Magelis Smart 8.4"

User Manual

07/2010

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Schneider Electric

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

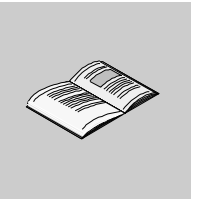
All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

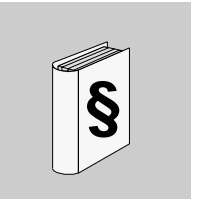
Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

Table of Contents



Safety Information



Important Information

NOTICE

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

⚠ CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

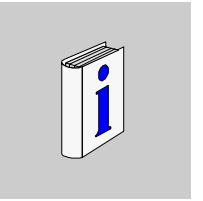
CAUTION
CAUTION, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** equipment damage.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and the installation, and has received safety training to recognize and avoid the hazards involved.

About the Book



At a Glance

Document Scope

This manual describes the configuration and usage of the Magelis Smart 8.4" from the Magelis terminal range.

This computer is designed to operate in an industrial environment and features the very latest technologies.

The Magelis Smart 8.4" computer is a standalone product.

There are four versions of the Smart 8.4".

The product references are:

MPC ST 11 NAJ 00T
- 24 Vdc supply plus external AC/DC adapter for 100...240 Vac
- 8.4'' SVGA TFT
- ULV Celeron M 600 MHz processor
- Windows® XPe
- 1 GB Compact Flash card

MPC ST 11 NAJ 0•H
- 24 Vdc supply plus external AC/DC adapter for 100...240 Vac
- 8.4'' SVGA TFT
- ULV Celeron M 600 MHz processor
- Windows® XPe with Vijeo Designer Runtime pre-installed
- 1 GB Compact Flash card

MPC ST 11 NDJ 00T
- 24 Vdc
- 8.4'' SVGA TFT
- ULV Celeron M 600 MHz processor
- Windows® XPe
- 1 GB Compact Flash card

XBT GTW450
- 24 Vdc
- 8.4'' SVGA TFT

- ULV Celeron M 600 MHz processor
- Windows® XPe with Vijeo Designer Runtime pre-installed
- 1 GB Compact Flash card

The characteristics of this terminal are detailed in Characteristics of the Smart 8.4 ‘’ *(see page 30)*

Part Number Description

Your product may have a Part Number not included in the enclosed User Manual. The commercial Part Number mentioned in the User Manual are those at the introduction of the product range. New part Numbers may be added during the life cycle of the product range. The new products are similar to products described in the User Manual but with changes, such as storage device size or type, memory size or bundled application software. The differences from the initial part numbers are indicated below:

	MPC		**S**		**T**		**1**		**1**		•		•		•		•		•		•	
Reference	1		2		3		4		5		6		7		8		9		10		11	

Reference Number	**Character Name**	**Possible Value**
1	Part number radical	MPC **NOTE:** No change over product range
2	Product Type	S = Smart **NOTE:** No change over product range
3	Front Panel Type	T = Touch screen **NOTE:** No change over product range
4	Screen size	1 = 8.4” 2 = 12” 5 = 15” 9 = 19”
5	CPU Type	1 = Low End 2 = Mid range 5 = High End
6	Hardware option	N = none M = HDD replaced by SSD 15GB S = HDD replaced by SSD 8GB • = HDD replaced by other storage device type and or size
7	Power Supply	A = AC D = DC
8	Operating System	J = XP embed X = XP Pro • = Other operating system

Reference Number	Character Name	Possible Value
9	Hardware iteration	0 = Initial 1 = First 2 = Second etc
10	Service	0 = None
11	Bundled Software	N = None V = Vijeo Citect Run Time 500 I/O Full L = Vijeo Citect Run Time 1200 I/O Lite H = Vijeo Designer • = Other application software

NOTE: All instructions applicable to the enclosed product and all safety precautions must be observed.

Validity Note

This documentation is valid for Magelis Smart 8.4”

The technical characteristics of the device(s) described in this manual also appear online. To access this information online:

Step	Action
1	Go to *www.schneider-electric.com*
2	In the **Search** box on the home page, type a model number. Do not type any blank spaces in the model number. To get information on a grouping similar modules, you can use the characters *; do not use dots or *xx*'s.
3	Under **All**, click **Products** →**Product Datasheets** and select the model number that interests you.
4	To save or print a data sheet as a .pdf file, click **Export to PDF**.

The characteristics presented in this manual should be the same as those that appear online. In line with our policy of constant improvement we may revise content over time to improve clarity and accuracy. In the event that you see a difference between the manual and online information, use the online information as your reference.

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Microsoft® and Windows® are registered trademarks of Microsoft Corporation.

Intel®, Celeron® and Pentium® are registered trademarks of Intel Corporation.

IBM® is a registered trademark of International Business Machines Corporation.

Related Documents

Title of Documentation	Reference Number
Installation Guide for Magelis Industrial PC and Terminals	35012221
Vijeo Designer Tutorial	35007035
NEMA ICS 1.1	–
Magelis Industrial PC and Terminals - Readme	35012220

You can download these technical publications and other technical information from our website at www.schneider-electric.com.

Product Related Information

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Always use a properly rated voltage sensing device to confirm power is off.
- Unplug the power cable from both the Smart unit and the AC power supply.
- Replace and secure all covers or elements of the system before applying power to the unit.
- Use only the specified voltage when operating the Smart 8.4". The AC unit is designed to use 100 ... 240 Vac input. The DC unit is designed to use 23 ... 25 Vdc. Always check whether your device is AC or DC powered before applying power

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.(1)
- Each implementation of a Magelis Smart 8.4" must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTE: The Smart 8.4" is a highly configurable device and is not based on a real-time operating system. Changes to the software and settings of the following must be considered new implementations as discussed in the message above. Examples of such changes include:

- System BIOS
- System Monitor (See *System Monitoring, page 83*).
- Operating system
- Installed hardware
- Installed software

(1) For additional information, refer to *NEMA ICS 1.1 (latest edition)*, *"Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Ajustable-Speed Drive System" or their equipment governing your particular location.*

User Comments

We welcome your comments about this document. You can reach us by e-mail at techcomm@schneider-electric.com.

General Overview

I

Subject of this Part

This part provides a general overview of the Magelis Smart 8.4" product.

What's in this Part?

This part contains the following chapters:

Important Information

1

General

This chapter describes safety aspects which are specific to the operation of the Smart terminal.

What's in this Chapter?

This chapter contains the following topics:

Federal Communications Commission Radio Frequency Interference Statement - For U.S.A.

FCC Radio Interference Information

This equipment has been tested and found to comply with the Federal Communications Commission (FCC) limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause or be subject to interference with radio communications. To minimize the possibility of electromagnetic interference in your application, observe the following two rules:

- Install and operate the Smart in such a manner that it does not radiate sufficient electromagnetic energy to cause interference in nearby devices.
- Install and test the Smart to ensure that the electromagnetic energy generated by nearby devices does not interfere with the Smart's operation.

⚠ WARNING

ELECTROMAGNETIC / RADIO INTERFERENCE

Electromagnetic radiation may disrupt the Smart's operations, leading to unintended equipment operation. If electromagnetic interference is detected:.

- Increase the distance between the Smart and the interfering equipment
- Reorient the Smart and the interfering equipment.
- Reroute power and communication lines to the Smart and the interfering equipment.
- Connect the Smart and the interfering equipment to different power supplies.
- Always use shielded cables when connecting the Smart to a peripheral device or another computer.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Qualified Personnel

General

You must only permit qualified personnel to install, operate, and maintain these products. A qualified person is one who has skills and knowledge related to the construction and operation of this electrical equipment and the installations, and has received safety training to recognize and avoid the hazards involved. Refer to the most current release of NFPA 70E®, "Standard for Electrical Safety in the Workplace", for electrical safety training requirements. Examples of qualified personnel may include:

- at the application design level, engineering department personnel who are familiar with automation safety concepts (for example, a design engineer),
- at the equipment implementation level, personnel who are familiar with the installation, connection and commissioning of automation equipment (for example, an installation assembly or cabling engineer, or a commissioning technician),
- at the operation level, personnel who are experienced in the use and control of automation and computing equipment (for example, an operator),
- as far as preventive or corrective maintenance is concerned, personnel trained and qualified in regulating or repairing automatic and computing devices (for example an operating technician, or an after-sales service technician, etc.).

Safety Information for the UK

Earthing and Wiring

⚠ WARNING

UNGROUNDED EQUIPMENT

- This apparatus must be earthed.
- Use a three-pin plug with a standard three-pin power point.
- Use only three-core extension cords.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠ WARNING

IMPROPER WIRING

Wire the equipment as described below:

- Green and Yellow: Earth
- Blue: Neutral
- Brown: Live
- The Green and Yellow wire must be connected to the terminal in the plug marked by the letter E or by the safety earth symbols colored Green, or Green and Yellow.
- The blue wire must be connected to the terminal which is marked by the letter N or colored Black.
- The brown wire must be connected to the terminal which is marked with the letter L or colored Red.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTE: The fact that the equipment operates satisfactorily does not imply that the power point is earthed. If you have any doubt about the effective earthing or wiring the power point, consult a qualified electrician.

⚠ WARNING

INCOMPATIBLE POWER SYSTEM

Do not connect this equipment to an isolation transformer power system:

- An isolation transformer system is a system having no reference between live parts and Earth; the exposed conductive parts of the device frame and enclosure are earthed.
- An isolation transformer system is not permitted where the computer is directly connected to public supply systems in the UK.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Certifications and Standards

Agency Certifications

The following agencies have certified this product as meeting the standards listed afterwards.

North America:

- Underwriters Laboratories Inc., UL508, Industrial Control Equipment
- Canadian Standards Association, Specification C22.2, No. 142, Process Control Equipment

Compliance Standards

Schneider Electric tested this product for compliance with the following compulsory standards.

North America:

- Federal Communications Commission, FCC Part 15
- Underwriters Laboratories Inc., UL 60950, Information Technology Equipment

Europe: CE

- Directive 2006/95/EC (Low Voltage) Directive 2004/108/EC (EMC)
- Programmable Controllers: IEC/EN 61131-2
- EMI: EN55011 (Group 1, Class A) / IEC/EN 61000-3-2, IEC/EN 61000-6-4
- EMC: EN 61000-6-2
- IEC/EN 60950, Information Technology Equipment

Australia:

- C-Tick N998
- Standard AS/NZS CISPR11

Qualification Standards

Schneider Electric voluntarily tested this product to additional standards. The additional tests performed, and the standards under which the tests were conducted, are specifically identified in *Environmental characteristics, page 32*.

Hazardous Substances

This product is compliant with:

- WEEE, Directive 2002/96/EC
- R0HS, Directive 2002/95/EC
- R0HS China, Standard SJ/T 11363-2006

European (CE) Compliance

CE Compliance Note

The products described in this manual comply with the European Directives concerning Electromagnetic Compatibility and Low Voltage (CE marking) when used as specified in the relevant documentation, in applications for which they are specifically intended, and in connection with approved third-party products.

Physical Overview

2

Subject of this Chapter

This chapter provides a physical overview of the products.

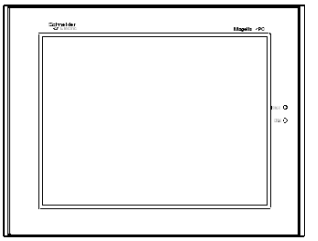
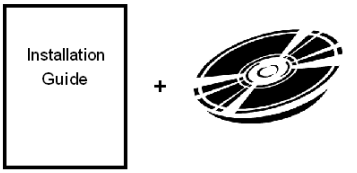
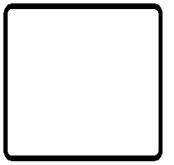
What's in this Chapter?

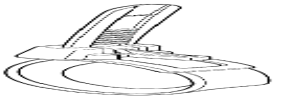
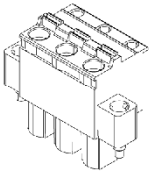
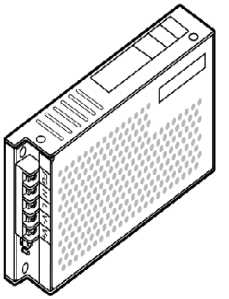
This chapter contains the following topics:

Package Contents

Items

The following items are included in the Smart Magelis package. Before using the unit, please confirm that all items listed here are present.

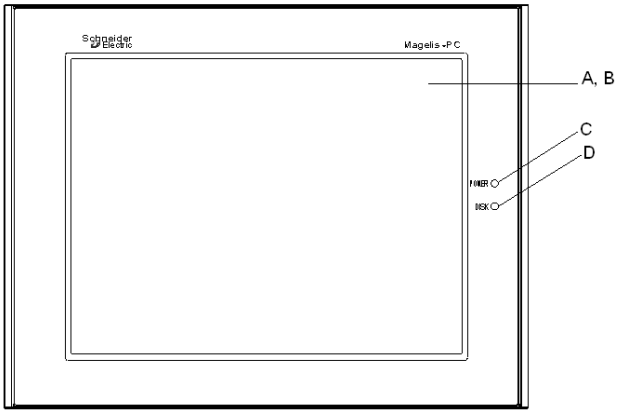
Designation	Figure
MPC ST11 ••• •• or XBT GTW450	
Installation Fasteners (4 per set)	
CD-ROM containing the software required to reinstall the Operating System, the Installation Guide and this User Manual documentation, and the MS Windows EULA	
Installation Gasket (Installed on the main unit)	
USB Holder x 2	

Designation	Figure
USB Cable Clamp x 2	
CF Card	
DC Connector	
Power Supply Unit ABL 1REM24025 (only for MPC ST11•A••••)	

This unit has been carefully packed, with special attention to quality. However, should you find anything damaged or missing, please contact your local distributor immediately.

