed inside the metal enclosure. - A filter of Schaffner type FN2070-10-06 or equivalent is to be installed inside the 24VDC power line. - A ferrite core is to be installed inside the 24VDC power line and signal lines. See the details at note. - Terminal must installed five meters away from the compass as required in 11.2 of IEC60945. - HMI application must be designed to not degrade the night vision of the officer of the watch. Configuration software offers the possibility to tune brightness/contrast and application panel colours to comply with ergonomic requirements based on IEC60945 for Bridge. - When using a battery for the display produced in the week 40 of 2018 (DATE:1840) and later, use the battery with 24VDC output.

Note:

Interface

	Qty	Turns	Ferrite Core
Power-Supply Lines	1	3	Seiwa Type E04SR401938 or equivalent
COM1, COM2, LAN1, LAN2, DVI-D	1	2	Seiwa Type E04SR301334 or equivalent
USB, L-IN/MIC, AUX	1	2	Seiwa Type E04SR200932 or equivalent

INSTRUCTION SHEET

Industrial PC and associated display

For installation in the **GENERAL POWER DISTRIBUTION ZONE** and **BRIDGE**.

- Products must be installed not less than 5m away from magnetic compass as required in 11.2 of IEC60945.
- HMI application must be designed to not degrade the night vision of the officer of the watch
Configuration software offers the possibility to tune brightness and application panel colours to comply with Ergonomic requirements based on IEC60945 for Bridge.

To comply with EMC requirements, products must be installed with accessories detailed in the table below:

Products	Instructions for Installation
Box PC HMI BU xND1xx1 HMI BU xND2xx1 HMI PCC B1B1B HMI PCC B1B2B HMI PCC B1B1B	• Power supply cable must be fitted (in series with supply terminals) with HMIYLFIMAR11 filter. (see Schneider catalogue)
Panel PC HMI PU x7D0xx1 HMI PU x9D0xx1 HMI PCC P170B HMI PCC P180B	• Power supply cable must be fitted (in series with supply terminals) with HMIYLFIMAR11 filter. (see Schneider catalogue)
Display HMI DID7DT0	• HMI DID7DT0 must be connected to marine approved Schneider Box PC • Power supply cable must be fitted (in series with supply terminals) with Schaffner FN2070-3-06 or FN670-1.8-06 type filter.

Products	Instructions for Installation
Box PC HMI BMO* HMI BMP*	• Box PC do not provide electrical insulation. External power supply like HMIYMMAC1 must be install in order to provide electrical insulation. • HDD are not type approved and must not be installed in the configured product. Please refer to appropriate type approval for alternative solutions like SSD,... • Box PC are tested without any cabinet for installation in general power distribution zone. Installation into a grounded EMC cabinet may allow the equipment to be installed into Bridge zone if emissions measures comply with IACS rules.
Display HMIDM6421 HMIDM6521 HMIDM7421 HMIDM7521 HMIDM9521 HMIDMA521	• Displays are tested without any cabinet for installation in general power distribution zone. Installation into a grounded EMC cabinet may allow the equipment to be installed into Bridge zone if emissions measures comply with IACS rules.