Operator dialogue terminals
Magelis display units and terminals with alphanumeric screen and with matrix screen

Presentation

XBT H/P/E display units and terminals with alphanumeric screen are used to represent messages and variables. Various keys can be used:
- to modify variables,
- to control the device,
- to browse in a dialogue application.

For models which have a printer output, the display units and terminals can also be used to print alarm messages and print-out form pages.

XBT HM/PM terminals with matrix screen can also be used to display bitmap images and animated bar chart and gauge objects.

Operation

All Magelis display units and terminals with alphanumeric and matrix screen have the same ergonomic user interface:
- function keys,
- service keys,
- numeric or alphanumeric keys.

Configuration

Magelis display units and terminals can be configured using the same XBT L1003 software in a Windows environment.

For terminals with alphanumeric screen, XBT L1003 software uses the concept of pages: each page can be viewed in its entirety.

A 2 or 4-line window, depending on the model, simulates what will appear on the product screen.

For XBT HM/PM terminals with matrix screen, XBT L1003 software offers up to 8 lines of 40 characters, and animated bar chart and gauge objects.

Communication

XBT H/P/E/HM/PM terminals communicate with PLCs via an integrated point-to-point or multidrop serial link.

The communication protocols used are those of Schneider Electric PLCs, as well as those of the other major manufacturers on the market.

XBT H/P/HM/PM terminals also communicate on the AS-Interface cabling system bus using the 22.5 pitched module.
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Functions
XBT H/P/E/HM/PM display units and terminals have (depending on the model) function keys and service keys on the front panel.

Function keys
Function keys are defined for the whole application. They can be used for:
- accessing a page,
- latching memory bits,
- toggling memory bits (ON/OFF).

Service keys
Service keys are the “arrow keys” and the control keys combined, and are used for modifying the parameters of the automated system. The control keys are used to perform the following actions:
- ENTER: Confirm a selection or entry, acknowledge an alarm.
- MOD: Change to the mode for entering pages, passwords, fields or graphic objects.
- ESC: Cancel an entry, suspend or stop a current action.
- SHIFT: Access the second of the dual key functions.
- MENU: Access a menu containing the operating functions.
- HOME: Return to the entry point of the current menu. Example: return to the first page of the application.
- SYST: Access the confidential mode which contains the setup functions.
- ALARM: View the alarms.
- PRINT: Print.

The “arrow” keys are used to:
- change page within a menu,
- move within a page,
- select the value of a digit,
- select a value from a list of choices,
- increment or decrement the value of a variable field, when used with the SHIFT key.

Description
XBT H/P/E/HM/PM display units and terminals comprise:

On the front panel
1. A communication monitoring indicator light.
2. A keypad activity indicator light (depending on model).
3. Fluorescent or back-lit LCD display.
4. Function keys with indicator light and changeable legends.
5. Service keys with indicator light.
6. Twelve numeric keys (for XBT-P02pppp).
   Twelve alphanumeric keys (0…9, +/-, .) associated with 3 alphabetical access keys (A…Z) for XBT E.

On the rear
1. A plug-in screw terminal block for +24 V power supply and a connection for the alarm relay (depending on model).
2. A 25-way female SUB-D connector for connection to PLCs, FT2100 configuration terminals or PC compatibles.
3. A 9-way male SUB-D connector for the printer connection (depending on model).
# Characteristics

## Operator dialogue terminals
Magelis display units with 2-line alphanumeric screen

### Type of display unit
<table>
<thead>
<tr>
<th>XBT H02010</th>
<th>XBT H811050</th>
<th>XBT H061010</th>
</tr>
</thead>
</table>

### Environment
- **Conforming to standards**: IEC 61131-2, IEC 60068-2-6, IEC 60068-2-27, UL 508, CSA C22-2 n° 14
- **Temperature**
  - Operation: 0...+ 50 °C
  - Storage: - 40...+ 70 °C
- **Degree of protection**: IP 65, conforming to IEC 60529, Nema 4
- **Vibration**: Conforming to IEC 60068-2-6; 2...11.2 Hz at 1 mm; 11.2...150 Hz, 1 gn for 3 hours per axis

