



User interface with PLC, 24VDC, 15.6-inch PCT widescreen display, 1366x768 pixels, 2xEthernet, 1xRS232, 1xRS485, 1xCAN, 1xProfibus, 1xSD card slot



**Part no.** XV-303-15-C02-A00-1C  
**Catalog No.** 191074  
**Alternate Catalog No.** XV-303-15-C02-A00-1C

Similar to illustration

## Delivery program

|   |  |       |   |
|---|--|-------|---|
| Product range                               |  |       | XV300 15.6"   |
| Product range                               |  |       | XV-303  |
| Function                                    |  |       | HMI-PLC (integrated SPS function)   |
| Description                                 |  |       | Control panel with PLC, PROFIBUS, and 2nd Ethernet port   |
| Common features of the model series         |  |       | Ethernet interface<br>CAN<br>USB device<br>USB Host<br>RS232<br>RS485<br>Slot for SD card<br>Operating System Windows Embedded Compact 7 pro<br>Integrated Runtime visualization software license |
| Display - Type                              |  |       | Color display, TFT, anti-glare  |
| Touch-technology                            |  |       | Capacitive multi-touch technology (PCT)   |
| Number of colours                           |  |       | 16777216 (Color depth 24 bit)   |
| Resolution                                  |  | Pixel | WXGA<br>1366 x 768  |
| Portrait format                             |  |       | yes   |
| Screen diagonal                             |  | Inch  | 15.6<br>widescreen  |
| Model                                       |  |       | Glass panel in aluminum bezel with die-cast aluminum enclosure and plastic enclosure  |
| Operating system                            |  |       | Windows Embedded Compact 7 Pro  |
| PLC-licence                                 |  |       | PLC licence inclusive   |
| License certificates for onboard interfaces |  |       | Not required  |
| built-in interfaces                         |  |       | 2 x Ethernet 10/100 Mbps<br>1 x RS232<br>1 x RS485<br>1 x CANopen®/easyNet<br>1 x USB host 2.0<br>1 x USB device<br>1 x PROFIBUS/MPI  |
| Front type                                  |  |       | Non-reflective tempered glass in aluminum frame   |
| Utilization                                 |  |       | Flush mounting  |
| Slots                                       |  |       | for SD card: 1  |
| Memory card automation                      |  |       | Optionally with SD card -> article no. 181638   |
| Pluggable communication cards (optional)    |  |       | no  |
| Touch sensor                                |  |       | Multi-touch touch panel   |
| Heat dissipation                            |  | W     | 21.6  |

## Technical data

### Display

|                     |                      |                |                                |
|---------------------|----------------------|----------------|--------------------------------|
| Display - Type      |                      |                | Color display, TFT, anti-glare |
| Screen diagonal     |                      | Inch           | 15.6<br>widescreen             |
| Resolution          |                      | Pixel          | WXGA<br>1366 x 768             |
| Visible screen area |                      | mm             | 344.23 x 193.54                |
| Format              |                      |                | 16:9                           |
| Viewing range       | [left/right/up/down] | °<br>(Degrees) | 85°/85°/80°/80°                |

|                               |  |                   |                               |
|-------------------------------|--|-------------------|-------------------------------|
| Number of colours             |  |                   | 16777216 (Color depth 24 bit) |
| Contrast ratio (Normally)     |  |                   | Normally 500:1                |
| Brightness                    |  | cd/m <sup>2</sup> | Normally 300                  |
| Back-lighting                 |  |                   | LED<br>dimmable via software  |
| Service life of back-lighting |  | h                 | Normally 50000                |

## Operation

|              |  |  |                                  |
|--------------|--|--|----------------------------------|
| Technology   |  |  | Projected Capacitive Touch (PCT) |
| Touch sensor |  |  | Multi-touch touch panel          |

## System

|                               |  |  |  |
|-------------------------------|--|--|--|
| Processor                     |  |  | ARM Cortex-A9 800 MHz  |
| Internal memory               |  |  | DRAM: 512 MB RAM<br>Flash: 1GB SLC<br>NVRAM: 128kB Retain                |
| External memory               |  |  | SD card, Type: SDSC, SDHC  |
| Cooling                       |  |  | Fanless CPU and system cooling, natural convection-based passive cooling |
| Back-up of real-time clock    |  |  |  |
| Battery (service life)        |  |  | non-replaceable, BR2330 soldered in                                      |
| Backup (time at zero voltage) |  |  | Normally 10 years  |

