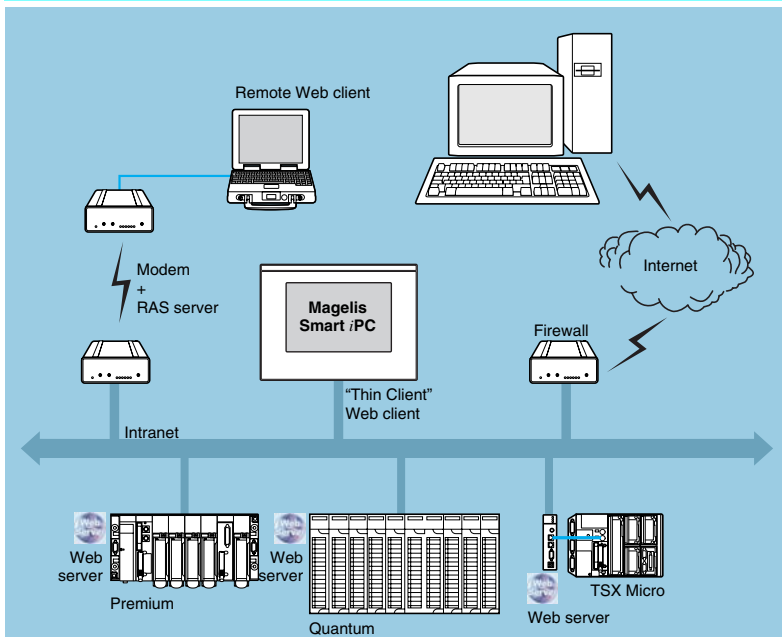


## FactoryCast configurable PLC Web services



In addition to standard Web services, FactoryCast modules (see selection table on page 48376/5) support the following functions:

- Alarm Viewer
- Creation and display of graphical views via an online graphic editor (Graphic Data Editor integrated)
- Hosting and display of user defined Web pages created by the user
- SOAP/XML server interface.

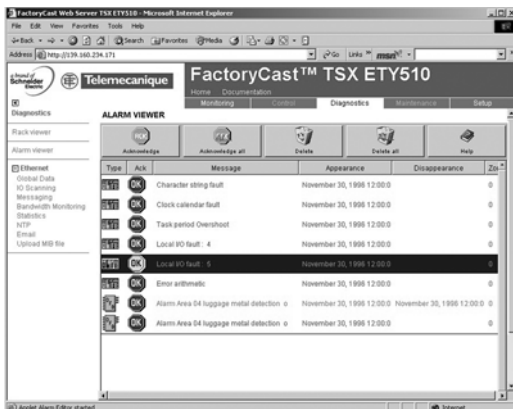
### Alarm Viewer function

"Alarm Viewer" is a ready-to-use, password-protected function. This function is used to manage the alarms (display, acknowledgment and deletion) generated at PLC level by the system or using diagnostic function blocks known as DFBs (system-specific diagnostic function blocks and application-specific diagnostic function blocks created by the user).

These alarms are store in the PLC diagnostic buffer (specific memory area used to store all diagnostic events), this function is available with the Premium/Atrium platforms (with PL7 or Unity Pro software) and the Quantum platform (with Unity Pro software).

The diagnostics viewer consists in a Web page displaying a list of messages, with the following informations:

- Time stamping of the appearance/disappearance of the fault.
- Alarm message
- Alarm status
- Type of associated diagnostic function block (DFB).



### Graphic Data Editor function

This function is used to create graphical views animated by PLC variables. This graphic editor is available online "ready-to-use" and also offline using FactoryCast configurator software.

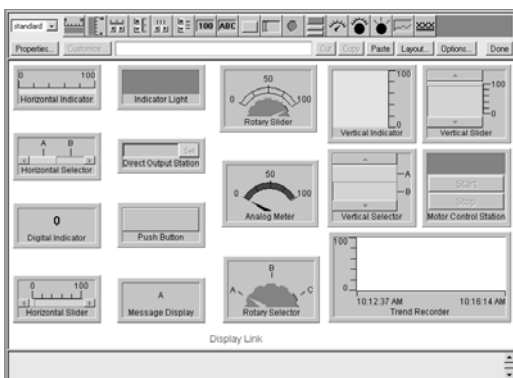
These views are created by simple copy/paste operations, using a library of predefined graphic objects. The object parameters are set according to user requirements (colors, PLC variables, labels, etc.).

List of graphic objects provided:

- Analog and digital indicators
- Horizontal and vertical bar charts
- Dialog boxes for displaying messages and controlling/displaying values
- Pushbuttons
- Trending charts
- Tanks, valves, motors, etc.