Smart Unit Description

Front View

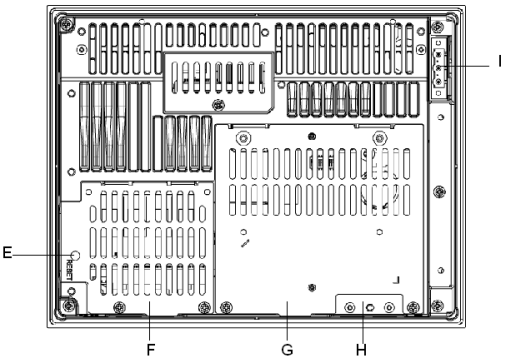


A Display
B Touch Panel
C Power LED/RAS Status Lamp
- Green Lit: Normal
- Green Blinking: System is not running (Soft OFF state)
- Orange Lit: System Monitor Error/Touch Panel Error
- Orange/Red Blinking: Backlight Error
- Not Illuminated: Power is Off

D HDD/IDE Access Lamp
- Green Lit: Access to HDD or IDE
- Not Illuminated: No Access to HDD or IDE

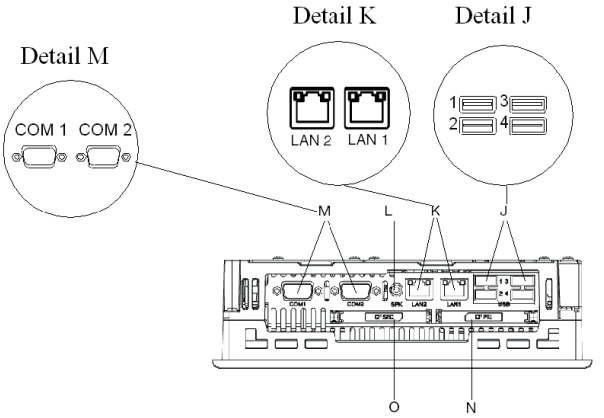
NOTE: Soft OFF: OS is shut down but the power line is still live. This is also called "S5 state". One of the merits of this state is that you can also use the "Wake on LAN" feature.

Rear View



E: Reset Switch: it is used to restart the unit or to turn ON Power
F: Memory Slot Cover
G: IDE Cover
H: USB Holder Attachment Area
I: Power Plug

Bottom View



J: USB (4 ports)
K: Ethernet LAN1 10/100Base-T (RJ45)
K: Ethernet LAN2 10/100/1000Base-T (RJ45)
L: Speaker Output Interface
M: COM 1 and COM 2
N: Primary CF Card Interface
O: Secondary CF Card Interface

Interface Specification

Communication Connections

⚠ WARNING

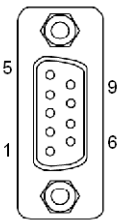
EQUIPMENT DISCONNECTION OR UNINTENDED EQUIPMENT OPERATION

- Ensure that power, communication, and accessory connections do not place excessive stress on the ports. Consider the vibration environment when making this determination.
- Securely attach power, communication, and external accessory cables to the panel or cabinet.
- Use only commercially available USB cables.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Serial Interfaces

COM 1 and COM 2: These interfaces are used to connect an RS-232C (serial) cable. A D-SUB 9 pin plug connector is used.

PIn Arrangement	Pin No.	RS-232C		
		Signal Name	Direction	Meaning
	1	CD	Input	Carrier Detect
	2	RXD	Input	Receive Data
	3	TXD	Output	Send Data
	4	DTR	Output	Data Terminal Ready
	5	SG	–	Signal Ground
	6	DSR	Input	Data Set Ready
	7	RTS	Output	Request to Send
	8	CTS	Input	Send Possible
	9	RI	Input	Called status display (+ 5 Vdc)
	Shell	FG	–	Frame Ground (Common with SG)

Characteristics of the Smart 8.4”

3

Subject of this Chapter

This chapter gives the product characteristics.

What's in this Chapter?

This chapter contains the following topics:

Structural and Electrical Characteristics

Introduction

The characteristics of the Smart 8.4" are given below.

Product Characteristics

Element	Characteristics
Processor	ULV Celeron M 600 MHz, secondary memory cache 512 KB (Fan less)
RAM	256 MB - 1 GB RAM (see *Accessories for the Smart 8.4”, page 113*)
Video Processor	Integrated Intel 855 GME video, sharing main memory. 8/16/32 bit color resolution at 1024x768
Ethernet TCP/IP link	• LAN1: 10/100Base-T • LAN2: 10/100/1000Base-T
USB ports	4 x USB 2.0 (Bottom side)
COM 1 and COM 2 serial ports	RS232C (D-SUB 9 pin male)
CF Card Slot	2 Slots (one for system use)
Audio port	Speaker out (mini-jack connector)
Dimensions (WxHxD)	230 x 177 x 65 mm (9.05 x 6.97 x 2.56 in.)
Weight	3.5 Kg (7.71 lb.)

NOTE: If a USB high speed device (such as a webcam or memory key isn’t recognized by the Smart, or doesn't operate as expected), plug it into USB port #2 and leave USB port #1 empty.

Display Characteristics

Element	Characteristics
Graphics	8.4'' SVGA TFT (800x600 pixels)
Number of colors	262,144 colors
Brightness	200 cd/m2
Brightness Control	4 level of adjustment
View angle	Vertical 100°, horizontal 120° maximum
Touch sensitive screen	Analog resistive film, resolution 1,024x1,024
Backlight's life span	CFL > 50,000 h at ambient temperature 25 °C (77 °F)

Power Supply

Element	Characteristics
Supply voltage	24 Vdc (19.2 Vdc to 28.8 Vdc)
Consumption	40W (max.)
Short dips	5 ms max.

Operating Systems

The Smart product is delivered with a Compact Flash card. This card contains the pre-installed operating system according to the reference of the product ordered.

The products have been tested with the following operating systems: Microsoft® Windows® XPe

Reference	Characteristics
MPC ST11 NAJ 00T	Smart with 8.4" SVGA TFT display, DC supply bundle with external AC/DC adapter, Compact Flash 1 GB with Windows® XPe pre-installed
MPC ST11 NAJ 00H	Smart with 8.4" SVGA TFT display, DC supply bundle with external AC/DC adapter, Compact Flash 1 GB with Windows® XPe and Vijeo Designer Run Time pre-installed
MPC ST11 NDJ 00T	Smart with 8.4" SVGA TFT display, DC supply bundle, Compact Flash 1 GB with Windows® XPe pre-installed
XBT GTW450	Smart with 8.4" SVGA TFT display, DC supply bundle, Compact Flash 1 GB with Windows® XPe and Vijeo Designer Run Time pre-installed

Environmental characteristics

Characteristics

The environmental characteristics of the 8.4" Smart are as follows:

Characteristics	Value	Standards
Degree of Protection	• IP 65/NEMA4 for the front panel. • IP 20 for the rest of the product	IEC 60529, NEMA 250, EN 61231-2
Pollution Degree	For use in Pollution Degree 2 environment	–
Surrounding air temperature during operation	0 ... 50 °C (32 ... 122 °F)	EN 61131-2, UL compliant
Storage temperature	–20 ... 60 °C (–4 .... 140 °F)	IEC 68-2-2 tests Bb and Ab, IEC 68-2-14 tests Na and EN 61131-2 compliant
Operating altitude	2000 m (6560 ft.) max	EN 61231-2
Vibration (in operation)	3.5 mm amplitude from 5 to 9 Hz, 1 g amplitude from 9 to 150 Hz	EN 61231-2
Shock Resistance (in operation)	15 g over 11 ms	IEC 68-2-27 Ea test and EN 61131-2 compliant
Humidity	10...90 % RH • Wet bulb temperature: 29 °C (84 °F) max. • No condensation	EN 61231-2
Immunity to interference	High frequency interference	EN 61131, IEC 1000-4-3/6 level 3
	Electromagnetic waves	Class A/EN 55022/55011
Additional Standards	Information Technology Equipment	IEC 60950
	Industrial Control Equipment	UL 508, CSA 22.2, No. 142

Dimensions/Assembly

4

Subject of this Chapter

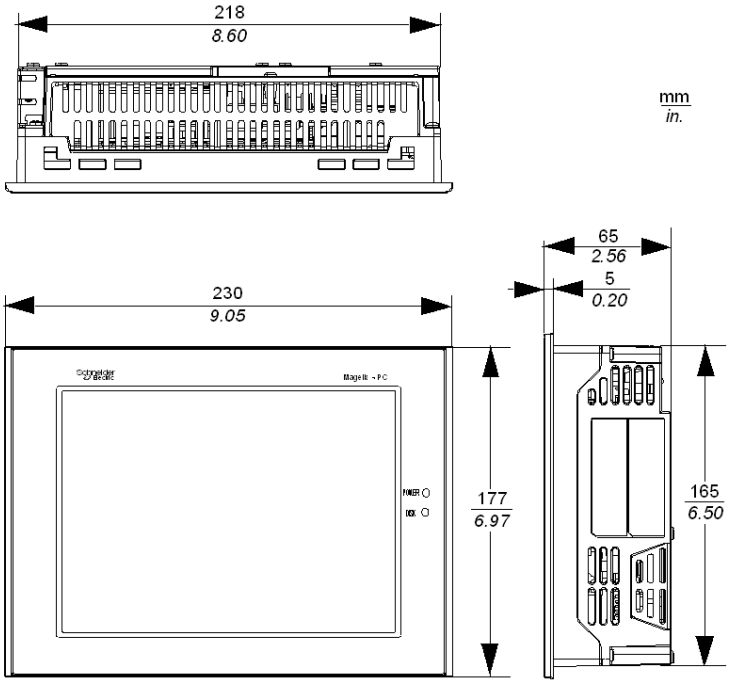
This chapter concerns the dimensions and the panel mounting of products.

What's in this Chapter?

This chapter contains the following topics:

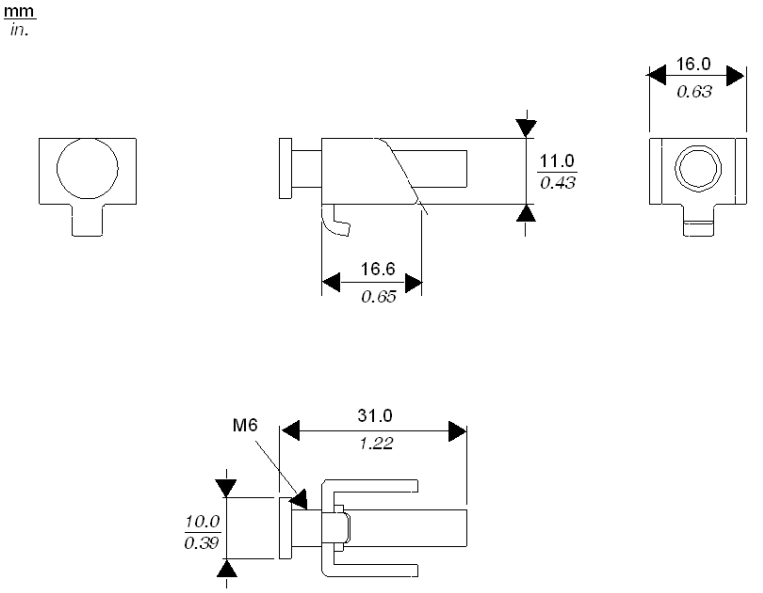
Dimensions

Dimensions of the Smart Unit

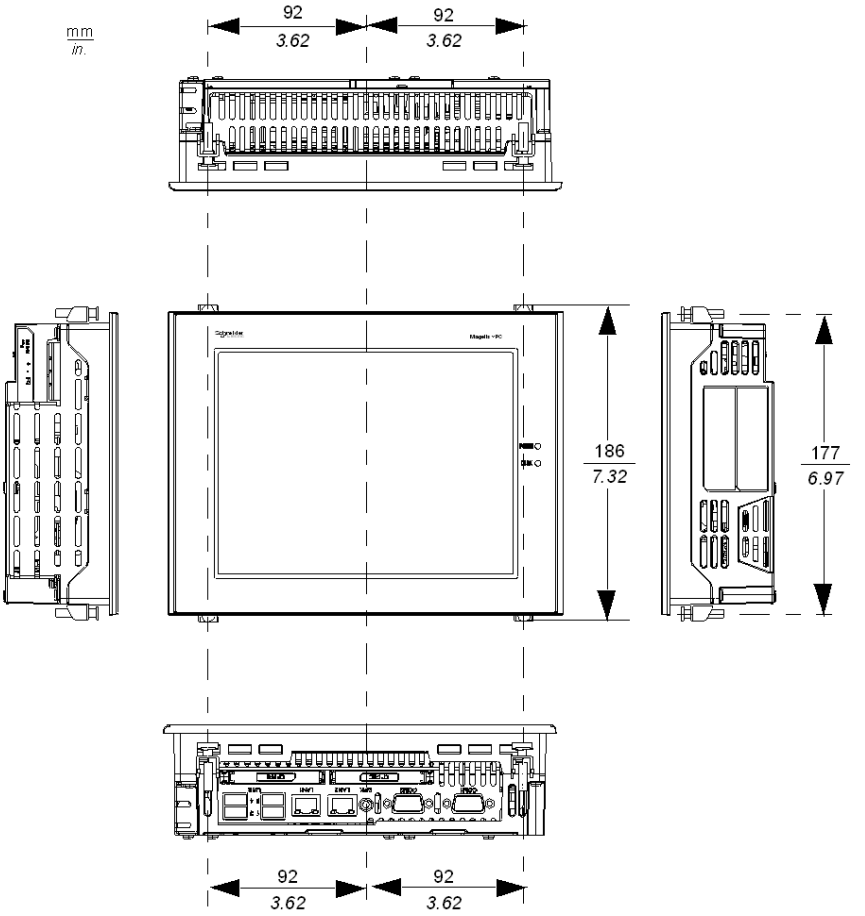


Installation Fastener Dimensions

The products are designed to be mounted in a cabinet with the attachments described below:



Dimensions with Installation Fasteners



Panel Mounting

Installation Location

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

Overheating can cause incorrect software behavior, up to and including Vijeo malfunctions:

- Avoid placing the Smart unit next to other devices that might cause overheating.
- Keep the Smart unit away from arc-generating devices such as magnetic switches and non-fused breakers.
- Avoid using the Smart unit in environments where corrosive gases are present.
- Install the Smart in a location providing a minimum clearance of 50 mm (2 in.) or more from all adjacent structures and equipment.
- Install the Smart with sufficient clearance to provide for cable routing and cable connector dimensions.

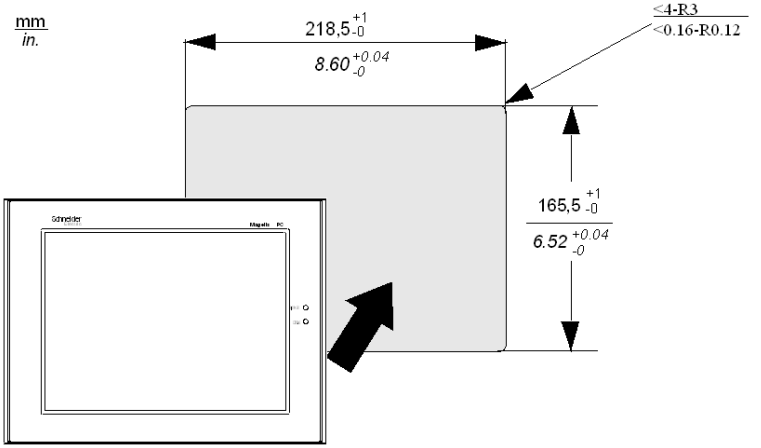
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Creating a Panel Cut-out for Cabinet Installation

For cabinet installation, it is necessary for the correct sized opening to be cut in the installation panel. The installation gasket and installation fasteners are required when installing the Smart unit.