## Engineering

|                              |  |  |                                  |
|------------------------------|--|--|----------------------------------|
| Visualisation software       |  |  | GALILEO<br>XSOF-CODESYS          |
| PLC-Programming software     |  |  | XSOF-CODESYS-2<br>XSOF-CODESYS-3 |
| Target and web visualization |  |  | Yes                              |
| PLC-licence                  |  |  | PLC licence inclusive            |
| Operating system             |  |  | Windows Embedded Compact 7 Pro   |

## Interfaces, communication

|                     |  |  |  |
|---------------------|--|--|--|
| built-in interfaces |  |  | 2 x Ethernet 10/100 Mbps<br>1 x RS232<br>1 x RS485<br>1 x CANopen®/easyNet<br>1 x USB host 2.0<br>1 x USB device<br>1 x PROFIBUS/MPI |
| USB Host            |  |  | USB 2.0, not galvanically isolated   |
| USB device          |  |  | USB 2.0, not galvanically isolated   |
| RS-232              |  |  | Not galvanically isolated, 9-pin D-sub plug, UNC   |
| RS-485              |  |  | Not galvanically isolated, 9-pin D-sub plug, UNC   |
| CAN                 |  |  | Not galvanically isolated, 9-pin D-sub plug, UNC   |
| Profibus            |  |  | PROFIBUS-DP, not galvanically isolated, 9 pole SUB-D socket, UNC   |
| Slots               |  |  | for SD card: 1   |
| Ethernet            |  |  | 10/100 Mbps  |
| MPI                 |  |  | Yes  |

## 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  | 21.6   |
| Power consumption                    |                   | W  | Normally 16  |
| Heat dissipation                     |                   | W  | 21.6   |
| Note on heat dissipation             |                   |    | Heat dissipation with power consumption for 24 V<br>19.1 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   |

## General

|                  |  |  |  |
|------------------|--|--|--|
| Housing material |  |  | Aluminium die-cast (glass panel)<br>Insulated material black |
|------------------|--|--|--|

|   |  |    |  |
|---|--|----|--|
| Front type  |  |    | Non-reflective tempered glass in aluminum frame  |
| Dimensions (W x H x D)                              |  | mm | 404 x 255 x 53   |
| flush mounted                                       |  |    | Clearance: W x H ≥ 50 mm (1.97"), T ≥ 20 mm (0.79")<br>Inclination from vertical: # ≤ ± 10 ° (if using natural convection)<br>Mounting plate: min. 1.5 mm (0.06"), max. 4 mm |
| Weight  |  | kg | 3.9  |
| Degree of protection (IEC/EN 60529, EN50178, VBG 4) |  |    | IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1)<br>NEMA 4X<br>NEMA12 (as per NEMA 250-2003)  |
| Approvals   |  |    |  |
| Approvals   |  |    | cUL 61010-2-201  |
| Applied standards and directives                    |  |    |  |
| EMC   |  |    | 2004/108/EEC   |
| Emitted interference                                |  |    | IEC/EN 61000-6-4   |
| Interference immunity                               |  |    | IEC/EN 61000-6-2   |
| Product standards                                   |  |    | EN50178/IEC/EN 61131-2   |
| Mechanical shock resistance                         |  | g  | 15g / 11ms   |
| Vibration   |  |    | 5...9 Hz +- 3.5 mm<br>9...60 Hz +- 0.15 mm<br>60...150 Hz ± 2 g  |
| Free fall, packaged                                 |  | m  | IEC/EN 60068-2-31  |
| RoHS  |  |    | conform  |

### Environmental conditions

|                                    |   |     |  |
|------------------------------------|---|-----|--|
| Climatic environmental conditions  |   |     |  |
| Climatic proofing                  |   |     | Cold to EN 60068-2-1<br>Dry heat to IEC 60068-2-2<br>Damp heat as per EN 60068-2-3 |
| Air pressure (operation)           |   | hPa | 795 - 1080   |
| Temperature                        |   |     |  |
| Storage / Transport                | θ | °C  | -20 - +60  |
| Operating ambient temperature min. |   | °C  | 0  |
| Operating ambient temperature max. |   | °C  | + 50   |
| Relative humidity                  |   |     |  |
| Condensation                       |   |     | Non-condensing   |
| Relative humidity                  |   |     | 10 - 95%, non-condensing   |

