



Touch panel, 24 V DC, 5.7z, TFTcolor, ethernet, RS232, (PLC)

Part no. **XV-102-A3-57TVRB-1E4**  
 Catalog No. **199734**

### Delivery program

|   |  |       |  |
|---|--|-------|--|
| Product range                               |  |       | XV100 5.7"   |
| Product range                               |  |       | easyE4   |
| Subrange                                    |  |       | Touch HMI easy   |
| Function                                    |  |       | Touch display for easyE4   |
| Description                                 |  |       | Touch display for easyE4, 24 VDC, 5.7-inch, TFT color, Ethernet                          |
| Common features of the model series         |  |       | Ethernet interface<br>USB device<br>USB Host<br>Slot for SD card<br>UL508, cUL approvals |
| Display - Type                              |  |       | Color display, TFT   |
| Touch-technology                            |  |       | Resistive-Touch  |
| Number of colours                           |  |       | 64 k Colours   |
| Resolution                                  |  | Pixel | VGA<br>640 x 480   |
| Screen diagonal                             |  | Inch  | 5.7  |
| Model                                       |  |       | Insulating enclosure and front plate   |
| Operating system                            |  |       | Windows CE 5.0 (licence incl.)   |
| PLC-licence                                 |  |       | no PLC function possible   |
| License certificates for onboard interfaces |  |       | not expandable   |
| built-in interfaces                         |  |       | 1 x Ethernet 100base-TX/10base-T<br>1 x USB device                                       |
| Front type                                  |  |       | Standard front with standard membrane (fully enclosed)                                   |
| Utilization                                 |  |       | Flush mounting   |
| Slots                                       |  |       | for SD card: 1   |
| Memory card automation                      |  |       | Optionally with SD card -> article no. 139807  |
| Pluggable communication cards (optional)    |  |       | no   |
| Touch sensor                                |  |       | Glass with film  |
| Heat dissipation                            |  | W     | 9.5  |
| For use with                                |  |       | easyE4   |

### Technical data

#### Display

|                                   |  |                   |                                |
|-----------------------------------|--|-------------------|--------------------------------|
| Display - Type                    |  |                   | Color display, TFT             |
| Screen diagonal                   |  | Inch              | 5.7                            |
| Resolution                        |  | Pixel             | VGA<br>640 x 480               |
| Visible screen area               |  | mm                | 115 x 86                       |
| Number of colours                 |  |                   | 64 k Colours                   |
| Contrast ratio (Normally)         |  |                   | Normally 300:1                 |
| Brightness                        |  | cd/m <sup>2</sup> | Normally 250                   |
| Back-lighting                     |  |                   | LED<br>dimmable via software   |
| Service life of back-lighting     |  | h                 | Normally 40000                 |
| Resistive touch protective screen |  |                   | Touch sensor (glass with foil) |

#### Operation

|              |  |  |                           |
|--------------|--|--|---------------------------|
| Technology   |  |  | Resistive-Touch<br>4 wire |
| Touch sensor |  |  | Glass with film           |

#### System

|           |  |  |                           |
|-----------|--|--|---------------------------|
| Processor |  |  | RISC CPU, 32 Bit, 400 MHz |
|-----------|--|--|---------------------------|

|                               |  |  |  |
|-------------------------------|--|--|--|
| Internal memory               |  |  | DRAM (OS, Program and data memory): 64 MByte<br>NAND-Flash (can be used for data backup): approx. 128 MByte available<br>NVRAM (retained data): approx. 32 KByte available |
| External memory               |  |  | SD Memory Card Slot: SDA Specification 1.00  |
| Cooling                       |  |  | Fanless CPU and system cooling, natural convection-based passive cooling   |
| Back-up of real-time clock    |  |  |  |
| Battery (service life)        |  |  | non-replaceable, CR2032 soldered in  |
| Backup (time at zero voltage) |  |  | Normally 10 years  |