Panel Cut Dimensions

The dimensions of the opening required to install the terminal are shown below:



Precautions

NOTE:

- Ensure the thickness of the installation panel is from 1.6 to 10 mm (0.06 to 0.39 in).
- All panel surfaces used should be strengthened. Due consideration should be given to the product's weight, especially if high levels of vibration are expected and the product's installation surface can move. Metal reinforcing strips can be attached to the inside of the panel near the panel cut-out, to increase the strength of the panel.
- Ensure all installation tolerances are maintained.

Preparing to Install the 8.4'' Smart

Installation Location

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Avoid placing the Smart terminal next to other devices that might cause overheating
- Keep the Smart terminal away from arc-generating devices such as magnetic switches and non-fused breakers.
- Avoid using the Smart terminal in environments where corrosive gases are present
- Install the Smart in a location providing a minimum clearance of 50 mm (2 in) or more from all adjacent structures and equipment
- Install the Smart with sufficient clearance to provide for cable routing and cable connector dimensions

Failure to follow these instructions can result in death, serious injury, or equipment damage.

If the Smart device or device connections will be modified frequently, consider installing the unit with sufficient clearances to permit easy cable access and unhindered operation of the CD-ROM drive.

Vibration and Shocks

Extra care should be taken with respect to the specification concerning vibration levels when installing or moving the terminal. If the Smart terminal is moved, for example, while it is installed in a rack equipped with caster wheels, the unit can receive excessive shock and vibration.

⚠ CAUTION

EXCESSIVE VIBRATION

- Plan your installation activities so that device shock and vibration tolerances are not exceeded.
- Ensure that the panel opening and thickness are within the specified tolerances.
- Before mounting the Smart unit into a cabinet or panel, ensure that the installation gasket is attached to the unit. The installation gasket provides additional protection from vibration.
- The recommended torque for mounting the Smart 8.4'' device is 0.5 N•m (4.5 lb-in).

Failure to follow these instructions can result in injury or equipment damage.

Installation Gasket

Use of the installation gasket may help extend the operating life of your Smart. The gasket is required to meet the protection ratings (IP65, IP20) of the unit and provides additional protection from vibration. Even if moisture protection is not required, install the gasket delivered with your Magelis product.

⚠ CAUTION

LOSS OF SEAL

- Inspect the installation gasket prior to installation or reinstallation, and periodically as required by your operating environment.
- Replace the gasket if visible scratches, tears, dirt, or excessive wear are noted during inspection.
- Do not stretch the gasket unnecessarily or allow the gasket to contact the corners or edges of the frame.
- Ensure that the gasket is fully seated in the installation groove.
- Install the Smart into a panel that is flat and free of scratches or dents.
- Tighten the installation fasteners using a torque of 0.5 N•m (4.5 lb-in).

Failure to follow these instructions can result in injury or equipment damage.

The corresponding gasket is provided in the maintenance kit ref:
MPC YK 10 MNT KIT.

Installation Fasteners

⚠ CAUTION

OVERTORQUE AND LOOSE HARDWARE

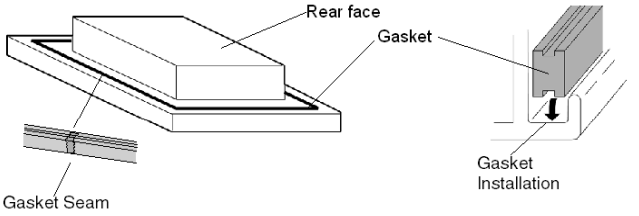
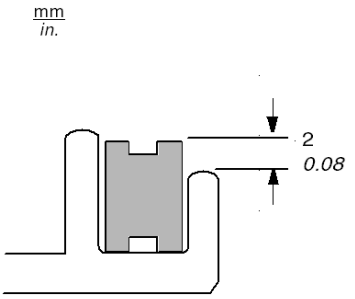
- Do not exert more than 0.6 N•m (5.3 lb-in) of torque when tightening the installation fastener, enclosure, accessory, or terminal block screws. Tightening the screws with excessive force can damage the plastic casing f the Smart 8.4''
- When installing or removing screws, ensure that they do not fall inside the Smart 8.4'' unit's chassis.

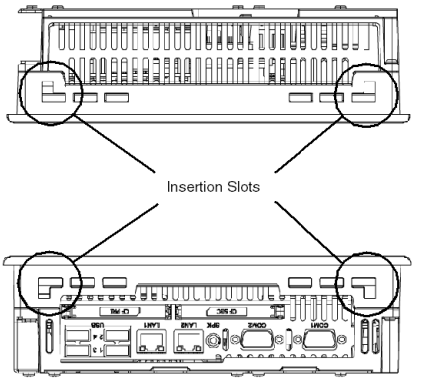
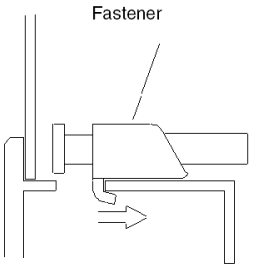
Failure to follow these instructions can result in injury or equipment damage.

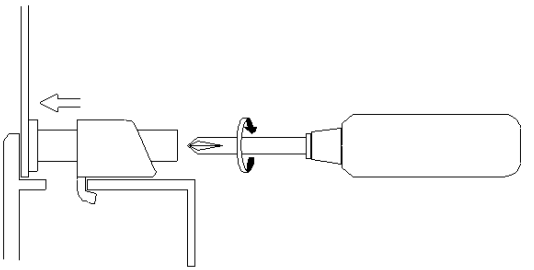
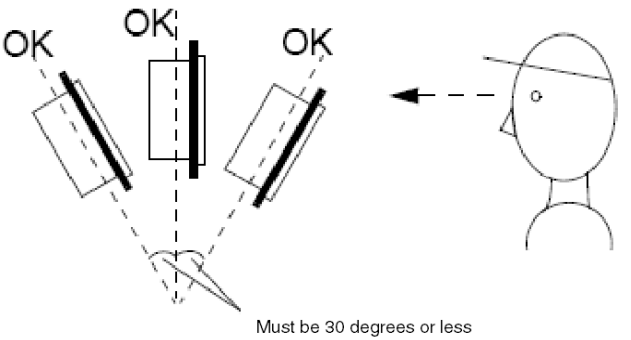
NOTE: The screw installation fasteners are required for NEMA4 protection.

Installing the Smart Unit

Follow the steps given below when installing the Smart terminal:

Step	Action
1	Place the unit face down on a soft, dry surface and attach the gasket to the rear side of the display face, in the installation groove (see picture below): 
2	Check that the gasket is correctly attached to the unit. The upper surface of the gasket should protrude evenly approximately 2 mm (0.08 in.) out of the groove. Note: When installing the Smart unit's installation gasket, avoid contact with the sharp edges of the Smart's frame, and press the gasket completely into its groove. 

Step	Action
3	Insert each installation fastener securely into the slot's recess at the top and bottom of the unit. 
4	Attach and Secure the Rear Installation Attachments  Note: ● Excessive torque may damage the Smart unit. ● To ensure a high degree of moisture resistance, the torque should be 0.5 N•m (4.5 lb-in). ● Insert each of the fasteners as shown below. Be sure to pull the fastener back until it is flush with the rear of the attachment hole.
5	Insert each of the fasteners. Pull the fastener back until it is flush with the rear of the attachment hole. Note: The corresponding installation attachments can be purchased as spare parts with the maintenance kit ref.: MPC YK 10 MNT KIT. 

Step	Action
6	Tighten the screws gradually in an even, crisscross pattern.  **Note:** The torque required to tighten the screws is 0.8 N•m (7.08 lb-in).
7	Smart Viewing Angle (see *Display Characteristics, page 30*). Ensure that the panel's viewing angle is tilted no more than 30 degrees from parallel to the operator (i.e. operator is directly in front). 

Implementation

II

Subject of this Part

This part describes the implementation of the product.

What's in this Part?

This part contains the following chapters:

Getting Started

5

First Power-up

License Agreement

NOTE: Limitations on your usage of the Windows XPe Operating System are noted in Microsoft's End User License Agreement (EULA). This EULA is included on the CD-ROM. Please read this document before first power-up.

Depending on the software configuration of the Magelis Smart, it is necessary to perform the following operations on first power-up:

- Customize and set the parameters for your system. Refer to the Magelis Installation Guide
- Install, customize and set the parameters for the Schneider Electric applications (Unity Pro, PL7 Junior or PL7 Pro, Vijeo Designer, Vijeo Designer Lite, OFS, MMI 17, XBT-L1000, PL7-07)

Some Useful Tools

A selection of program icons are displayed on the launch bar which can be used to launch some useful programs.

Icon	Usage
	This is the virtual keyboard. Click on it, and a graphical keyboard is displayed. It is useful when you do not want to connect, or cannot connect a keyboard to the unit.
	This is the virtual mouse button selector. It allows the user to associate the next "click" to a "right click". For instance, this tool permits the use of context sensitive menus.

Icon	Usage
	Configuration Panel / Brightness: This link allows the user to change the brightness of the screen (useful for dark areas).
	These icons indicate the status of the Enhanced Write Filter (EWF) Manager. They are located in the system tray on the Windows® taskbar.

EWF Manager Enhanced Write Filter

The Magelis Smart operating system, Windows® XPe, is installed on a memory cartridge. This cartridge is a rewritable "Compact Flash" card and it allows approximately 100,000 write operations before it should be replaced.

The Enhanced Write Filter (EWF) Manager minimizes the number of write operations to help extend the life of the CF Card. It loads temporary data (for example, system updates and software operations) into RAM, and does not at any point write this information to the CF Card.

Therefore, if the EWF is enabled, a restart of the Smart 8.4" will cause any changes the user made to the system to be overwritten. The following types of modifications may be overwritten if the EWF Manager is active and the system is restarted:

- Newly installed applications
- Newly installed peripherals
- Newly created or modified user accounts
- Network configuration changes (e.g., IP address, default gateway, etc.)
- Operating System Customizations (background pictures, etc.)

⚠ CAUTION

DATA AND CONFIGURATION LOSS

- Disable the EWF Manager before making any permanent changes to the hardware, software, or Operating System of the Smart 8.4" device. Confirm that the EWF icon in the Windows system tray has a red "X".
- Re-enable the EWF Manager after making permanent changes and confirm that the EWF icon in the Windows system tray does not have a red "X". This can help extend the operating life of the CF Card.
- Back up all CF Card data regularly to another storage media.

Failure to follow these instructions can result in injury or equipment damage.

Enabling /Disabling the EWF Manager

The status of the EWF Manager may be changed by running the `ChangeEWFstate.exe` program located in the `C:\Program files\Change EWF State` directory. After running this program, a system restart is required for the change to take effect. Administrator privileges are required to enable and disable the EWF Manager.

Main Power Connection

6

Subject of this Chapter

This chapter describes the connection of the terminal to the mains power supply.

What's in this Chapter?

This chapter contains the following topics:

Grounding

Overview

The grounding resistance between the Smart's Frame Ground (FG) and Ground must be 100 Ω or less. When using a long grounding wire, check the resistance and if required replace a thin wire with a thicker wire and place it in a duct. In addition, please refer to the table below for maximum line lengths for the thickness of wire.

Ground Wire Dimensions

Wire Thickness	Maximum Line Length
2 mm^2 (14 AWG)	30 m (98 ft.)
	60 m (196 ft.) round trip.
1.5 mm^2 (16 AWG)	20 m (65 ft.)
	40 m (131 ft.) round trip.

Precaution

⚠ WARNING

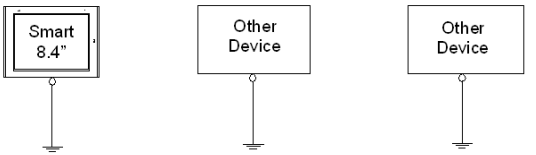
UNINTENDED EQUIPMENT OPERATION

- Use only the authorized grounding configurations shown below.
- Confirm that the grounding resistance is 100 Ω or less.
- Test the quality of your ground connection before applying power to the device. Excess noise on the ground line can disrupt the Smart's operations.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

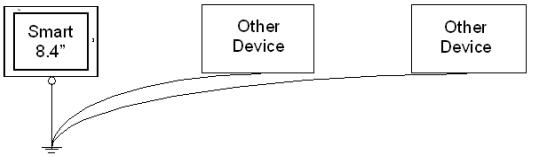
Dedicated Ground

Connect the Frame Ground (FG) to a dedicated ground.



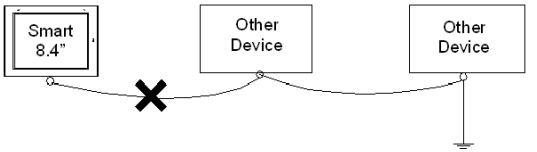
Shared Ground Allowed

If a dedicated ground is not possible, use a shared ground, as shown below.



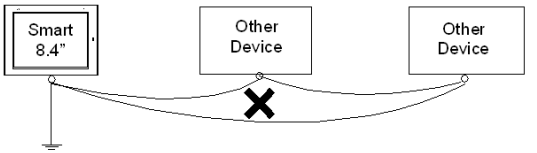
Shared Ground not Allowed

Do not connect the Smart 8.4’’ unit to ground through other devices using the SG terminal.



Shared Ground - Avoid Ground Loop

When connecting an external device to a Smart with the Shield Ground (SG), ensure that no ground loop is created. The Smart’s FG and SG are connected internally.



Grounding Procedure

When grounding, follow the procedures given below:

Step	Action
1	Check that the grounding resistance is 100 Ω or less.
2	When connecting the SG line to another device, ensure that the design of the system/connection does not produce a ground loop. Note: The SG and FG terminals are connected internally in the unit.
3	Wherever possible, use 2 mm^2 (14 AWG) wire to make the ground connection. If this isn't possible, ensure that the grounding wire gauge and length conform to the table in *Ground Wire Dimensions, page 52*. Create the connection point as close to the unit as possible and make the wire as short as possible.