### Design verification as per IEC/EN 61439

|  |                   |    |   |
|--|-------------------|----|---|
| Technical data for design verification   |                   |    |   |
| Rated operational current for specified heat dissipation   | I <sub>n</sub>    | A  | 0   |
| Heat dissipation per pole, current-dependent   | P <sub>vid</sub>  | W  | 0   |
| Equipment heat dissipation, current-dependent  | P <sub>vid</sub>  | W  | 0   |
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub>   | W  | 21.6  |
| Heat dissipation capacity  | P <sub>diss</sub> | W  | 0   |
| Operating ambient temperature min.   |                   | °C | 0   |
| Operating ambient temperature max.   |                   | °C | 50  |
| Degree of Protection   |                   |    | IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1)<br>NEMA 4X<br>NEMA12 (as per NEMA 250-2003) |
| 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, since the entire switchgear needs to be evaluated.   |                   |    |   |
| 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.   |
| 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.                         |

## Technical data ETIM 7.0

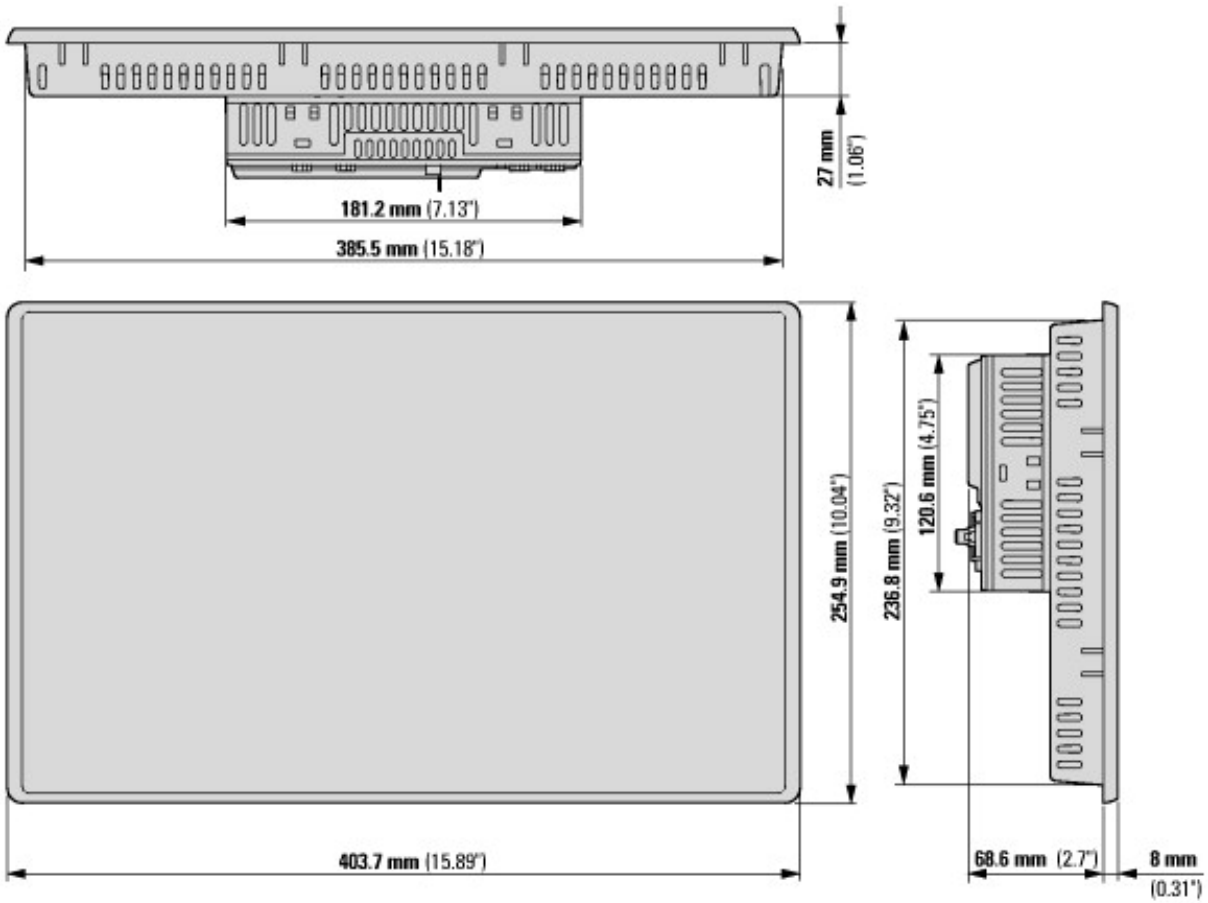
|  |   |           |
|--|---|-----------|
| PLC's (EG000024) / Graphic panel (EC001412)  |   |           |
| Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecl@ss10.0.1-27-33-02-01 [AFX016003]) |   |           |
| Supply voltage AC 50 Hz  | V | 0 - 0     |
| Supply voltage AC 60 Hz  | V | 0 - 0     |
| Supply voltage DC  | V | 19.2 - 30 |
| Voltage type of supply voltage   |   | DC        |
| Number of HW-interfaces industrial Ethernet  |   | 2         |
| Number of interfaces PROFINET  |   | 0         |
| Number of HW-interfaces RS-232   |   | 1         |
| Number of HW-interfaces RS-422   |   | 0         |
| Number of HW-interfaces RS-485   |   | 1         |
| Number of HW-interfaces serial TTY   |   | 0         |
| Number of HW-interfaces USB  |   | 2         |
| Number of HW-interfaces parallel   |   | 0         |
| Number of HW-interfaces Wireless   |   | 0         |
| Number of HW-interfaces other  |   | 1         |
| With SW interfaces   |   | Yes       |
| Supporting protocol for TCP/IP   |   | Yes       |
| Supporting protocol for PROFIBUS   |   | Yes       |
| Supporting protocol for CAN  |   | Yes       |
| Supporting protocol for INTERBUS   |   | No        |
| Supporting protocol for ASI  |   | No        |
| Supporting protocol for KNX  |   | No        |
| Supporting protocol for MODBUS   |   | Yes       |
| Supporting protocol for Data-Highway   |   | No        |
| Supporting protocol for DeviceNet  |   | No        |
| Supporting protocol for SUCONET  |   | No        |
| Supporting protocol for LON  |   | No        |
| Supporting protocol for PROFINET IO  |   | No        |
| Supporting protocol for PROFINET CBA   |   | No        |
| Supporting protocol for SERCOS   |   | No        |
| Supporting protocol for Foundation Fieldbus  |   | No        |
| Supporting protocol for EtherNet/IP  |   | Yes       |
| Supporting protocol for AS-Interface Safety at Work  |   | No        |
| Supporting protocol for DeviceNet Safety   |   | No        |
| Supporting protocol for INTERBUS-Safety  |   | No        |
| Supporting protocol for PROFIsafe  |   | No        |
| Supporting protocol for SafetyBUS p  |   | No        |
| Supporting protocol for other bus systems  |   | No        |

