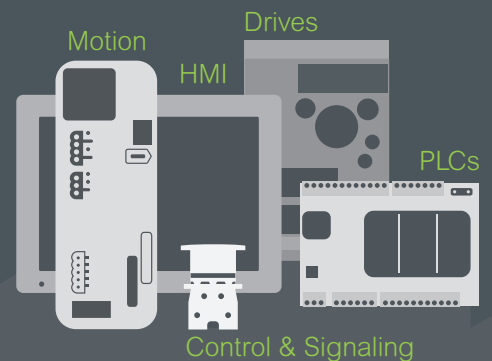## Introducing the **Easy** Series

Essential automation & control products

*When just enough is just right!*

Motion

HMI

Drives

PLCs

Control & Signaling

# **Easy** Harmony ET6

# Human Machine Interfaces

Essential touch screen panels for simple machines

Life Is On | **Schneider Electric**

# Contents

**Easy Harmony ET6 Essential touch screen panels**

# Human Machine Interfaces
Easy Harmony ET6
Essential touch screen panels for simple machines

## SIO HMI panels

| | | 7" W | 10.1" W |
|---|---|---|---|
| **Applications** | | Display of text messages, graphic objects, and synoptic views Control and configuration of data | |
| **Type of display module** | | SIO HMI panels | |
| | |  |  |
| **Display** | Touch screen size | 7" W | 10.1" W |
| | Resolution (pixels) | 800 x 480 pixels, 16 million colors | 1,024 x 600 pixels, 16 million colors |
| | Type | TFT Color LCD, single-touch analog resistive | |
| **Degree of protection** | | IP65 (front) | |
| **Functions** | Brightness control | 16 levels (adjusted with touch panel or software) | |
| | Backlight service life | 20,000 hours or more (continuous operation at 25 °C/*77 °F*) before backlight brightness decreases to 50% | |
| **Memory** | Device memory | 256 MB | 256 MB |
| | User data memory | 256 MB | 256 MB |
| | Backup memory | 128 KB NVRAM | |
| **Dimensions** | External W × H × D mm/*in.* | 205.5 x 150.5 x 45/*8.09 x 5.92 x 1.77* | 270.5 x 200.5 x 47/*10.64 x 7.89 x 1.85* |
| | Cut-out W × H mm/*in.* | 190 x 135/*7.48 x 5.31* | 255 x 185/*10.04 x 7.28* |
| **Weight** | kg/lb | 0.600/*1.323* | 0.980/*2.161* |
| **Supply voltage** | | 19.2 V...28.8 V ⎓ | |
| **Environment** | | Ambient air temperature 0...50 °C/*32...122 °F* | |
| **Communication** | Asynchronous serial link | RS-232C (COM1), RS-485/RS-422 (COM2) | |
| | USB ports | 1x USB 2.0 Micro-B | |
| | Buses and networks | No | No |
| **RTC** | | Yes | |
| **Conformity to standards and certifications** | | CE, China RoHS, and UL 61010-2-201 | |
| **Operating system** | | VxWorks | |
| **Development software** | | Vijeo Designer Basic *(1)* | |
| **Terminal reference** | | **HMIET6401** | **HMIET6501** |
| **Pages** | | 9 | |

*(1) Requires Vijeo Designer Basic V1.2. For more information on Vijeo Designer, please refer to the DIA5ED2130614EN catalog.*