Grounding I/O Signal Lines

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not wire I/O lines in proximity to power cables, radio devices, or other equipment that may cause electromagnetic interference.
- If wiring of I/O lines near power lines or radio equipment is unavoidable, use shielded cables and ground one end of the shield to the Smart's Frame Ground (FG).

Electromagnetic radiation may interfere with the Smart's control communications.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

DC Version Wiring

Precaution

When connecting the Smart unit's power cable to the power connector on the unit, first ensure that the power cord is disconnected from the main DC power supply.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Always use a properly rated voltage sensing device to confirm power is off.
- Unplug the power cable from both the Smart unit and the AC power supply.
- Replace and secure all covers or elements of the system before applying power to the unit.
- Use only the specified voltage when operating the Smart 8.4". The AC unit is designed to use 100 ... 240 Vac input. The DC unit is designed to use 23 ... 25 Vdc. Always check whether your device is AC or DC powered before applying power.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

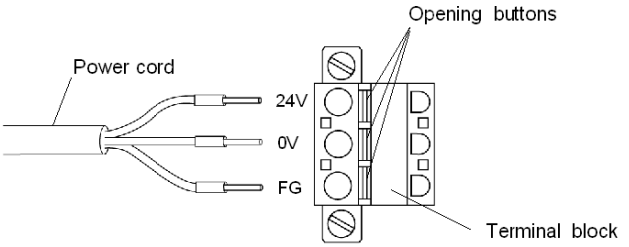
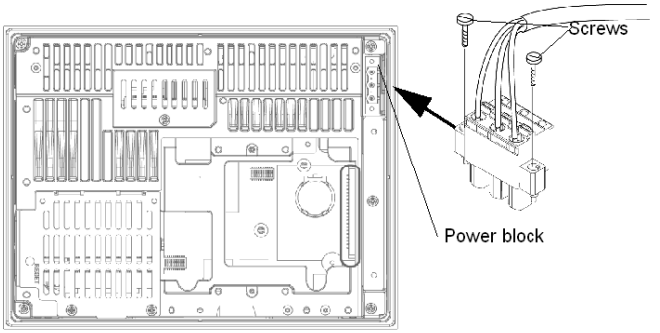
EQUIPMENT DISCONNECTION OR UNINTENDED EQUIPMENT OPERATION

- Ensure that power, communication, and accessory connections do not place excessive stress on the ports. Consider the vibration environment when making this determination.
- Securely attach power, communication, and external accessory cables to the panel or cabinet.
- Use only commercially available USB cables.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

How to Wire the Terminal Block

When wiring and connecting the wires, be sure to follow the procedures given below:

Step	Action
1	Remove all power from the Smart 8.4" and confirm that the DC power supply has been disconnected from its power source.
2	Connect the power cord to the terminal block as shown below: 
3	Place the terminal block in the power block and tighten the screws. The recommended torque to tighten these screws is 0.5 to 0.6 N•m (4.5 to 5.3 lb-in): 

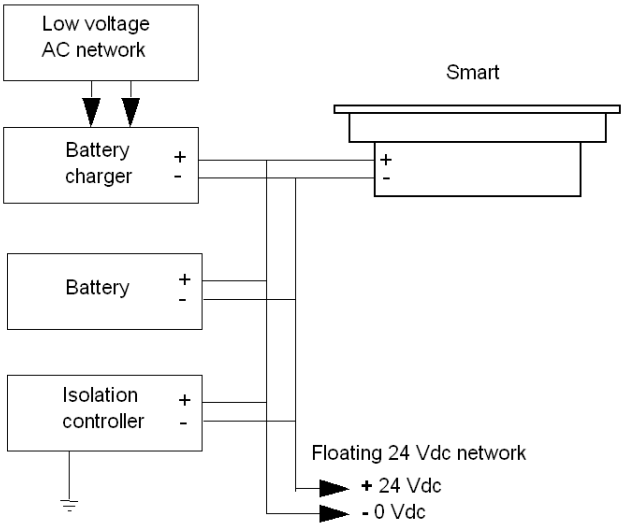
NOTE: The 24 Vdc power supply inside the DC-powered Smart units is protected by an 8 A fuse. This fuse is located inside the power supply and cannot be accessed or replaced by the user.

Possible Connections

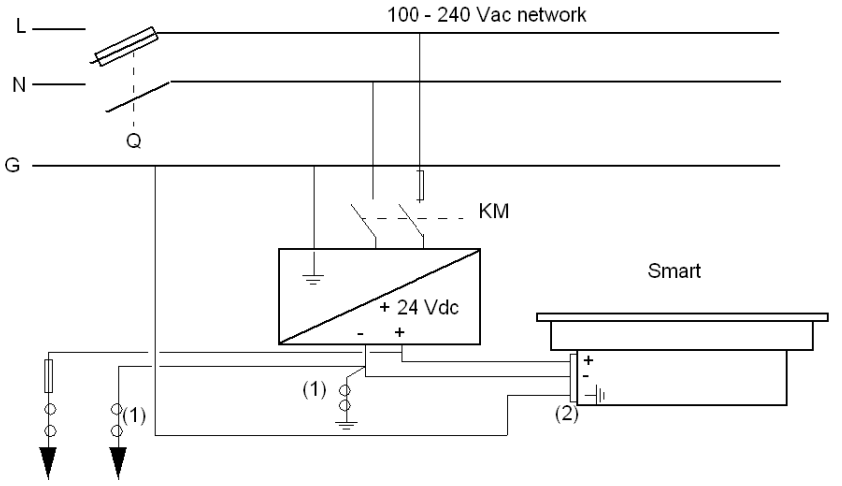
Connection to a 24 Vdc Smart supplied by a non-grounded safety DC network:

Some specific applications require the use of a floating (ungrounded) power system. The characteristics of such as system, as it might apply when a DC-powered Smart 8.4" is installed, are as follows:

- The 0 Vdc power line and Frame Ground (FG) are connected internally.
- The 24 Vdc power line is isolated from the FG and from the outputs. The dielectric strengths for these are:
  - Primary/Secondary: 1000 Vac
  - Primary/Ground: 1000 Vac



Connection to a Ground-referenced DC Power System:



Q : General isolator
KM : Line contactor or circuit breaker: General isolator
(1) : Isolation strip for detecting grounding faults
(2) : Terminal block

NOTE: Schneider suggests the use of the TSX SUP 1101 DC Power Supply to provide the Smart unit's 24 Vdc power.

AC Version Wiring

Precaution

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Always use a properly rated voltage sensing device to confirm power is off.
- Unplug the power cable from both the Smart unit and the AC power supply.
- Replace and secure all covers or elements of the system before applying power to the unit.
- Use only the specified voltage when operating the Smart 8.4". The AC unit is designed to use 100 ... 240 Vac input. The DC unit is designed to use 23 ... 25 Vdc. Always check whether your device is AC or DC powered before applying power.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

EQUIPMENT DISCONNECTION OR UNINTENDED EQUIPMENT OPERATION

- Ensure that power, communication, and accessory connections do not place excessive stress on the ports. Consider the vibration environment when making this determination.
- Securely attach power, communication, and external accessory cables to the panel or cabinet.
- Use only commercially available USB cables.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Introduction

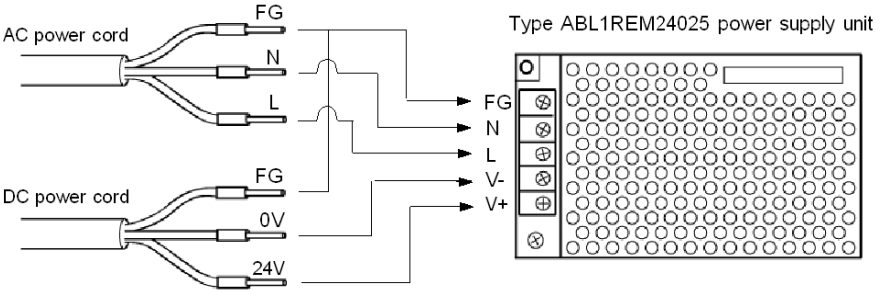
The Smart 8.4" versions whose references are MPCST11NAJ00T and MPCST11NAJ0*H, are provided with an AC/DC power supply unit type ABL1REM24025. Consequently, in order to connect your Smart terminal, you have to observe the following steps.

How to Wire the Terminal Block

Refer to the relevant procedure in *How to Wire the Terminal Block, page 56*

How to Wire the AC/DC Power Supply Unit

After having connected the terminal block, observe the following procedure to connect the AC/DC power supply unit:

Step	Action
1	Confirm that the power cords are disconnected from any power supply
2	Connect the AC and DC power cords as shown below:  Note: On the other end, the DC power cord is connected to the terminal connector.

Configuration of the BIOS

7

Accessing the BIOS

Overview

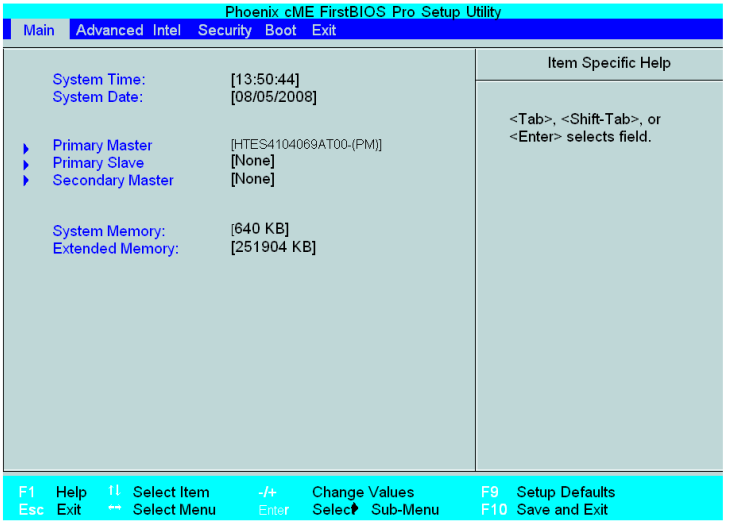
NOTE: Normally, factory (defaults) settings should be used.

Connect a USB or PS/2 keyboard to the Smart unit.

Switch on the Smart unit power and when prompted to do so, press the F2 key to enter the BIOS.

Main Menu

Selecting the `Main` menu item displays the following screen:



NOTE: When you have finished entering the parameters, press the Esc key to reach the `Exit` menu. Here you will be prompted either to exit saving the changes, or to exit without saving the changes as described below.

System Time

Time (hh:mm:ss)

This field shows the present Smart unit time from the internal clock.The hh/mm/ss (00:00:00) format is factory set prior to shipping.

Hours: 00 to 23

Minutes: 00 to 59

Seconds: 00 to 59

The correct time can be set by using the [+] and [-] keys.

System Date

Date (mm:dd:yyyy)

This field shows the Smart unit's internal calendar. The correct date can be set by using the [+] and [-] keys.

Year: 1999 to 2099

Month: 01 to 12

Day: 01 to 31

Primary Master

Displays the name of the devices connected to the primary bus of the Smart. Pressing the Enter key will call up the `Parameter Settings` menu.

Primary Slave

Displays the name of the devices connected to the secondary bus of the Smart. Pressing the Enter key will call up the `Parameter Settings` menu.

System Memory

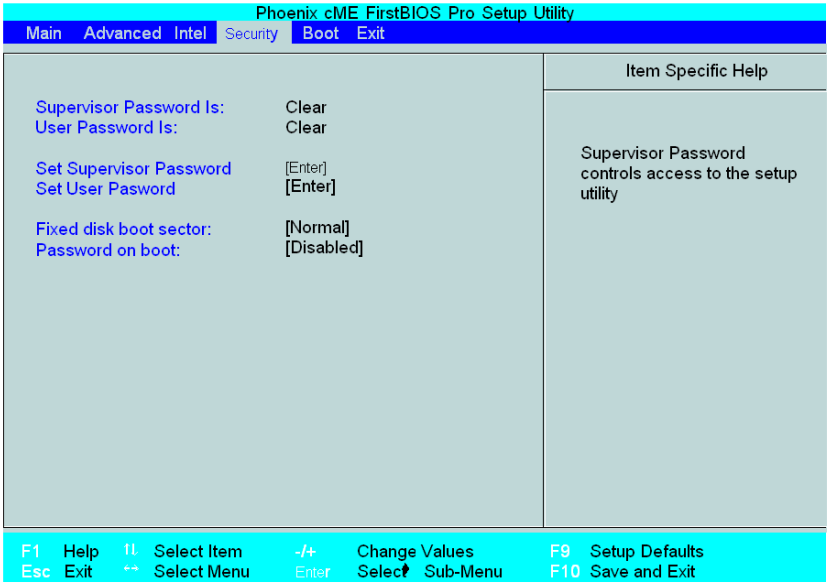
Displays the capacity of the System Memory.

Extended Memory

Displays the capacity of the Extended Memory.

Security Password

From the `Main` menu use the Tab key to reach the `Security` menu. This menu is used for setting Supervisor and User Passwords.



Supervisor Password

This password is used to change system information settings. It is designed to prevent unapproved users from changing these settings. Entering up to 8 characters here will overwrite the current password.

When you wish to have no password, click on the Enter key. Next, the words "PASSWORD DISABLE" will be displayed, providing confirmation that the Password is no longer set.

User Password

This password is used to view system information settings. It is designed to prevent unapproved users from viewing the system information settings. Entering up to 8 characters here will overwrite the current password.

When you wish to have no password, click on the Enter key. Next, the words "PASSWORD DISABLE" will be displayed, providing confirmation that the Password is no longer set.

NOTE:

- Without having defined a Supervisor Password, it is not possible to define a User Password.
- When using `Set Supervisor Password`, you can easily view and change the system settings.
- When using only `Set User Password`, you will be allowed to view the system data only, not change it.

Exit BIOS saving the Modifications

This feature saves the settings entered in the `Setup Utility` and restarts the Smart unit.

Exit BIOS Without Saving Modifications

This feature quits the `Setup Utility` program without saving any settings entered.

Hardware Modifications

8

Subject of this Chapter

This chapter concerns the hardware modifications for the Smart terminal.

A wide variety of optional units, Main Memory, CF cards, PCMCIA (PC cards) manufactured by Schneider Electric and commercial PCMCIA (PC Cards) can be used with the Smart terminal.

What's in this Chapter?