|   |  |       |                       |
|---|--|-------|-----------------------|
| Radio standard Bluetooth                            |  |       | No                    |
| Radio standard WLAN 802.11                          |  |       | No                    |
| Radio standard GPRS                                 |  |       | No                    |
| Radio standard GSM                                  |  |       | No                    |
| Radio standard UMTS                                 |  |       | No                    |
| IO link master                                      |  |       | No                    |
| Type of display                                     |  |       | TFT                   |
| With colour display                                 |  |       | Yes                   |
| Number of colours of the display                    |  |       | 16777.216             |
| Number of grey-scales/blue-scales of display        |  |       | 0                     |
| Screen diagonal                                     |  | inch  | 15.6                  |
| Number of pixels, horizontal                        |  |       | 1.366                 |
| Number of pixels, vertical                          |  |       | 768                   |
| Useful project memory/user memory                   |  | kByte | 512                   |
| With numeric keyboard                               |  |       | No                    |
| With alpha numeric keyboard                         |  |       | No                    |
| Number of function buttons, programmable            |  |       | 0                     |
| Number of buttons with LED                          |  |       | 0                     |
| Number of system buttons                            |  |       | 1                     |
| Touch technology                                    |  |       | Capacitive multitouch |
| With message indication                             |  |       | Yes                   |
| With message system (incl. buffer and confirmation) |  |       | Yes                   |
| Process value representation (output) possible      |  |       | Yes                   |
| Process default value (input) possible              |  |       | Yes                   |
| With recipes  |  |       | Yes                   |
| Number of password levels                           |  |       | 200                   |
| With printer output                                 |  |       | Yes                   |
| Number of online languages                          |  |       | 100                   |
| Additional software components, loadable            |  |       | Yes                   |
| Degree of protection (IP), front side               |  |       | IP65                  |
| Degree of protection (NEMA), front side             |  |       | 12                    |
| Operation temperature                               |  | °C    | 0 - 50                |
| Rail mounting possible                              |  |       | No                    |
| Wall mounting/direct mounting                       |  |       | No                    |
| Suitable for safety functions                       |  |       | No                    |
| Width of the front                                  |  | mm    | 404                   |
| Height of the front                                 |  | mm    | 255                   |
| Built-in depth                                      |  | mm    | 75.5                  |