Many views created can be saved in the Web server modules.

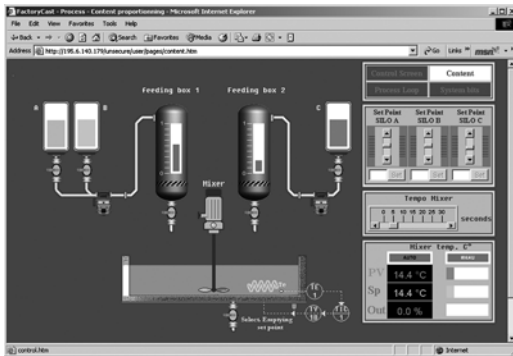
These customized graphic objects can be reused in user defined Web pages that have been created using standard software for editing HTML pages.



# Ethernet in Machines and Installations

## System approach

### FactoryCast configurable PLC Web services



#### FactoryCast configurable PLC Web server (continued)

##### User Web page hosting and display function

FactoryCast Web modules also have an 8 Mbyte memory (1), which is accessed in the same way as a hard drive and can be used to host Web pages and all user-defined documents in Word or Acrobat Reader (for example, maintenance manuals, diagrams, etc).

These Web pages can be created using any standard tool, for example Microsoft FrontPage, that enables creation and editing in HTML format. These pages can be enhanced by inserting animated graphic objects linked to PLC variables. These animated objects are created using the Graphic Data Editor supplied with FactoryCast.

The Web pages created can be used, for example, to:

- Display and modify all PLC variables in real time
- Create hyperlinks to other external Web servers (documentation, suppliers, etc).

This function is particularly suitable for creating graphic screens used for the following purposes:

- Display, monitoring, diagnostics
- Generation of realtime production reports
- Maintenance help
- Operator guides.

##### SOAP/XML server interface

FactoryCast modules incorporate a standard SOAP/XML data server that provides direct interoperability between automation devices and computer management applications (MES, ERP, SAP, .Net application, etc). See page 48373/5.

##### FactoryCast Web server configuration software

The FactoryCast Web server configuration software is supplied on CD-ROM with every FactoryCast module (TSX ETZ 510 for TSX Micro, TSX ETY 110WS/5103 for Premium, 140 NOE 771 11 for Quantum and TSX ETG 1000/1010 gateways). This software is used for configuration and administration of the Web server embedded in these modules. It is compatible with Windows 2000 and Windows XP operating systems. It provides the following functions:

- Setting the parameters of the FactoryCast functions
- Definition of access security, passwords
- Importing of PLC symbol databases
- Definition of access to write-enabled variables
- Management of the Web site:
  - Management of default Web site pages
  - Management of user Web site pages (2)
  - Graphic object editor for animating Web pages
  - Downloading of Web pages between the PC and the module
  - Debugging of Web pages in online mode or in simulation mode (including animations and Java beans)
- Simulation mode

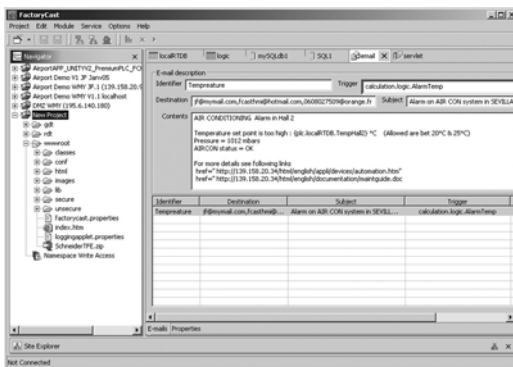
The application and the Web site (including the Java animations) can be set up in online mode or in simulation mode. Simulation mode is used to test the operation of the Web application without a FactoryCast module (with no physical connection to a PLC) thereby simplifying debugging.

A graphics editor integrated in the configuration software can be used for easy customization of graphic objects (bar charts, gauges, LEDs, curves, cursors, operator input fields, alphanumeric display fields, buttons, etc).

- Creation of user Web pages (2)

User Web pages are created graphically using an external HTML editor (FrontPage or similar, not supplied).

User Web pages created in the FactoryCast environment are actual animated supervision screens and can be used to monitor your process. Based on Web technologies (HTML and Java) they provide realtime access to PLC variables using the FactoryCast graphic object library (Java beans).



(1) Memory not affected by power outages or reinitialization of the PLC.

(2) FactoryCast includes a plug-in for FrontPage 2000. This plug-in makes it easier to set up animations for realtime access to the PLC variables in HTML pages created by the user. They are created in the HTML editor by simply inserting customized graphic objects.