## ETH HMI panels

| | 7" W | 10.1" W | 12.1" W | 15.6" W |
|---|---|---|---|---|
| **Applications** | Display of text messages, graphic objects, and synoptic views Control and configuration of data | | | |
| **Type of display module** | ETH HMI panels | | | |
| |  |  |  |  |
| Touch screen size | 7" W | 10.1" W | 12.1" W | 15.6" W |
| Resolution (pixels) | 800 x 480 pixels, 16 million colors | 1,024 x 600 pixels, 16 million colors | 1,280 x 800 pixels, 16 million colors | 1,366 x 768 pixels, 16 million colors |
| Type | TFT Color LCD, single-touch analog resistive | | | |
| Degree of protection | IP65 (front) | | | IP65 (front), Type 4X (indoor use only) |
| Brightness control | 16 levels (adjusted with touch panel or software) | | | |
| Backlight service life | 20,000 hours or more (continuous operation at 25 °C/*77 °F*) before backlight brightness decreases to 50% | | | |
| Device memory | 256 MB | | | |
| User data memory | 256 MB | | | |
| Backup memory | 128 KB NVRAM | | | |
| External W × H × D mm/*in.* | 205.5 x 150.5 x 45/*8.09 x 5.92 x 1.77* | 270.5 x 200.5 x 47/*10.64 x 7.89 x 1.85* | 310.5 x 232.5 x 50/*12.22 x 9.5 x 1.97* | 412 x 268 x 50/*16.22 x 10.55 x 1.97* |
| Cut-out W × H mm/*in.* | 190 x 135/*7.48 x 5.31* | 255 x 185/*10.04 x 7.28* | 295 x 217/*11.61 x 8.54* | 394 x 250/*15.51 x 9.84* |
| Weight kg/lb | *0.610/1.344* | 0.990/*2.183* | 1.620/*3.571* | 2.520/*5.556* |
| Supply voltage | 19.2 V...28.8 V ⎓ | | | |
| Environment | Ambient air temperature 0...50 °C/*32...122 °F* | | | |
| Asynchronous serial link | RS-232C (COM1), RS-485/RS-422 (COM2) | | | |
| USB ports | 1x USB 2.0 (Type A), 1x USB 2.0 Micro-B | | | |
| Buses and networks | 1x Ethernet TCP/IP (10BASE-T/100BASE-TX) | | | |
| RTC | Yes | | | |
| Conformity to standards and certifications | CE, China RoHS and UL 61010-2-201 | | | |
| Operating system | VxWorks | | | |
| Development software | Vijeo Designer Basic *(1)* | | | |
| Terminal reference | **HMIET6400** | **HMIET6500** | **HMIET6600** | **HMIET6700** |
| Pages | 9 | | | |

More technical Information on www.se.com

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More technical Information on www.se.com

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# Human Machine Interfaces
## Easy Harmony ET6
Essential touch screen panels for simple machines

## Essential touch screen panels for communication with simple machine systems

Easy Harmony ET6 essential touch screen panels are entry-level products that are tailored to meet the specific requirements of new economies. These panels are designed to communicate with simple machine systems for human machine interaction.

### Better visualization

Improved graphical presentation of the machine information with:
■ Better quality of graphic display with high resolution (over 30% higher than legacy) *(1)*
■ More colorful with 16 million colors

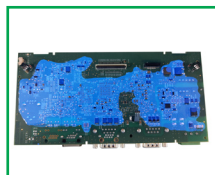### Better performance

Improved user operation experience with:
■ Faster micro processor unit for operational performance of screen changes, parts animations, and scripts, etc.
■ More memory to design higher level applications with HD graphics, charts, recipes, and operation logs (alarm/event/data), etc.

*QR code*

*Scan QR code on smartphone*

*Product info on smartphone*

### Easy to use

■ Product information via QR code scanning
■ Easily mounted with anti-drop hooks
■ Easy migration of legacy panels with compatible installation cut-out, communication ports, and configuration software
■ Easy to set up and use with simplified and intuitive programming software (Vijeo Designer Basic) and an illustrated Online help for self-guided training

*Anti-drop hooks*

*Default coating*

### Robustness

■ Designed with isolated power supply and enhanced protection on serial communication port for better EMC performance in harsh industrial environments.
■ Designed with protection for reverse power connection against negligent miswiring
■ PCBA default coating to be sustainable in harsh environment with high humidity
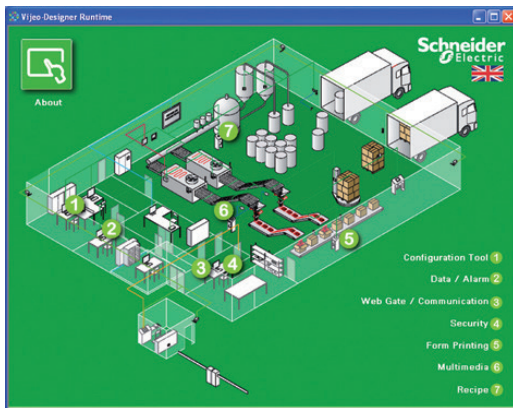■ USB clamps for stable USB cable connection
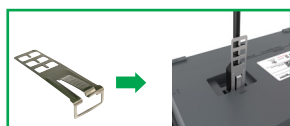
*Clamp option for USB Type A*