This chapter contains the following topics:

Before Modifications

Overview

For the detailed installation procedures for the optional units, please refer to the OEM's (Original Equipment Manufacturer) Installation Guide.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Always use a properly rated voltage sensing device to confirm power is off.
- Unplug the power cable from both the Smart unit and the AC power supply.
- Replace and secure all covers or elements of the system before applying power to the unit.
- Use only the specified voltage when operating the Smart 8.4''. The AC unit is designed to use 100 ... 240 Vac input. The DC unit is designed to use 23 ... 25 Vdc. Always check whether your device is AC or DC powered before applying power.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

CHEMICAL BURNS TO EYES OR SKIN

- Do not use tools to operate the touch panel or in the vicinity of the display.
- When placing the display face-down, select a clean, level, non-abrasive surface. If necessary, place a soft, non-abrasive pad on the surface before lowering the unit.
- If a leak in the LCD panel is discovered and you come in contact with the liquid crystal material, follow these procedures:
  - In the case of contact with eyes or mouth, flush with running water for 15 minutes minimum.
  - In the case of contact with skin or clothing, wipe off the liquid crystal material and wash with soap and running water for 15 minutes.
  - If liquid crystal is ingested, induce vomiting, rinse mouth, and then drink a large quantity of water.
  - Follow any other hazardous substances safety procedures required by your facility.

Failure to follow these instructions will result in death or serious injury.

⚠ CAUTION

OVERTORQUE AND LOOSE HARDWARE

- Do not exert more than 0.6 N•m (5.3 lb-in) of torque when tightening the installation fastener, enclosure, accessory, or terminal block screws. Tightening the screws with excessive force can damage the plastic casing of the Smart 8.4''.
- When installing or removing screws, ensure that they do not fall inside the Smart 8.4'' unit's chassis.

Failure to follow these instructions can result in injury or equipment damage.

⚠ CAUTION

STATIC SENSITIVE COMPONENTS

Smart 8.4'' internal components, including accessories such as RAM modules and expansion boards, can be damaged by static electricity. Observe the electrostatic precautions below when handling such components.

Failure to follow these instructions can result in injury or equipment damage.

Precautions to be taken:

- Keep static-producing materials (plastic, upholstery, carpeting) out of the immediate work area.
- Do not remove ESD-sensitive components from their anti-static bags until you are ready to install them.
- When handling static-sensitive components, wear a conductive wrist strap connected to the component through a minimum of one megaohm resistance.
- Avoid touching exposed conductors and component leads with skin or clothing.

Installing a Larger RAM Chip

General

⚠ CAUTION

ELECTRO-STATIC DISCHARGE

RAM modules contain components which are sensitive to Electro-Static Discharge (ESD).

- Use proper ESD protection (grounding wrist strap, protected mat etc.) when handling ESD sensitive components.
- Do not remove ESD sensitive components from their anti-static bags until you are ready to install them.
- Handle the RAM module only by the edges.

Failure to follow these instructions can result in injury or equipment damage.

NOTE: If you install a 1GB RAM chip, a blue screen will appear for about 4 minutes the first time you start the terminal. After this installation the terminal will start as usual.

⚠ DANGER

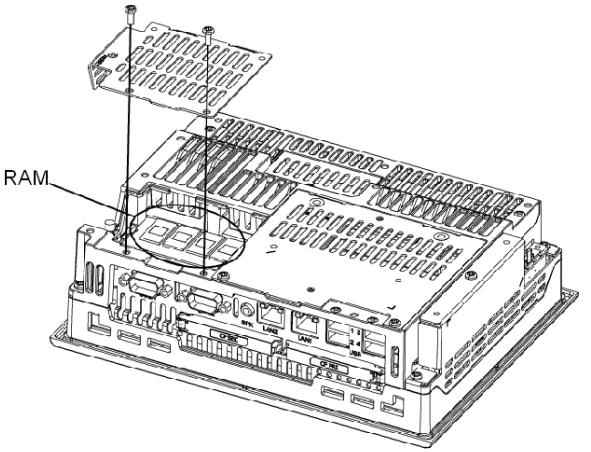
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

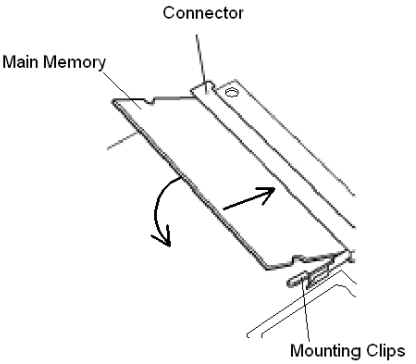
Read and understand the safety information (see *Overview, page 66*) before attempting this procedure.

Failure to follow these instructions will result in death or serious injury.

Installing a RAM Chip

When installing the Main Memory (RAM) module, follow the procedures listed below:

Step	Action
1	Shut down Windows® in an orderly fashion and remove all power from the device.
2	Place the unit on a clean, level surface with the display facing downwards. If necessary, place a soft, non-abrasive pad on the surface before placing the unit.
3	Unscrew the two screws on the memory cover slot and remove it: 
4	Unfasten the mounting clips on the connector such that the old RAM module is accessible.
5	Remove the old RAM module from the holder and store it in its anti-static bag.
6	Angle the new memory module down slightly, and push it into the connector until the connector pins mate with the module's pins.

Step	Action
7	Position the new RAM module so that the side with the RAM chips is facing up, and the contacts are facing the connector. Insert the RAM chips at an angle to the connector, applying even pressure until the contacts mate with the connector. Press the module flat ensuring that both mounting clips lock into place. 
8	Replace the memory slot cover and screw it into place.

Compact Flash (CF) Card Installation and Removal

Preparing to Use a CF Card

The Smart's operating system views the CF Card as a hard disk. Proper handling and care of the CF Card helps extend the life of the Card. Familiarize yourself with the Card prior to attempting insertion or removal of the Card.

⚠ CAUTION

COMPACT FLASH (CF) CARD DAMAGE AND DATA LOSS

- Remove all power before doing anything with the CF card.
- Use only CF cards manufactured by Schneider. The performance of the Smart 8.4'' has not been tested using CF cards from other manufacturers
- Confirm that the CF Card is correctly oriented before insertion.
- Do not bend, drop, or strike the CF card.
- Do not touch the CF card connectors.
- Do not disassemble or modify the CF card.
- Keep the CF card dry.

Failure to follow these instructions can result in injury or equipment damage.

⚠ DANGER

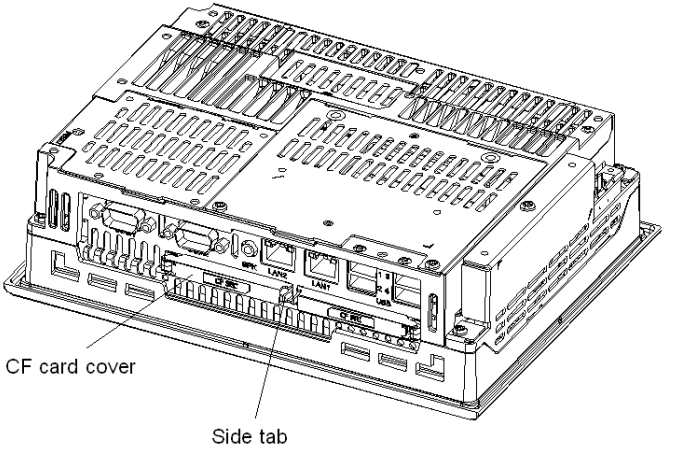
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Read and understand the safety information (see *Overview, page 66*) before attempting this procedure.

Failure to follow these instructions will result in death or serious injury.

Inserting the CF Card

The table below describes how to insert the CF Card.

Step	Action
1	Shut down Windows® in an orderly fashion and remove all power from the device.
2	Open the CF card cover by pushing the side tab and moving it 90°. Insert the CF Card (Primary or Secondary) firmly into the CF card slot, and check that the eject button pops out: 
3	Close the CF card cover and make sure it is secured in place.

Removing the CF Card

The table below describes how to remove the CF Card.

Step	Action
1	Shut down Windows® in an orderly fashion and remove all power from the device.
2	Open the CF card cover as described above.
3	Press the eject button in fully to remove the CF Card from the CF Card slot.
4	After removing the CF card, close the CF Card cover and make sure it is secured in place.

Data Writing Limitation

The CF card is limited to approximately 100,000 write operations. Therefore, be sure to back up all CF Card data regularly to another storage media.

USB Holder Attachment/Removal

Introduction

When using a USB device, attaching the USB holder to the USB interface located on the side of the Smart terminal prevents the USB cable interface from becoming disconnected.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Read and understand the safety information (see *Overview, page 66*) before attempting this procedure.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

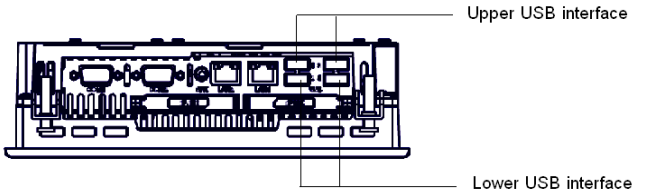
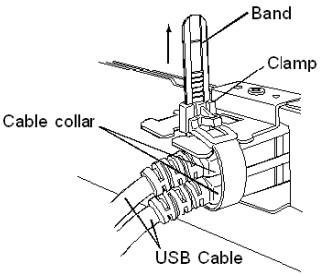
EQUIPMENT DISCONNECTION OR UNINTENDED EQUIPMENT OPERATION

- Ensure that power, communication, and accessory connections do not place excessive stress on the ports. Consider the vibration environment when making this determination.
- Securely attach power, communication, and external accessory cables to the panel or cabinet.
- Use only commercially available USB cables.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

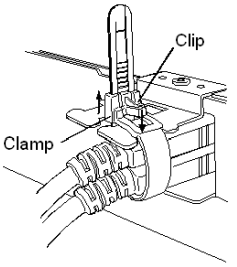
USB Holder Attachment

The table below describes how to attach the USB holder.

Step	Action
1	Shut down Windows® in an orderly fashion and remove all power from the device. Then place the unit face-down on a flat surface to see the 4 USB connectors: • When using two or more USB ports, be sure to first connect one USB cable to the lower USB connector, and then connect the second USB cable to the upper USB connector. • When using only one of the USB ports, be sure to use the upper USB connector. This allows you to securely clamp the USB cable in the cable clamp. 
2	Unscrew the two attachment screws used to hold the Smart Unit's Cover and open this cover.
3	Secure the USB holder with a screw.
4	Insert the USB Cable Clamp's band through the hollow of the holder. Pass the USB cables through the Cable Clamp's band and securely tighten the clamp band around the cables. • Be sure the clamp is securely holding the USB cable's plug and collar. • Be sure the clamp is positioned as shown below, with the clamp pointing upwards not to the side. This is to keep the clamp from interfering with nearby connectors and their cables. 
5	Replace the Smart Unit's Cover and reattach two attachment screws.

USB Holder Removal

The table below describes how to remove the USB holder.

Step	Action
1	To remove the clamp from the USB cables, push down on the clamp strap's clip to release it while pulling up on the clamp. 

Installation

III

Subject of this Part

This part describes the product installation.

What's in this Part?

This part contains the following chapters:

Connections to PLCs

9

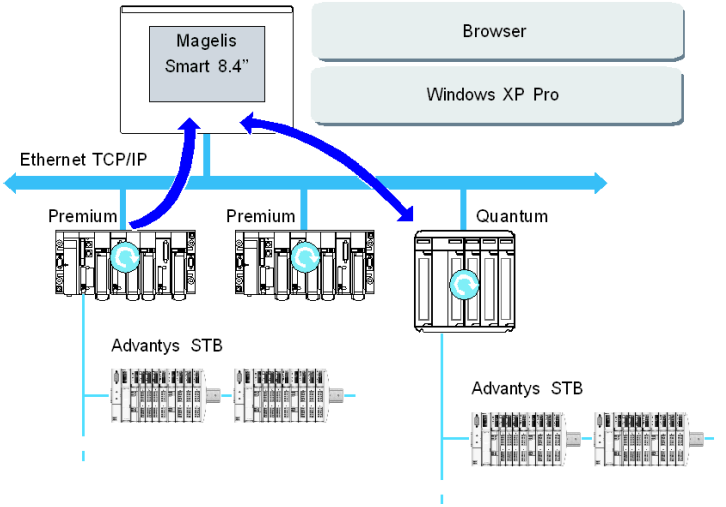
Connection to PLCs

Introduction

Two different kinds of architecture are possible:

- Transparent Ready Architecture
- Traditional Architecture

Connections to Transparent Ready Architectures

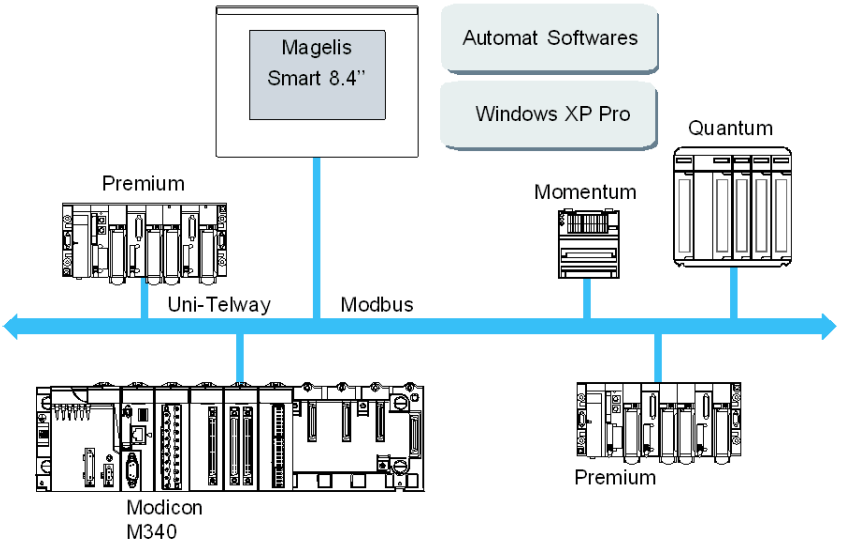


With its built-in Ethernet 10/100 Mbps ports, Smart 8.4" industrial PCs can be integrated into "full Ethernet" architectures, such as Transparent Ready. Transparent Ready devices with this type of architecture enable transparent communication on the Ethernet TCP/IP network. Communication services and Web services assure the sharing and distribution of data between levels 1, 2 and 3 of the Transparent Ready architecture.