## Engineering

|                        |  |  |                                |
|------------------------|--|--|--------------------------------|
| Visualisation software |  |  | easySoft V7<br>GALILEO         |
| PLC-licence            |  |  | no PLC function possible       |
| Operating system       |  |  | Windows CE 5.0 (licence incl.) |

## Interfaces, communication

|                     |  |  |  |
|---------------------|--|--|--|
| built-in interfaces |  |  | 1 x Ethernet 100base-TX/10base-T<br>1 x USB device         |
| USB Host            |  |  | USB 2.0 (1.5 - 12 Mbit/s), not galvanically isolated       |
| RS-232              |  |  | RS-232, not galvanically isolated (SUB-D plug 9 pole, UNC) |
| Slots               |  |  | for SD card: 1   |
| Ethernet            |  |  | 100Base-TX/10Base-T  |

## Power supply

|                                      |                   |    |  |
|--------------------------------------|-------------------|----|--|
| Nominal voltage                      |                   |    | 24 V DC SELV (safety extra low voltage)  |
| permissible voltage                  |                   |    | Effective: 19.2-30.0 V DC (rated operating voltage -20%/+25%)<br>Absolute with ripple: 18,0-31,2 V DC<br>Battery powered: 18,0-31,2 V DC (rated operating voltage -25%/+30%)<br>35 V DC for a duration of < 100 ms |
| Voltage dips                         |                   | ms | ≤ 10 ms from rated voltage (24 V DC)<br>5 ms from undervoltage (19.2 V DC)   |
| Power consumption                    | P <sub>max.</sub> | W  | 10   |
| Note on power consumption            |                   |    | Basic device<br>USB Slave to USB Host: 2.5<br>Total: 9.5   |
| Heat dissipation                     |                   | W  | 9.5  |
| Note on heat dissipation             |                   |    | Heat dissipation with power consumption for 24 V<br>7 W for basic device + 2.5 W for USB module  |
| Protection against polarity reversal |                   |    | yes  |
| Type of fuse                         |                   |    | Yes (fuse not accessible)  |
| Potential isolation                  |                   |    | no potential isolation   |

## General

|  |  |    |   |
|--|--|----|---|
| Housing material                                 |  |    | Plastic, gray   |
| Front type                                       |  |    | Standard front with standard membrane (fully enclosed)  |
| Dimensions (W x H x D)                           |  | mm | 170 x 130 x 39  |
| flush mounted                                    |  |    | Clearance: W x H x D ≥ 30 mm (1.18")<br>Inclination from vertical: ±45° (if using natural convection) |
| Weight   |  | kg | 0.6   |
| Approvals  |  |    |   |
| Approvals  |  |    | cUL (UL508)<br>EAC  |
| Explosion protection (according to ATEX 94/9/EC) |  |    | II 3D Ex II T70°C IP5x: Zone 22, Category 3D  |
| shipping classification                          |  |    | DNV GL  |
| Mechanical shock resistance                      |  | g  | according to IEC 60068-2-27   |
| Vibration  |  |    | according to IEC/EN 60068-2-6   |
| RoHS   |  |    | conform   |

## Environmental conditions

|                                    |  |     |                          |
|------------------------------------|--|-----|--------------------------|
| Climatic environmental conditions  |  |     |                          |
| Air pressure (operation)           |  | hPa | 795 - 1080               |
| Temperature                        |  |     |                          |
| Operating ambient temperature min. |  | °C  | 0                        |
| Operating ambient temperature max. |  | °C  | + 50                     |
| Relative humidity                  |  |     |                          |
| Relative humidity                  |  |     | 10 - 90%, non condensing |

## Supply voltage U<sub>Aux</sub>

|                                      |                  |   |                    |
|--------------------------------------|------------------|---|--------------------|
| Rated operational voltage            | U <sub>Aux</sub> | V | 24 V DC (-20/+25%) |
| Protection against polarity reversal |                  |   | Yes                |
| Potential isolation                  |                  |   | No                 |

## Supply voltage U<sub>Pow</sub>

|                                      |                  |   |                    |
|--------------------------------------|------------------|---|--------------------|
| Supply voltage                       | U <sub>Pow</sub> | V | 24 DC -20 % + 25 % |
| Input voltage ripple                 |                  | % | ≤ 5                |
| Protection against polarity reversal |                  |   | yes                |