*Clamp for USB Type B*

*(1) Except 7" W panel.*

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# Human Machine Interfaces
## Easy Harmony ET6
### Essential touch screen panels for simple machines



*7" Wide and 10" Wide Easy Harmony ET6 touch screen panels*



*Example of project configuration*

## Presentation and applications

The range of Easy Harmony ET6 essential touch screen panels has been designed for various industrial production machines and system integration. They are dedicated to the following fields and types of machine:
- Utilities and engineering equipment
  - Water pump
  - Air conditioning (compressor, heat exchangers, chillers, etc)
  - Mechanical parking system
  - Crane
  - Car washing equipment
  - EV car charging pile
- Production machines
  - Textile machinery (blowing, carding, winding, twisting, etc.)
  - Packaging machinery (VFFS, wrapping, labelling, etc.)
  - Material working (Metal, wood, stone and glass, etc.)
  - Plastic and rubber (foaming, molding, extruding, etc.)
  - Other segments (electronics, SEMICON, Li-battery, printing, etc.)

This range of panels is available with two different models of communication ports:
- ETH model with Ethernet port (7", 10", 12", and 15" wide screen)
- SIO model without Ethernet port (7" and 10" wide screen)

## Operation

Easy Harmony ET6 touch screen panels are designed to meet the essential needs of information and communication technologies, which, depending on the model, include:
- Essential level of communication (serial multilink, USB downloading port)
- High level of communication (embedded Ethernet multilink) *(1)*
- External data storage (on a USB memory stick) for storing production data and backing up applications *(1)*
- Management of peripheral equipment: printers, barcode readers, etc. *(1)*

These panels offer an excellent level of technical performance and are designed for use mainly by OEM customers.

## Configuration

Easy Harmony ET6 touch screen panels are configured using Vijeo Designer Basic software*(1)* in Windows 7, Windows 8.1, and Windows 10 (32-bit and 64-bit) environments. This simplified configuration software boasts an intuitive user interface with many configurable windows, enabling projects to be developed quickly and easily.

## Communication

Automation platform or logic controller



**Modbus**

Easy Harmony ET6 panels
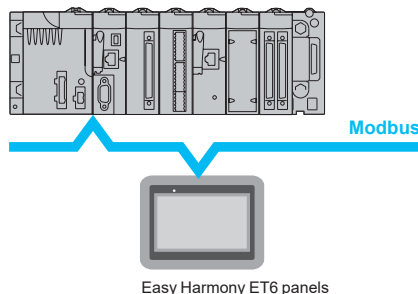
Easy Harmony ET6 touch screen panels can communicate with various PLCs via the integrated serial links or Ethernet links, using the following communication protocols:
- Schneider Electric (Modbus)
- Third-party: Mitsubishi Electric, Omron, and Siemens