Used as a Client station, Smart 8.4'' makes it easier to implement Web Client solutions for:

- Basic servers embedded in field devices (Advantys STB/Momentum distributed I/O, ATV 71/38/58 starters, Ositrack identification systems, etc.).
- FactoryCast Web servers embedded in Modicon PLCs (TSX Micro, Premium and Quantum) or the FactoryCast gateway. The following services are available as standard (without the need for additional programming): alarm management, synoptic view management and Web home pages created by users.
- FactoryCast HMI Web servers embedded in Modicon Premium and Quantum PLCs also provide basic data management services, automatic e-mail sending triggered by specific process events and arithmetic and logic calculations for data preprocessing.

HMI Applications in Traditional Architectures

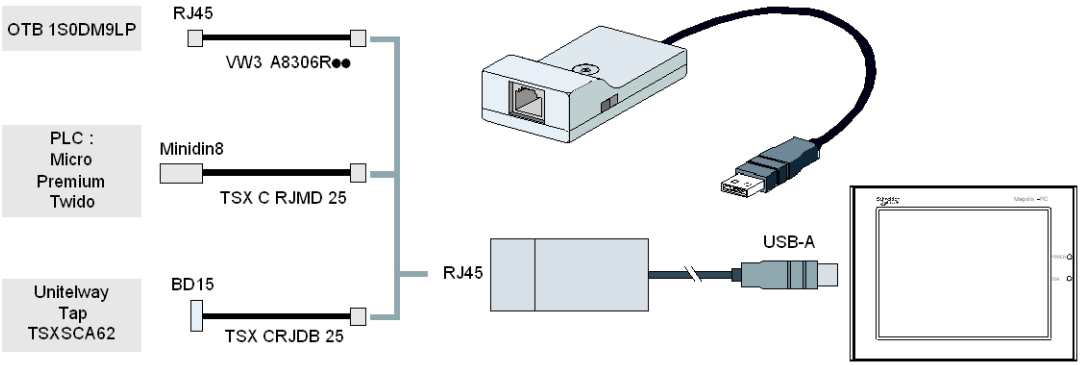


The combined offer comprising the Smart 8.4'' industrial PC, pre-installed Vijeo Designer control or automat softwares allow them to be used in mono-network architectures such as Uni-Telway/Modbus or Fipway/Modbus Plus.

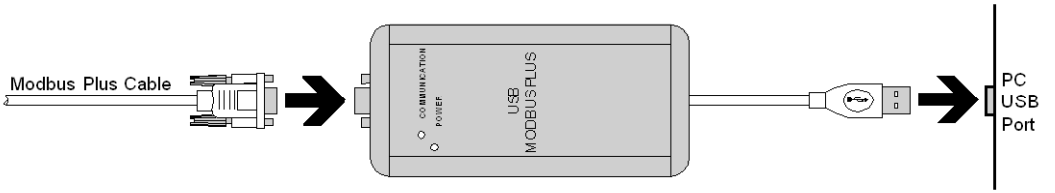
Uni-Telway, Modbus and Fipway networks could be used with Smart 8.4''. PCMCIA or USB ports are able to receive these links.

Different connection devices are required depending on the type of network being used. These devices are specified below:

- For PCMCIA slot:
  - Fipway network with the PCMCIA card TSX FPP 20 (1).
  - Modbus Plus network with the PCMCIA card TSX MBP 100 or the PCI bus card 416 NHM 300 30.
  - Uni-Telway, with an RS 485 TSX SCP 114 card (1).
  - For a Modbus link, one of the built-in RS 232C COM ports is used.
- For USB slot:
  - Modbus and Uni-Telway with the TSXCUSB485 converter. It allows an iPC to be connected to remote devices using an RS 485 interface.
    This device, fully compatible with Modbus and Uni-Telway, requires the standard Schneider drivers provided with software such as UNITY, PL7-Pro or part of the CD driver TLXCDDRV20M. Example on drawing below:



  - Modbus Plus network with the TSXCUSBMBP converter. This converter is compatible with PCs equipped with CONCEPT, ProWORX or UNITY. Example on drawing below:

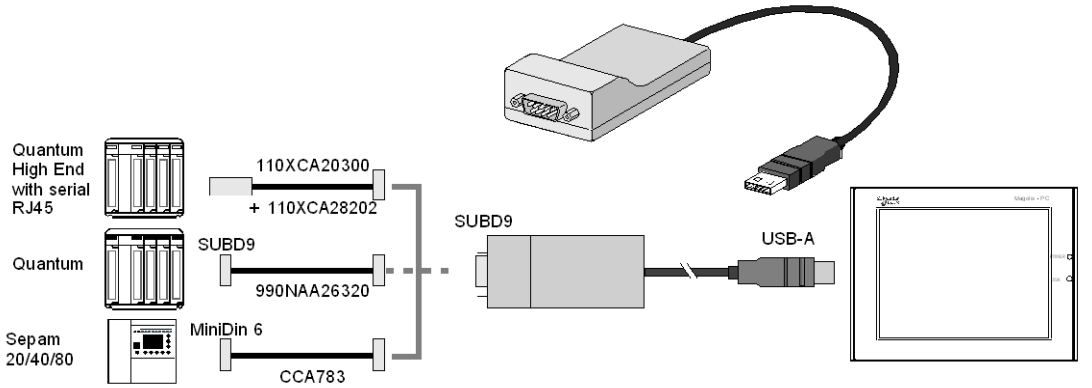


(1) Requires the "X-Way drivers" CD-ROM, TLX CD DRV20M.

Cables and Converters

For using the different types of PLCs, the following cables and converters are required:

- TSX PCX 1031 connection cable for Nano, Micro and Premium.
  This cable is supplied with Unity Pro, PL7 Pro and PL7 Junior software.
  The rotatory switch on this cable must be set to "TER MULTI" for a connection with the COM1 serial port or the connection will not succeed. It can be left on "TER DIRECT" for a connection with the COM2 serial port.
- FT20CBCL30 connection cable for the Series 7 family (included TSX 27 PLCs, and TSX/PMX 47/67/87/107 PLCs).
  This cable is supplied with the XTEL Pack software.
- TSX17ACCPC converter for TSX 17 LCs.
- TSXCUSB232 converter for connecting an iPC, via an USB port, to remote devices using an RS 232 interface.
  This device, fully compatible with Modbus and Uni-Telway, requires the standard Schneider drivers provided with software such as UNITY, PL7-Pro or part of the CD driver TLXCDDRV20M. Example on drawing below:



This device can be used as a PCMCIA port.

System Monitoring

10

Subject of this Chapter

This chapter describes the System Monitoring and the RAS (Reliability, Availability and Serviceability) features of the Smart.

What's in this Chapter?

This chapter contains the following topics:

System Monitor Overview

Presentation

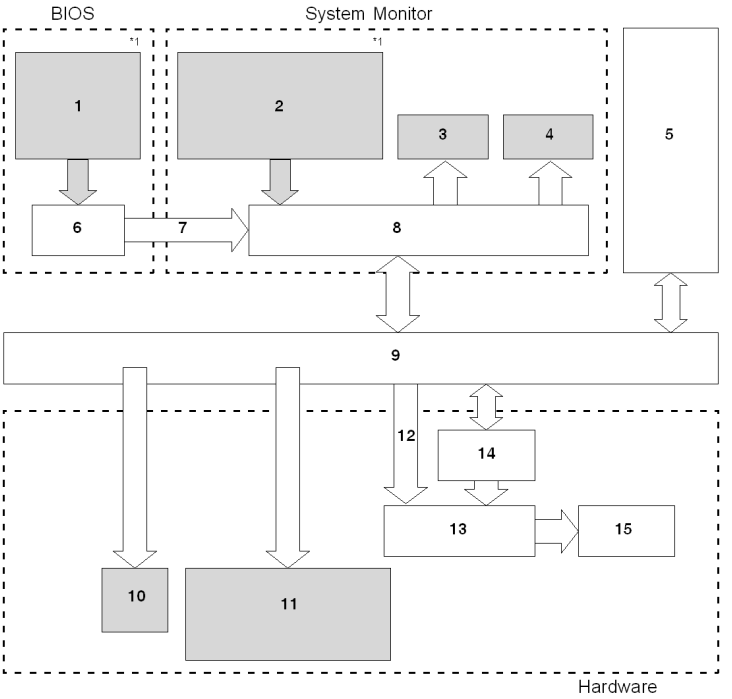
The System Monitor software enables you to monitor several system parameters (CPU temperature, normal operation of the miscellaneous voltages, normal operation of the backlight, normal operation of the hard disk...).

The System Monitor software alerts you if thresholds are exceeded via a popup message or a Windows alarm (in the Event Viewer). You can also configure actions to be undertaken: shutdown the Smart, restart the Smart ...

The software enables both system configuration (See *System Monitor Property, page 86*), and the system operation (See *System Monitor Interface, page 90*).

System Monitor Architecture

The following figure shows the architecture of System Monitor:



1 BIOS Setup: Voltage, Fan RPM3, Temperature alarm, Detection Level Setting, Enable/Disable Setting

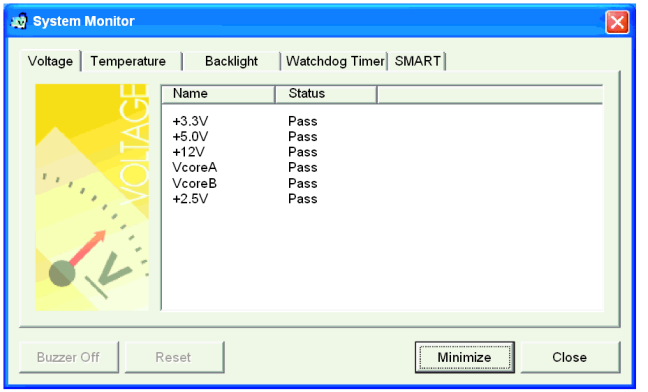
2 System Properties: Power alarm, Fan Alarm3, Internal Temperature Alarm, Output Settings, Watchdog Timer Value Settings, Watchdog Reset Enable/Disable Settings

3 Popup Message
4 OS Shutdown
5 User Application
6 BIOS
7 System Alarm Data
8 System Monitor Application
9 Driver or API-DLL
10 Buzzer
11 LED, Green: Power On, Orange: RAS Error/Touch Panel Self Test Error, Orange/Red blinking: Backlight Error, Green Blinking: Soft OFF Status.
12 WDT Reset, Mask settings
13 Reset Control
14 Watchdog Timer
15 Hardware Reset

*[1] Be sure to adjust these settings according to your system's specification.

Accessing System Monitor

You can monitor the system status at any time using the System Monitor interface. The procedure below shows how to access System Monitor:

Step	Action
1	Start the Smart 8.4" operating system.
2	In the task bar, double-click the  icon. **Result**: The System Monitor GUI screen appears. 

NOTE: If you cannot see the  icon in the task bar, launch the System Monitor software by double-clicking the **systemmonitor.exe** file located in the following path: *C:\schneider\sysmon\gui*.

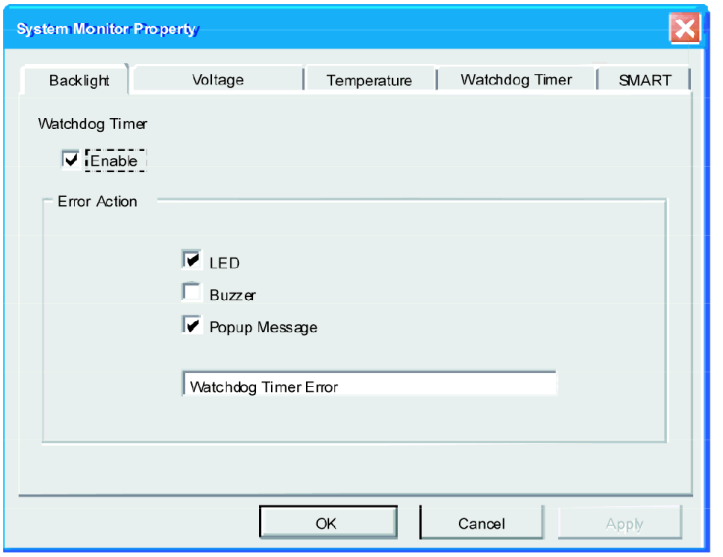
System Monitor Property

Presentation

The System Monitor Property enables you to specify which system parameters you want to monitor and how you want to be alerted.

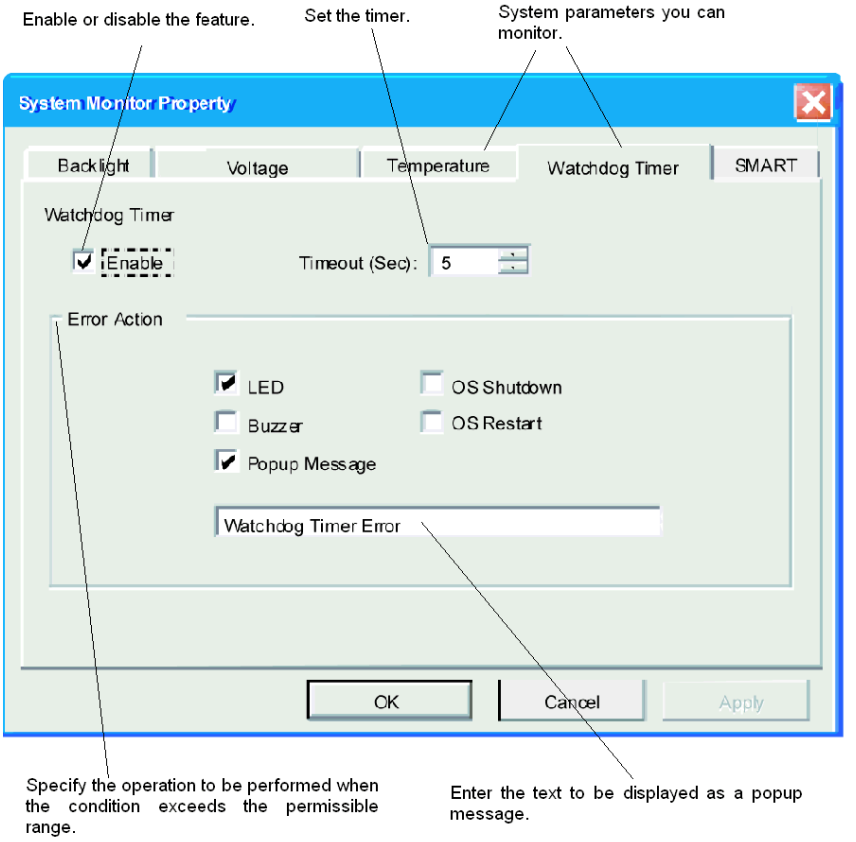
Accessing the System Monitor Property

The System Monitor Property screen enables you to configure the Smart system parameters you want to monitor and select how you want to be alerted. The procedure below shows how to access the System Monitor Property screen:

Step	Action
1	Start your Smart 8.4" operating system
2	Click **Start** →**Control Panel**. **Result**: The Control Panel window appears.
3	Double-click **System Monitor Property**. **Result**: The System Monitor Properties window appears. 