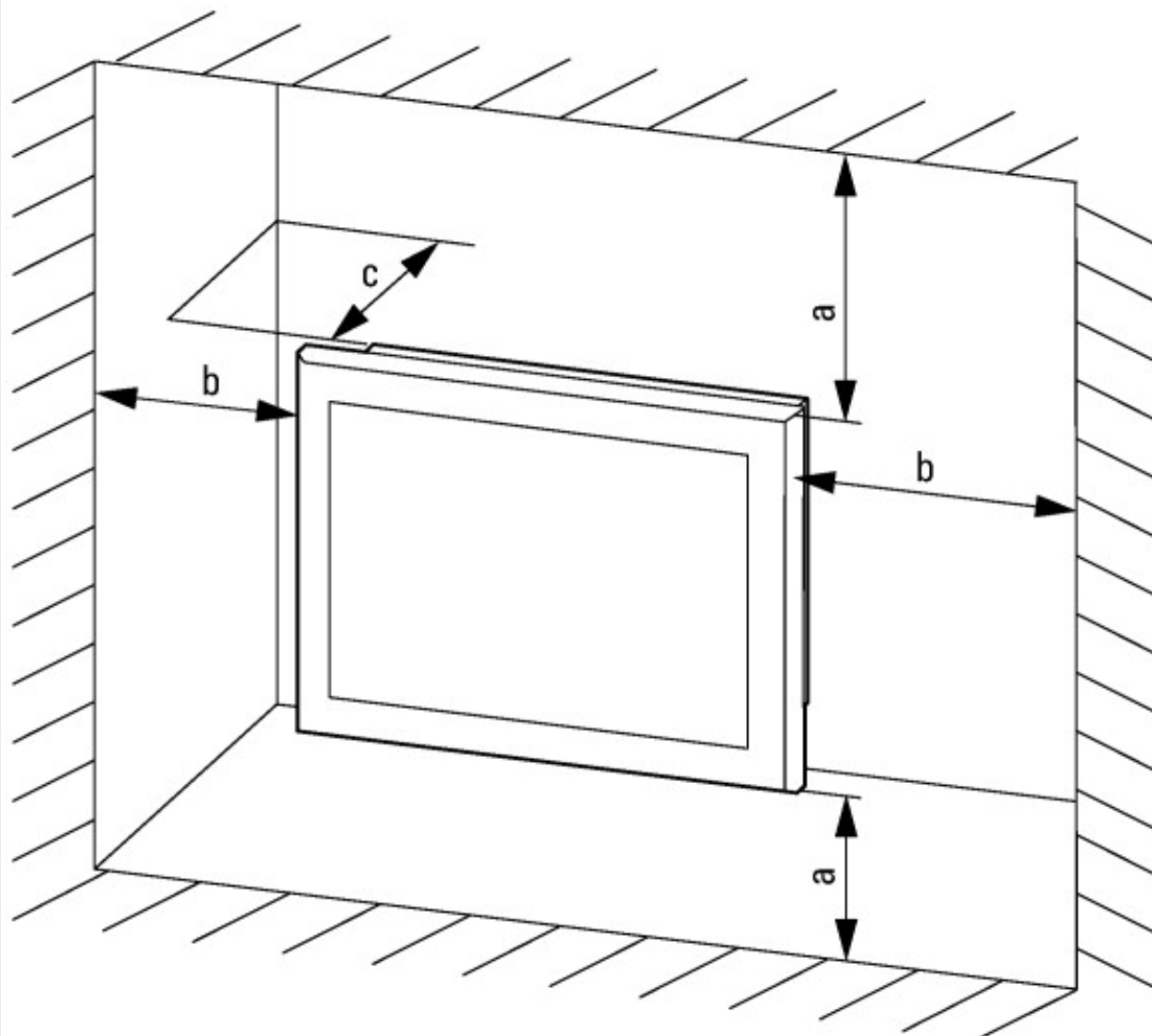
## Design verification as per IEC/EN 61439