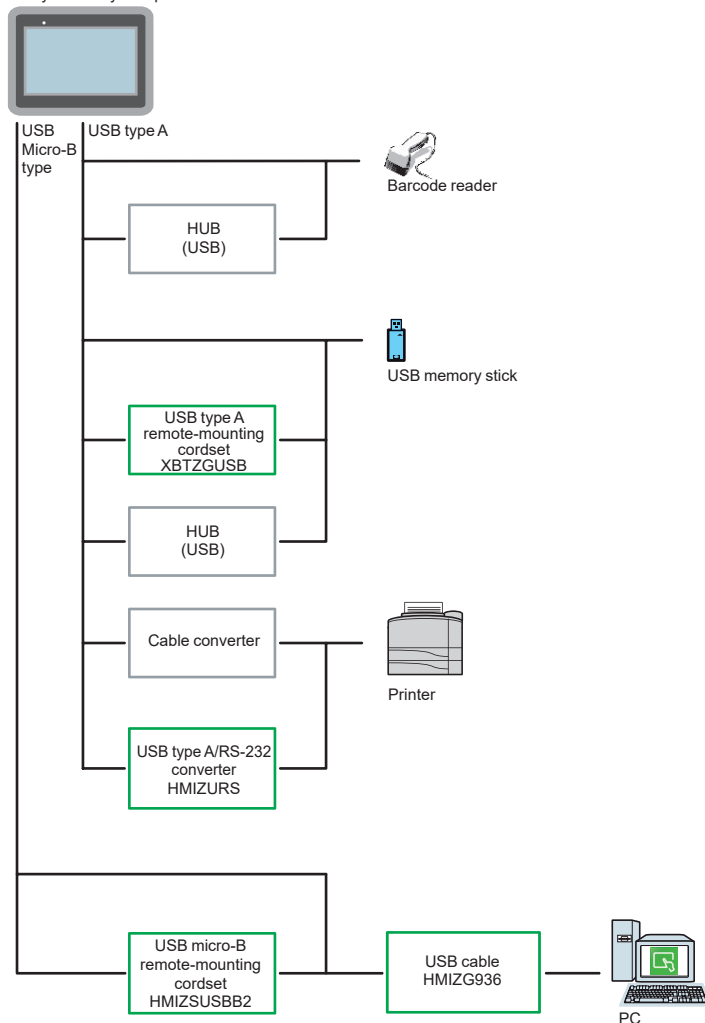*(1) Requires Vijeo Designer Basic version 1.2*

## Functions

Easy Harmony ET6 touch screen panels with Vijeo Designer Basic offer the following functions:

■ Display of animated mimics with 8 types of animation (pressing the touch panel, color changes, filling, movement, rotation, size, visibility, and value display)
■ Control, modification of numeric and alphanumeric values
■ Display of date and time
■ Real-time curves and trend curves with log
■ Alarm display, alarm log, and management of alarm groups
■ Multi-window management
■ Page calls initiated by the operator
■ Multilingual application management (10 languages simultaneously)
■ Recipe management
■ Data processing via Java Script
■ Application and logs stored on external application memory card in USB stick format
■ Management of printer and barcode reader

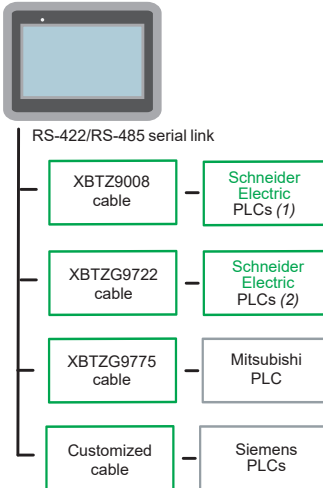## Operating modes for Harmony ET6 touch screen panels

### Edit mode

Easy Harmony ET6 panel

Presentation:
page 5

Description:
page 8

References:
page 9

6

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# Human Machine Interfaces
## Easy Harmony ET6
Essential touch screen panels for simple machines

## Operating modes for Harmony ET6 touch screen panels (continued)

### Communication with RS-422/RS-485 serial link mode

Easy Harmony ET6 panels

RS-422/RS-485 serial link

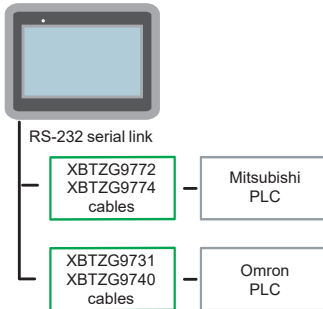| | | |
|---|---|---|
| XBTZ9008 cable | — | Schneider Electric PLCs (1) |
| XBTZG9722 cable | — | Schneider Electric PLCs (2) |
| XBTZG9775 cable | — | Mitsubishi PLC |
| Customized cable | — | Siemens PLCs |

*Examples of connection to RS-422/RS-485 serial port (3)*

### Communication with RS-232C serial link mode

Easy Harmony ET6 panels

RS-232 serial link

| | | |
|---|---|---|
| XBTZG9772 XBTZG9774 cables | — | Mitsubishi PLC |
| XBTZG9731 XBTZG9740 cables | — | Omron PLC |