Setting up the System Monitor Properties

The following screen gives an overview of the System Monitor Property setting screen.



Click the tabs on the top of the screen to access configuration page of each system parameters.

NOTE: Since the Smart 8.4" has no HDD, the SMART monitoring function is not available, and nothing is functional in the SMART tab.

The table below describes the system parameters available for monitoring:

Feature	Functions Supervised
Voltage	Monitors the status of the Smart's built-in power supply and internal CPU power supply.
Temperature	Provides an alert when the temperature of the CPU or the overall system exceeds the defined limit.
Backlight	Detects backlight alarms. When the backlight burns out, the power LED will flash orange/red (See *Smart Unit Description, page 26*).
Watchdog Timer	This feature monitors the performance of the CPU by writing the uptime count value for the CPU and by periodically clearing the count value from the CPU. Errors are detected when the clearing of the count values from the CPU stops. This causes a timer overflow.

Once you know the system parameters you want to monitor, you can specify actions that will be undertaken when an event (time out, value out of range...) occurs. Set the action to be performed when a System Monitor event occurs, by selecting the relevant check box.

The following table gives a description of the operations that can be performed:

Item	Action
Enable	Select or deselect this option to enable/disable each the monitoring feature.
Buzzer	Sound an electronic beep (this option is automatically disabled when a checkmark is placed in the "OS shutdown checkbox).
Popup Message	Display error messages as popup messages. (The monitored item and description of the error are displayed).
Operating System shutdown	Shutdown the operating system. (The shutdown confirmation message is not displayed).
Operating System Restart	Resets the hardware.
Power LED	The Power LED lights orange for an RAS alarm.

Power LED Indicator

The three color power LED (See *Smart Unit Description, page 26*) indicates the Smart system conditions. It is also a power ON/OFF indicator. The power LED is located on the front face of the unit.

The Smart unit can send the following system status information to an external device:

Power LED Color	System Status	Output Condition
Green (Lit)	Normal operation (Power is ON)	None
Green (Blinking)	System is NOT running (Soft OFF). See *Smart Unit Description, page 26*.	None
Orange (ON)	Touch Panel Self-Test Error	None
Orange/Red (Blinking)	Backlight is not functioning	None
OFF	Power is OFF	–

NOTE: If the power LED of the Smart terminal is illuminated immediately in orange after the power is turned ON, a Touch Panel Self-test Error may have occurred.

Features Availability

The following table lists the operating settings available for each feature:

O: Setting available X: Setting not available

Feature	Operation				
	Buzzer	Popup message	OS shutdown	Reset	Power LED
Watchdog Timer	O	O	O	O	O
Voltage	O	O	O	X	O
Temperature	O	O	O	X	O
Backlight	O	O	X	X	O

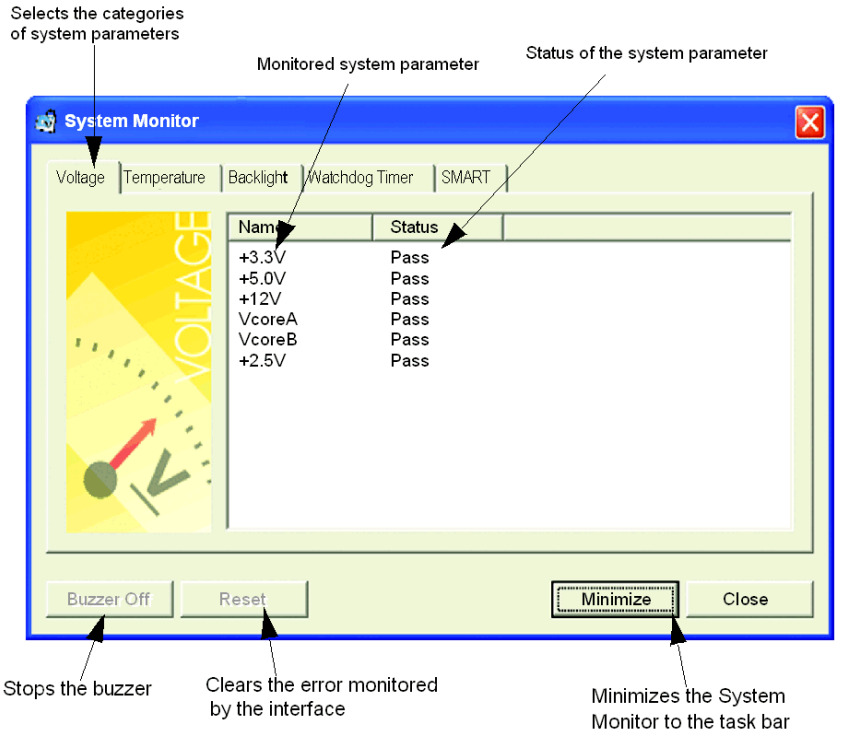
System Monitor Interface

Presentation

You can monitor the system status at any time using the System Monitor interface.

Description of the Interface

The following screen gives an overview of System Monitor. Selecting each of the tabs displays the status of each item. When an error occurs, the color of the tab changes:



NOTE: Since the Smart 8.4" unit has no HDD, the SMART monitoring function is not available, and nothing is functional in the SMART tab.

System Monitor displays the status of the system parameters. The following table describes the messages provided by the System Monitor interface:

Display	Meaning
Pass	Normal
Fail	Abnormal (exceeds programmed limits)
Disabled	Monitoring disabled
Not Supported	Not supported

System Monitoring Operation

When an error is detected, the operations specified in the System Monitor Property settings are performed (buzzer, popup message etc.) and an "X" is displayed on the icon in the system tray indicating an error status.

When the icon in the system tray changes as shown below, double-clicking the icon gives an explanation of the error condition.

The system performs the Error Action set in System Monitor Property when an error condition is detected with each monitoring item. The Error Action is performed only once when an error is detected for any of the items being monitored.

For example, look at the "+3.3 V" and "+5.0 V" options in the Voltage field. When the popup message feature for monitoring the voltage status is enabled, the popup message **+3.3 V Power Supply Error** is shown on the screen if a +3.3 V power supply error occurs. Press the **OK** button on the dialog box to hide the message.

Example of +3.3 V Power Supply error:

If a +5.0 V power supply error occurs, the popup message **+5.0 V Power Supply Error** is shown on the screen. The popup message displays the monitored item and an error description. When the buzzer feature is enabled, press the **Buzzer Off** button on the popup message to stop the buzzer sound. Press the **OK** button to close the popup message.

When OS Shutdown is enabled, the system automatically enters the shutdown operation without prompting the user for confirmation. To display the System Monitor screen for reviewing the present condition and the Smart's system date and time, double click on the icon in the System Tray.

When the buzzer sounds as an error action, the System Monitor screen displays the **Buzzer Off** button that is hidden during normal operation. When a popup message window is displayed, the **Buzzer Off** button is displayed in the window.

NOTE: Once an error is detected, the System monitor stores the error status (displays the icon indicating an error status). To resolve the error, press the **Reset** button on the System Monitor screen or switch off the terminal, perform the actions necessary to remove the cause of the error and power up the terminal once more.

System Monitor Error Messages

This section describes the error messages and closing messages displayed on the System Monitor and System Monitor Property screens.

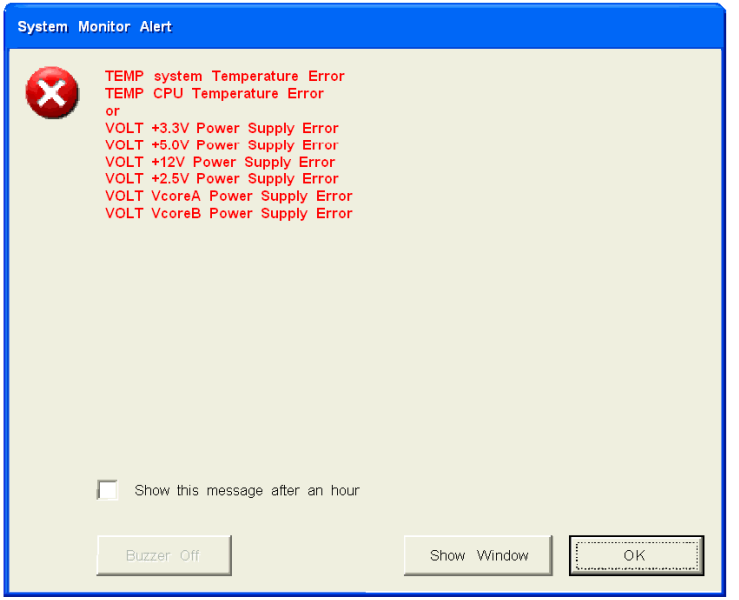
When an error occurs whilst the popup message option is enabled for Error Action, the following messages are displayed on the popup message output screen under the factory settings.

List of the error messages:

Error Generating Item	Message
VcoreA	VOLT VcoreA Power Supply Error
VcoreB	VOLT VcoreB Power Supply Error
Voltage +3.3 V	VOLT +3.3 V Power Supply Error
Voltage +5.0 V	VOLT +5.0 V Power Supply Error
Voltage +12 V	VOLT +12 V Power Supply Error

Error Generating Item	Message
Voltage +2.5 V	VOLT +2.5 V Power Supply Error
System Temperature	TEMP System Temperature Error
CPU Temperature	TEMP CPU Temperature Error
Watchdog Timer	Watchdog Timer Error
Backlight	Backlight Error

Example of displayed screen:



NOTE: You can modify the messages displayed on the popup message from the System Monitor Property screen.

Error Displays when Using the Event Viewer

The System Log records error type/location and error actions as error events. You can check the error event information using the Event Viewer.

Step	Action
1	Start your Smart terminal
2	Click **Start** →**Control Panel** →**Administrative Tools** →**Event Viewer**

NOTE: This feature is supported by Windows® XPe.

Error Type/Location and Error Action

The error type/locations shown by the Event Viewer are shown in the table below:

Error type/Location	Error Message Description
VcoreA	VOLT VcoreA Error has occurred
VcoreB	VOLT VcoreB Error has occurred
Voltage +3.3 V	VOLT +3.3 V Error has occurred
Voltage +5.0 V	VOLT +5.0 V Error has occurred
Voltage +12 V	VOLT +12 V Error has occurred
Voltage +2.5 V	VOLT +2.5 V Error has occurred
System Temperature	TEMP System Error has occurred
CPU Temperature	TEMP CPU Error has occurred
Watchdog Timer	Watchdog Timer Error has occurred

The actions taken when an error occurs and which are shown by the Event Viewer, are shown in the table below.

Type of Alert	Error Message
Buzzer	Buzzer has sounded because of an "xx" error.
Popup Message	Popup message has been displayed because of an "xx" error.
OS Shutdown	Windows® has been shutdown due to an "xx" error.
Power LED	The LED has changed to orange because of an "xx" error.

NOTE:

- The data shown in the table as "xx" indicate the error type/location
- The actions to be taken by the system after an error occurs are set via System Monitor Property screen.
- When a +3.3 V error occurs and the buzzer sounds, two errors will be displayed by the Event Viewer: **+3.3 V Error has occurred** and **Buzzer has sounded because of a +3.3 V error**.

Maintenance

11

Subject of this Chapter

This chapter covers maintenance of the Smart 8.4".

What's in this Chapter?

This chapter contains the following topics:

Reinstallation Procedure

At a Glance

In certain cases, it may be necessary to reinstall the operating system.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Remove all power from the device before removing any covers or elements of the system, and prior to installing or removing any accessories, hardware, or cables.
- Always use a properly rated voltage sensing device to confirm power is OFF.
- Unplug the power cable from both the Smart unit and the AC power supply.
- Replace and secure all covers or elements of the system before applying power to the unit.
- Use only the specified voltage when operating the Smart 8.4''. The AC unit is designed to use 100 ... 240 Vac input. The DC unit is designed to use 23 ... 25 Vdc. Always check whether your device is AC or DC powered before applying power.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

CHEMICAL BURNS TO EYES OR SKIN

- Do not use tools to operate the touch panel or in the vicinity of the display.
- When placing the display face-down, select a clean, level, non-abrasive surface. If necessary, place a soft, non-abrasive pad on the surface before lowering the unit.
- If a leak in the LCD panel is discovered and you come in contact with the liquid crystal material, follow these procedures:
  - In the case of contact with eyes or mouth, flush with running water for 15 minutes minimum.
  - In the case of contact with skin or clothing, wipe off the liquid crystal material and wash with soap and running water for 15 minutes.
  - If liquid crystal is ingested, induce vomiting, rinse mouth, and then drink a large quantity of water.
  - Follow any other hazardous substances safety procedures required by your facility.

Failure to follow these instructions will result in death or serious injury.

⚠ CAUTION

OVERTORQUE AND LOOSE HARDWARE

- Do not exert more than 0.6 N•m (5.3 lb-in) of torque when tightening the installation fastener, enclosure, accessory, or terminal block screws. Tightening the screws with excessive force can damage the plastic casing of the Smart 8.4''.
- When installing or removing screws, ensure that they do not fall inside the Smart 8.4'' unit's chassis.

Failure to follow these instructions can result in injury or equipment damage.

⚠ CAUTION

STATIC SENSITIVE COMPONENTS

Smart 8.4'' internal components, including accessories such as RAM modules and expansion boards, can be damaged by static electricity. Observe the electrostatic precautions below when handling such components.

Failure to follow these instructions can result in injury or equipment damage.

Before Reinstallation

Hardware required:

- Reinstallation CD-ROM.
- A computer running Windows 2000/XP able to read "Compact Flash Memory" and having a CD-ROM drive.
  Optimal configuration: Standard computer with PCMCIA slot (Notebook for example) and "Compact Flash" to PCMCIA adapter.
  Possible configuration: Computer and "Compact Flash reader" on USB port."

Setting up the hardware:

- Shut down Windows® in an orderly fashion and remove all power from the device.
- Disconnect all external peripherals.

NOTE: Save all important data on a backup Compact Flash card (the reinstallation process erases all data on them). The reinstallation process will return the computer to its factory settings.