### Mechanical characteristics
- **Mounting and fixing**: Flush mounted, fixed by 4 or 6 locking clips (included), pressure mounted (on 1 to 6 mm thick panel)
- **Material**
  - Enclosure: Polyphenyl oxide, 10% glass fibre (PPO GFN1 SE1)
  - Keypad, screen protection: Anti-UV treated toughened polyester (Autoflex EB AG)

### Keys
- **Function keys**: No keys, 4, No keys
- **Service keys**: No keys, 1, 5, No keys

### Electrical characteristics
- **Display**
  - Type: Fluorescent green matrix characters (5 x 7 pixels)
  - LCD (5 x 7 pixels)
  - Back-lit LCD (5 x 7 pixels)
- **Capacity**
  - 2 lines of 20 characters, height 5 mm
  - 2 lines of 20 characters, height 9 mm
  - 2 lines of 20 characters, height 9 mm
- **Power supply**
  - Voltage: ± 24 V non isolated
  - ± 24 V non isolated (during configuration)
  - ± 24 V via Nano/Micro/ Premium PLC terminal port (during operation)
- **Voltage limits**: 18...30 V
- **Ripple**: 5% maximum

### Operating characteristics
- **Consumption**
  - 10 W
  - 1.5 W
  - 10 W

### References:
- Dimensions, mounting: page 1/46
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Magelis display units with 2-line alphanumeric screen

Display units with 2 lines of 20 characters (fluorescent)

<table>
<thead>
<tr>
<th>Downloadable exchange protocol</th>
<th>Number of keys</th>
<th>Supply voltage V</th>
<th>Language version</th>
<th>Reference</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without printer port, without log</td>
<td></td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H002010</td>
<td>0.600</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H022010</td>
<td>0.600</td>
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<tr>
<td></td>
<td>–</td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H012010</td>
<td>0.600</td>
</tr>
<tr>
<td>With printer port, with log</td>
<td></td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H012110</td>
<td>0.600</td>
</tr>
</tbody>
</table>

Display units with 2 lines of 20 characters (LCD)

<table>
<thead>
<tr>
<th>Modbus, Uni-Telway</th>
<th>Without printer port, without log</th>
<th>Supply voltage V</th>
<th>Language version</th>
<th>Reference</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>24 and 5 via terminal port on the Twido/ Nano/Micro/ Premium PLC</td>
<td>Multilingual</td>
<td>XBT H811050</td>
<td>0.600</td>
</tr>
</tbody>
</table>

Display units with 2 lines of 20 characters (back-lit LCD)

<table>
<thead>
<tr>
<th>Without printer port, without log</th>
<th>Supply voltage V</th>
<th>Language version</th>
<th>Reference</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H001010</td>
<td>0.600</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H021010</td>
<td>0.600</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Multilingual</td>
<td>XBT H011010</td>
<td>0.600</td>
</tr>
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</table>

Separate parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Usage</th>
<th>Reference</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development software</td>
<td>Under Windows 98, 2000 or XP, for downloading the application and protocols</td>
<td>See page 3/7</td>
<td>–</td>
</tr>
<tr>
<td>Connecting cables</td>
<td>Connection to PLCs, configuration terminals, etc.</td>
<td>See page 1/41</td>
<td>–</td>
</tr>
</tbody>
</table>

Documentation

<table>
<thead>
<tr>
<th>Description</th>
<th>Format</th>
<th>Reference</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magelis user’s manual</td>
<td>AS bound To order separately to the XBT L100M CD-ROM</td>
<td>XBT X000</td>
<td>0.700</td>
</tr>
</tbody>
</table>

(1) Add the following suffix to the reference: EN for English, FR for French, DE for German, ES for Spanish, IT for Italian.