*Examples of connection to RS-232C (3)*

### Communication with Ethernet mode

Easy Harmony ET6 panels

Ethernet TCP/IP

- Schneider Electric Modicon M200
- Schneider Electric Modicon M241
- Mitsubishi PLC
- Omron PLC
- Siemens PLCs
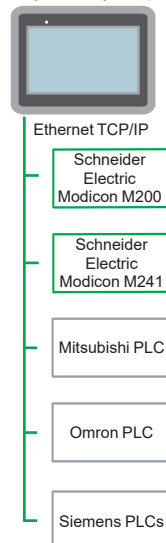
*(1) M221/M241/M251/M218/M258 logic controllers.*
*(2) M100/M200 logic controllers. For all other products, contact our Customer Care Center.*
*(3) Non-exhaustive examples; contact our Customer Care Center for more information.*

# Human Machine Interfaces
## Easy Harmony ET6
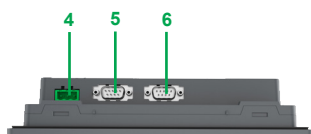Essential touch screen panels for simple machines
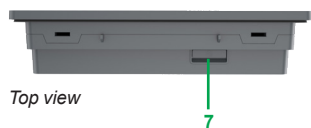**ETH and SIO touch screen panels**
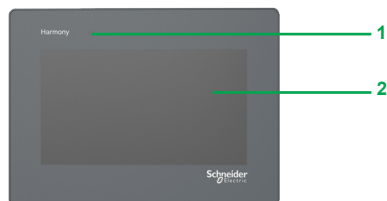


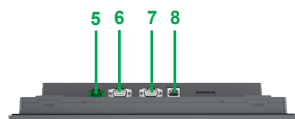*Front view*



*Rear view*



*Underside view*



*Top view*

### Easy Harmony ET6 SIO touch screen panels
**Front view**

**1** An LED on/off indicator
**2** Wide, true color LCD and touch screen

**Rear view**

**3** USB micro-B port for screen data downloading

**Underside view**

**4** A 24 V DC power supply connector supplied with the terminal
**5** A 9-way male SUB-D connector for RS 232C serial link (COM1 port)
**6** A 9-way male SUB-D connector for RS 422/RS 485 serial link (COM2 port)

**Top view**

**7** A sliding slot containing a replaceable battery to support embedded real-time clock



*Front view*



*Rear view*



*Underside view*



*Top view*

### Easy Harmony ET6 ETH touch screen panels
**Front view**

**1** An LED on/off indicator
**2** Wide, true color LCD and touch screen

**Rear view**

**3** A USB type A port for external storage with USB memory stick
**4** A USB micro-B port for screen data downloading

**Underside view**

**5** A 24 V DC power supply connector supplied with the terminal
**6** A 9-way male SUB-D connector for RS-422/RS-485 serial link (COM2 port)
**7** A 9-way male SUB-D connector for RS-232C serial link (COM1 port)
**8** An Ethernet port, 10/100Base-Tx type

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*References*

# Human Machine Interfaces
## Easy Harmony ET6
Essential touch screen panels for simple machines
**ETH and SIO touch screen panels and Vijeo Designer software**

HMIET6501



HMIET6700



*Vijeo Designer Basic*

### Easy Harmony ET6 SIO touch screen panels *(1) (2)*

| Screen size and type | Number of ports | Memory capacity | | Reference | Weight kg/*lb* |
|---|---|---|---|---|---|
| | | **For application** | **For backup** | | |
| **7" wide, 800 x 480 pixels, color TFT screen** | 1x COM2 (RS-422/485), 1x COM1 (RS-232C), 1x USB micro-B | 256 MB | 128 KB | **HMIET6401** | 0.60/*1.32* |
| **10" wide, 1,024 x 600 pixels, color TFT screen** | | | | **HMIET6501** | 0.98/*2.16* |