Reinstallation

Proceed as follows:

Step	Action
1	Insert the backup disk in the floppy disk drive and power up the Magelis.
2	Insert the restore CD or DVD in the CD or DVD drive.
3	At the MS-DOS D:\> prompt, type "RESTORE" and confirm with "Enter".
4	At the message "Proceed Restore [Y,N]", type "Y".
5	Wait for the appearance of the following message to indicate the end of restoration: ****Restore OK**** If any other message appears, contact your approved Schneider Automation technical center.
6	Remove the CD or DVD from its drive and restart the machine using "Ctrl+Alt+Del".

Cleaning and Maintenance

Cleaning Solution

⚠ CAUTION

HARMFUL CLEANING SOLUTIONS

- Do not clean the unit or any component of the unit with paint thinner, organic solvents, or strong acids.
- Use only a mild soap or detergent that will not harm the polycarbonate material of the screen.

Failure to follow these instructions can result in injury or equipment damage.

Installing a Replacement Gasket

Installation Gasket

Use of the installation gasket may help extend the operating life of your Smart. The gasket is required to meet the protection ratings (IP65, IP20) of the unit and provides additional protection from vibration. Even if moisture protection is not required, install the gasket delivered with your Magelis product.

⚠ CAUTION

LOSS OF SEAL

- Inspect the installation gasket prior to installation or reinstallation, and periodically as required by your operating environment.
- Replace the gasket if visible scratches, tears, dirt, or excessive wear are noted during inspection.
- Do not stretch the gasket unnecessarily or allow the gasket to contact the corners or edges of the frame.
- Ensure that the gasket is fully seated in the installation groove.
- Install the Smart into a panel that is flat and free of scratches or dents.
- Tighten the installation fasteners using a torque of 0.5 N•m (4.5 lb-in).

Failure to follow these instructions can result in injury or equipment damage.

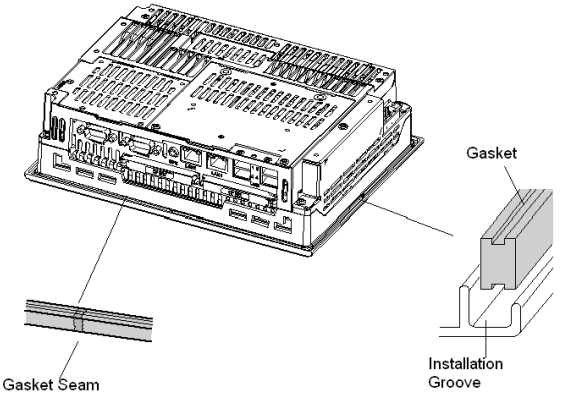
⚠ DANGER

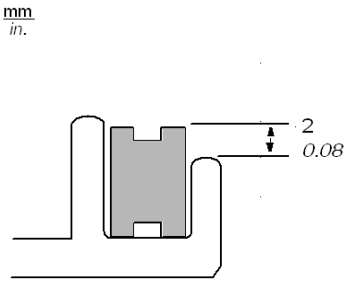
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Read and understand the safety information on previous pages (see *Reinstallation Procedure, page 96*) before attempting this procedure.

Failure to follow these instructions will result in death or serious injury.

The table below describes how to replace the installation gasket.

Step	Action
1	Shut down Windows® in an orderly fashion and remove all power from the device.
2	Place the unit on a clean, level surface with the display facing downwards. If necessary, place a soft, non-abrasive pad on the surface before placing the unit.
3	Remove the gasket from the unit.
4	Attach the new gasket ensuring that the gasket's grooved sides are vertical. Ensure that the gasket's seam is not inserted into any of the corners of the unit as this may lead to tearing of the gasket. 

Step	Action
5	heck that the gasket is correctly attached to the unit. The upper surface of the gasket should evenly protrude approximately 2 mm (0.08 in) out of the groove. 

Lithium Battery

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Read and understand the safety information on previous pages (see *Reinstallation Procedure, page 96*) before attempting this procedure.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

EXPLOSION, FIRE, OR CHEMICAL HAZARD

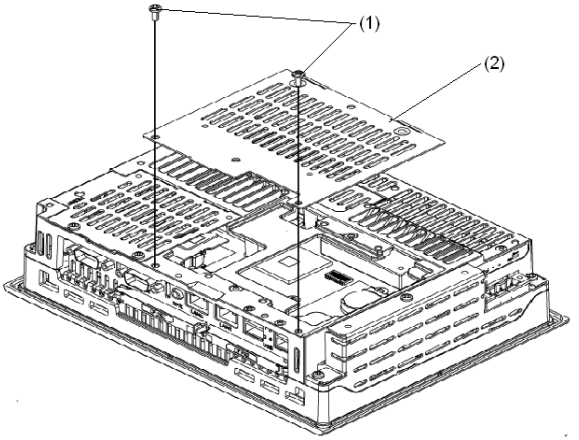
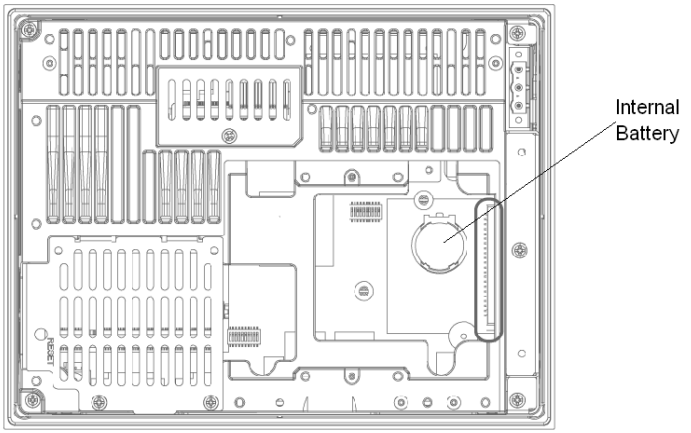
Follow these instructions for the Lithium batteries:

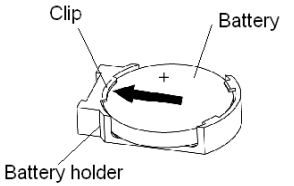
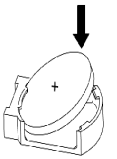
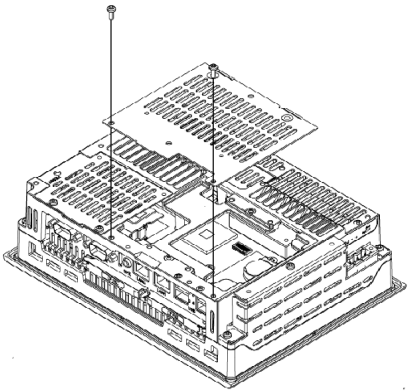
- Do not recharge, disassemble, heat above 100 °C (212 °F), or incinerate.
- Recycle or properly dispose of used batteries.
- Replace with identical type.
- Follow all battery manufacturer's instructions.

Failure to follow these instructions will result in death or serious injury.

The Smart 8.4" contains a lithium battery, which is used to save certain system data such as the date and time.

The following tables gives the Battery replacement procedure:

Step	Action
1	Shut down Windows® in an orderly fashion, remove all power from the device.
2	Place the unit on a clean, level surface with the display facing downwards. If necessary, place a soft, non-abrasive pad on the surface before placing the unit.
3	Remove the screws (1) from the IDE Cover (2) and remove the IDE Cover: 
4	Remove the battery from its place as shown below:  Push the clip of the battery holder and the battery is pushed up and removed.

Step	Action
5	Push the clip of the battery holder and the battery is pushed up and removed: 
6	Insert the battery in the side of the clip of the battery holder first with the plus (+) pole facing upward:  Push the battery from above until you hear the click to fit it in the battery holder.
7	Replace the IDE Cover with the two screws. The necessary torque is 0.5 to 0.6 N•m (4.5 to 5.3 lb-in): 
8	Replace the Smart unit on its mounting and reconnect the power.

Periodic Inspection

Be sure to inspect the Smart 8.4'' to determine its general condition. For example:

- Are all power cords and cables connected properly? Have any become loose?
- Are all mounting brackets holding the unit securely?
- Is the ambient temperature within the specified range?
- Are there any scratches or traces of dirt on the installation gasket?

Troubleshooting

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Troubleshooting

Troubleshooting Checklist

This section explains how to find and resolve problems with the Smart unit.

The Smart can be connected to a wide range of devices, including a host (PLC), however, this manual will not discuss every possible device or problem. For problems not directly related to the Smart unit, refer to that device's manual.

The main problems that can occur during usage of the Smart are:

- The Touch Panel display is blank
- The Touch Panel does not respond
- Connected devices cannot be used.

When a problem occurs, be sure to first read each checklist item and follow the instructions given. If this does not solve the problem, please contact your local Smart distributor.

When a hardware or software problem cannot be solved, please contact the distributor where you purchased the Smart unit.

No Display

Step	Check Item or Operation	Check Result	Action Required
1	Switch OFF the Smart power supply.		
2	Is the power cord connected correctly?		Connect the power cord correctly.
3	Is the power supply voltage within specification?		Please refer to *Structural and Electrical Characteristics, page 30*
4	Switch ON the power supply.		

Step	Check Item or Operation	Check Result	Action Required
5	Does the ON LED illuminate in green?		Power indicator does not light up or is orange/red blinking and you have no screen operation, contact the distributor where the Smart was purchased.
6	Does the Windows® operating system work normally?		If a white screen is displayed and Windows® does not work at all, please contact the distributor where the Smart was purchased.
–	Was the problem solved by the above?		If not, please contact the distributor where the Smart was purchased.

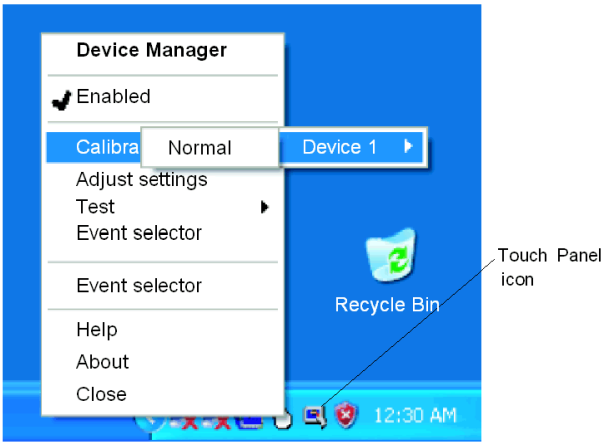
Touch Panel does not Respond

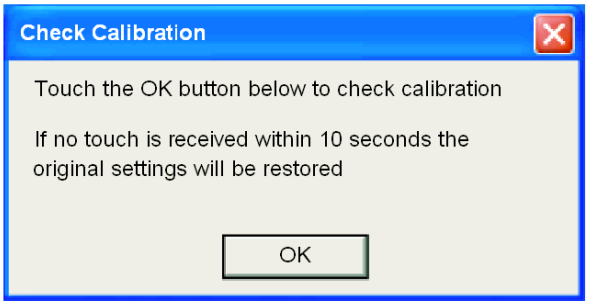
Step	Check Item or Operation	Check Result	Action Required
1	Has the Touch Panel been calibrated?		Calibrate the Touch Panel (See the procedure "Touch Panel Calibration" given below). If the Touch Panel cannot be calibrated, please contact the distributor where the Smart was purchased.
–	Was the problem solved by the above?		If not, please contact the distributor where the Smart was purchased.

Touch Panel Calibration

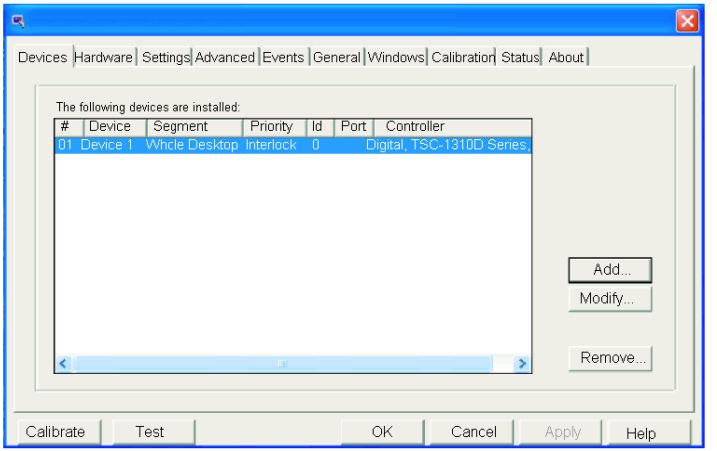
You have two possible procedures to calibrate the Touch Panel:

First procedure:

Step	Actions for procedure 1
1	Click on the Touch Panel icon. Select ‘Calibration’, then ‘Device 1’: 
2	An arrow appears in the upper left corner of the Touch Panel: touch the red point with your finger. Do the same for the four corners: 

Step	Actions for procedure 1
3	In order to valid the calibration, click on OK in the following window: 

Second procedure:

Step	Action for procedure 2
1	Open the ‘Control panel’ window.
2	Click on the ‘Pointer Devices’ icon: 
3	In the following window, click on ‘Calibrate’ (bottom left): 
4	Then follow steps 2 and 3 of the previous table.

Connected Devices cannot be Used

Step	Check Item or Operation	Check Result	Action Required
1	Switch OFF the Smart power supply.		
2	Is the power cord connected correctly?		Connect the power cord correctly.
3	Are the peripheral devices connected correctly?		Follow the instructions described in the respective manual.
4	Switch ON the Smart power supply.		
5	Does this device require driver setup?		Refer to the device's manual and setup the driver.
–	Was the problem solved by the above?		If not, please contact the distributor where the Smart was purchased.

Recovery

Please refer to the reinstallation procedure *Reinstallation Procedure, page 96*

Appendices

IV

Accessories

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Accessories for the Smart 8.4’’

List

Accessories are available as options. The list of accessories for the Smart 8.4’’ is shown below:

Description	Reference
RAM 1 GB	MPC YK22 RA 1024
Compact Flash 1 GB - Web edition - Windows® XP Embedded	MPC YN11 CF 110T
Compact Flash 1 GB - HMI edition - Windows® XP Embedded - Vijeo Designer Run Time	MPC YN11 CF 110H
Compact Flash 2Gb - Web Edition -Windows XP Embedded and Framework.NET	MPC YN11 CF 210M
Compact Flash 2Gb - Web Edition -Windows XP Embedded and Framework.NET - Vijeo Designer Run Time	MPC YN11 CF 210T
Compact Flash 2Gb - Empty	MPC YN00 CF 200N
Compact Flash 4Gb - Empty	MPC YN00 CF 400N
Protection sheet	MPC YK10 SPS KIT
Maintenance kit including installation fasteners, installation screws and gasket	MPC YK10 MNT KIT