|  |                 |    |  |
|--|-----------------|----|--|
| Technical data for design verification   |                 |    |  |
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub> | W  | 9.5  |
| Operating ambient temperature min.   |                 | °C | 0  |
| Operating ambient temperature max.   |                 | °C | 50   |
| IEC/EN 61439 design verification   |                 |    |  |
| 10.2 Strength of materials and parts   |                 |    |  |
| 10.2.2 Corrosion resistance  |                 |    | Meets the product standard's requirements.   |
| 10.2.3.1 Verification of thermal stability of enclosures   |                 |    | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |                 |    | Meets the product standard's requirements.   |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                 |    | Meets the product standard's requirements.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |                 |    | Please enquire   |
| 10.2.5 Lifting   |                 |    | Does not apply to enclosures without lifting aids.   |
| 10.2.6 Mechanical impact   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions  |                 |    | Meets the product standard's requirements.   |
| 10.3 Degree of protection of ASSEMBLIES  |                 |    | Meets the product standard's requirements.   |
| 10.4 Clearances and creepage distances   |                 |    | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections  |                 |    | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors   |                 |    | Is the panel builder's responsibility.   |
| 10.9 Insulation properties   |                 |    |  |
| 10.9.2 Power-frequency electric strength   |                 |    | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage   |                 |    | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material   |                 |    | Is the panel builder's responsibility.   |
| 10.10 Temperature rise   |                 |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating   |                 |    | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility  |                 |    | Is the panel builder's responsibility.   |
| 10.13 Mechanical function  |                 |    | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## Approvals

|                                      |  |  |  |
|--------------------------------------|--|--|--|
| Product Standards                    |  |  | UL 60950-01; CSA-C22.2 No. 60950-1; IEC/EN 61131-2; CE marking   |
| UL File No.                          |  |  | E208621  |
| UL Category Control No.              |  |  | NWQG2  |
| CSA File No.                         |  |  | UL 60950-01; CSA-C22.2 No. 60950-1; IEC/EN 61131-2; CE marking   |
| CSA Class No.                        |  |  | NWQG8  |
| North America Certification          |  |  | UL recognized, certified by UL for use in Canada   |
| Conditions of Acceptability          |  |  | The investigated Pollution Degree is: 2<br>The following end-product enclosures are required: Fire<br>The unit must be supplied via a SELV source.<br>The provided Ethernet Connection is only allowed to connect to inhouse networks. |
| Specially designed for North America |  |  | No   |
| Current Limiting Circuit-Breaker     |  |  | No   |
| Degree of Protection                 |  |  | IEC: IP65, UL/CSA Type: -  |

## Dimensions



$a, b, c \geq 30 \text{ mm}$ ,  $0 \leq T \leq 50 \text{ }^\circ\text{C}$

## Additional product information (links)

### Instruction leaflet IL048007ZU XV-102

Instruction leaflet IL048007ZU XV-102 [https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL048007ZU2018\\_02.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL048007ZU2018_02.pdf)

### Instruction manual XV-102 MN04802004Z

Bedienungsanleitung XV-102 MN04802004Z - Deutsch [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN04802004Z\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04802004Z_DE.pdf)

Instruction manual XV-102 MN04802004Z - English [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN04802004Z\\_EN.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04802004Z_EN.pdf)

### Quick-start manual XV100 MN04802013Z

Schnellstart-Handbuch XV100 MN04802013Z - Deutsch [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN04802013Z\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04802013Z_DE.pdf)

Quick-start manual XV100 MN04802013Z - English [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN04802013Z\\_EN.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04802013Z_EN.pdf)

f1=1454&f2=1174&f3=1755;Download Software easySoft V7 <http://applications.eaton.eu/sdlc?LX=11&>

f1=1454&f2=1242&f3=1773;Download Software GALILEO <http://applications.eaton.eu/sdlc?LX=11&>

Product overview (WEB) <http://www.eaton.eu/xv>