### Easy Harmony ET6 ETH touch screen panels *(1) (2)*

| Screen size and type | Number of ports | Memory capacity | | Reference | Weight kg/*lb* |
|---|---|---|---|---|---|
| | | **For application** | **For backup** | | |
| **7" wide, 800 x 480 pixels, color TFT screen** | 1x COM1 (RS-232C), 1x COM2 (RS-422/485) 1x USB micro-B, 1x USB Type A, 1x 10/100 Base-Tx | 256 MB | 128 KB | **HMIET6400** | 0.61/*1.34* |
| **10" wide, 1,024 x 600 pixels, color TFT screen** | | | | **HMIET6500** | 0.99/*2.18* |
| **12" wide, 1,280 x 800 pixels, color TFT screen** | | | | **HMIET6600** | 1.62/*3.57* |
| **15.6" wide, 1,366 x 768 pixels, color TFT screen** | | | | **HMIET6700** | 2.52/*5.56* |

### Configuration software

| Description | Used for | Reference |
|---|---|---|
| **Vijeo Designer Basic** *(4)* | Easy Harmony ET6 models | *(3)* |

*(1) Panels supplied with fixing screws, power supply connector, and instruction sheet. Setup documentation for Easy Harmony ET6 panels is included in electronic format with the Vijeo Designer Basic configuration software.*
*(2) Comprehensive information relating to Easy Harmony ET6 panels is available on our website.*
*(3) To download this software, visit our website www.se.com.*
*(4) Requires software version 1.2. Cable for transferring application from PC to Easy Harmony ET6 panels (HMIZG936), to be ordered separately (see our website www.se.com).*

# Human Machine Interfaces
## Easy Harmony ET6
Essential touch screen panels for simple machines
**Spare parts and connection accessories**

PF1437108



*HMIZGFIX3*

ET6_30834661_OPSPH21004



*HMIZSFIXTF1*

ET6_30834661_OPSPH21006



*HMIZGPWS1*

ET6_30834661_OPSPH21003



*HMIZGCLP1*

ET6_30834661_OPSPH21001



*HMIZSCLP3*

ET6_30834661_OPSPH21002



*HMIZSUSBB2*

ET6_30834661_OPSPH21005



*HMIZG936*

### Spare parts

| Description | Used for | Sold in lots of | Reference | Weight kg/*lb* |
|---|---|---|---|---|
| **Installation fastener** | Used to install 7", 10", and 12" wide model into the solid panel | **24 pieces/set** | **HMIZGFIX3** | – |
| | Used to install 15.6" wide model into a solid panel | **2 pieces/set** | **HMIZSFIXTF1** | – |
| **DC power supply connector** | Connector for a DC power supply cable | **5 pieces/set** | **HMIZGPWS1** | – |
| **Replacement battery** | Primary battery for time data backup (RTC) | **1 piece/set** | **HMIZSBA1** | – |
| **USB clamp Type A (for 1 port)** | Clamp to prevent disconnection of USB cable | **5 pieces/set** | **HMIZGCLP1** | – |
| **USB clamp mini-B/micro-B (for 1 port)** | Clamp to prevent disconnection of USB cable | **5 pieces/set** | **HMIZSCLP3** | – |
| **Screen protection sheet, disposable, dirt-resistant, and ultra-violet protected** | Protection sheet for 7" wide screen | **1 piece/set** | **HMIZG63W** | – |
| | Protection sheet for 10" wide screen | **1 piece/set** | **HMIZG65W1** | – |
| | Protection sheet for 12" wide screen | **1 piece/set** | **HMIZUV6W** | – |
| | Protection sheet for 15.6" wide screen | **1 piece/set** | **HMIZG67W** | – |

### Connection accessories

| Designation | Description | Length m/*ft* | Reference | Weight kg/*lb* |
|---|---|---|---|---|
| **USB (micro-B) front cable** | Extension cable that attaches USB interface to HMI front panel | 1.8/*5.91* | **HMIZSUSBB2** | 0.230/*0.507* |
| **USB (Type A) front cable** | Extension cable that attaches USB interface to front panel | 1/*3.28* | **XBTZGUSB** | 0.507/*1.118* |
| **USB transfer cable** | Cable for transferring screen data from a PC (USB Type A) to HMI (USB micro-B) | 1/*3.28* | **HMIZG936** | 0.100/*0.220* |
| **USB Type A port/9-way SUB-D converter for serial printer** | Enables connection of an RS 232 serial link printer (9-way SUB-D) to the USB Type A port of Easy Harmony ET6 Ethernet panels | – | **HMIZURS** | – |

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# Human Machine Interfaces
## Easy Harmony ET6
Essential touch screen panels for simple machines
**Cables for third-party PLCs and Connection via Modbus serial link**

## Cables for connecting Easy Harmony ET6 panels to Schneider Electric PLCs

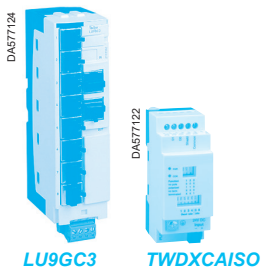| Type of automation product | Type of connector (automation product end) | Protocol | Type of Easy Harmony ET6 panels | Physical link (panels port) | Length m/*ft* | Reference | Weight kg/*lb* |
|---|---|---|---|---|---|---|---|
| **Modicon M340 Modicon M218 Modicon M258 Modicon M221 Modicon M241 Modicon M251** | RJ45 | Modbus | All models | RS-485 | 2.5/*8.20* | **XBTZ9008** | – |
| **Easy Modicon M100 Easy Modicon M200** | Terminal block | Modbus | All models | RS-485 | 2.5/*8.20* | **XBTZG9722** | – |
| **TeSys U/T starters Altivar drives Altistart starters Lexium motion control Preventa XPS MC** | RJ45 | Modbus | All models | RS-485 | 2.5/*8.20* | **XBTZ9008** | – |

105876



*XBTZG9772*

105876



*XBTZG9731*

## Cables and adapters for connecting Easy Harmony ET6 panels to third-party PLCs

| Description *Driver used* | Type of Easy Harmony ET6 panels | Type of connector (fitted to cable, excluding adapter) | Physical link (panels port) | Length m/*ft* | Reference | Weight kg/*lb* |
|---|---|---|---|---|---|---|
| **Mitsubishi, Melsec PLCs** | | | | | | |
| **Connection cable, Q Link (SIO)** | All models | 9-way SUB-D/9-way SUB-D | RS-232C | 5/*16.40* | **XBTZG9772** | – |
| **Connection cable, Q CPU (SIO)** | All models | 9-way SUB-D/mini-DIN | RS-232C | 5/*16.40* | **XBTZG9774** | – |
| **Connection cable, FX (CPU)** | All models | 9-way SUB-D/mini-DIN | RS-422 | 5/*16.40* | **XBTZG9775** | – |
| **Omron, Sysmac PLCs** | | | | | | |
| **Connection cables, Link (SIO)** | All models | 9-way SUB-D/25-way SUB-D | RS-232C | 5/*16.40* | **XBTZG9731** | – |
| | All models | 9-way SUB-D/9-way SUB-D | RS-232C | 5/*16.40* | **XBTZG9740** | – |
| **Connection cable, FINS (SIO)** | All models | 9-way SUB-D/9-way SUB-D | RS-232C | 5/*16.40* | **XBTZG9740** | – |
| **Siemens, Simatic PLCs** | | | | | | |
| **Connection cables, MPI port, S7 200 S7 300/400** | All models | 9-way SUB-D/9-way SUB-D | RS - 485 | – | *(1)* | – |
| **Customizable cables** | | | | | | |
| **Universal cable, RS-422** | All models | 9-way SUB-D/flying leads at other end | RS-422 | 2.5/*8.20* | **XBTZG9722** | – |

## Connecting Easy Harmony ET6 panels via Modbus serial link

| Type of bus/network | Tap-off units | Connector (tap-off unit end) | Type of Easy Harmony ET6 panels | Length m/*ft* | Reference | Weight kg/*lb* |
|---|---|---|---|---|---|---|
| **Modbus serial link** | 8-port Modbus splitter box **LU9GC3** 2-port tap junction **TWDXCAISO TWDXCAT3RJ** | RJ45 | All models | 2.5/*8.20* | **XBTZ9008** | – |

*(1) Customized cable.*

DA577124

DA577122



**LU9GC3**   **TWDXCAISO**

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11

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