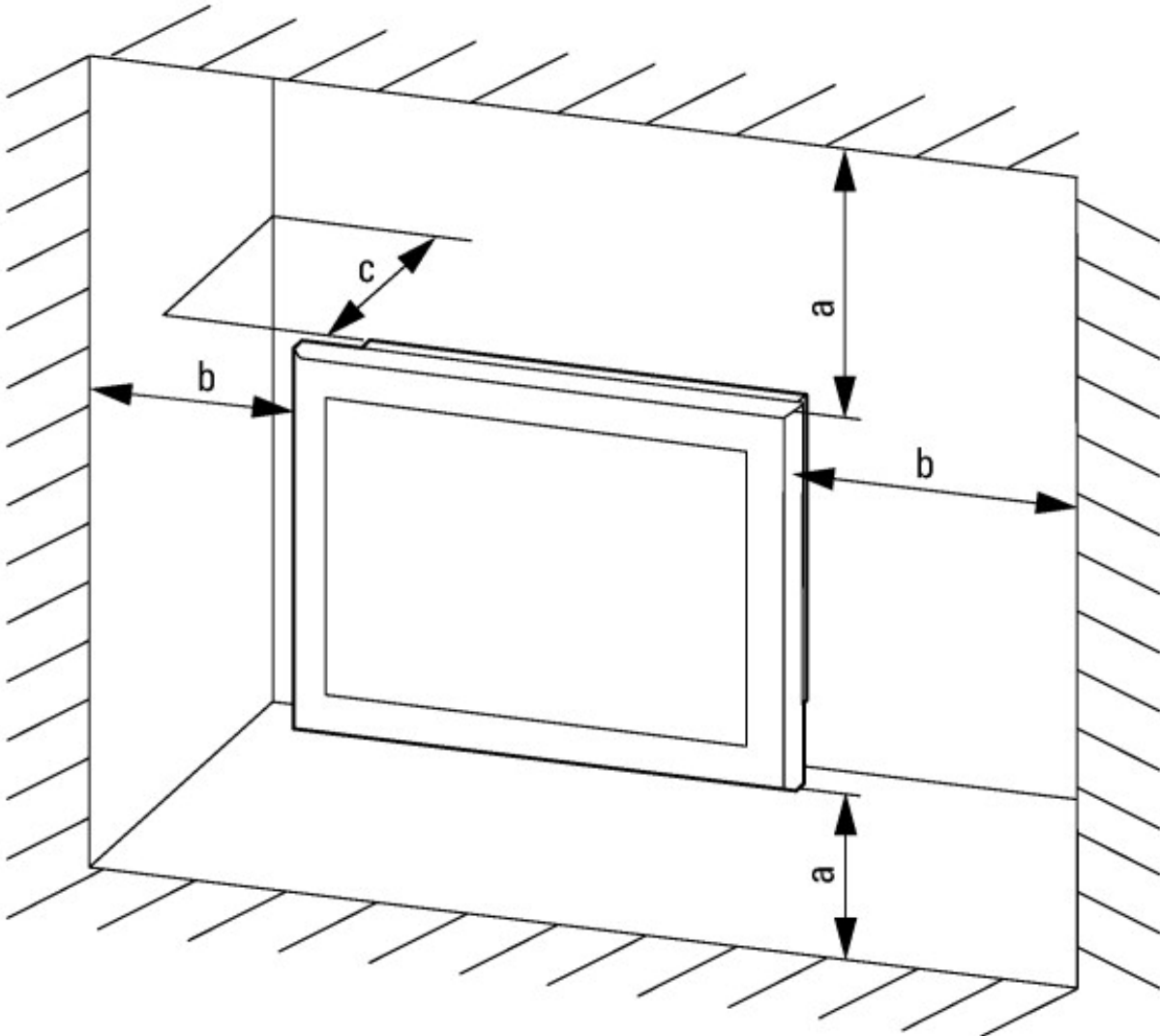
## Approvals

|                                      |  |  |                               |
|--------------------------------------|--|--|-------------------------------|
| North America Certification          |  |  | Request filed for UL          |
| Specially designed for North America |  |  | No                            |
| Current Limiting Circuit-Breaker     |  |  | No                            |
| Degree of Protection                 |  |  | IEC: IP65, NA: NEMA4X, NEMA12 |

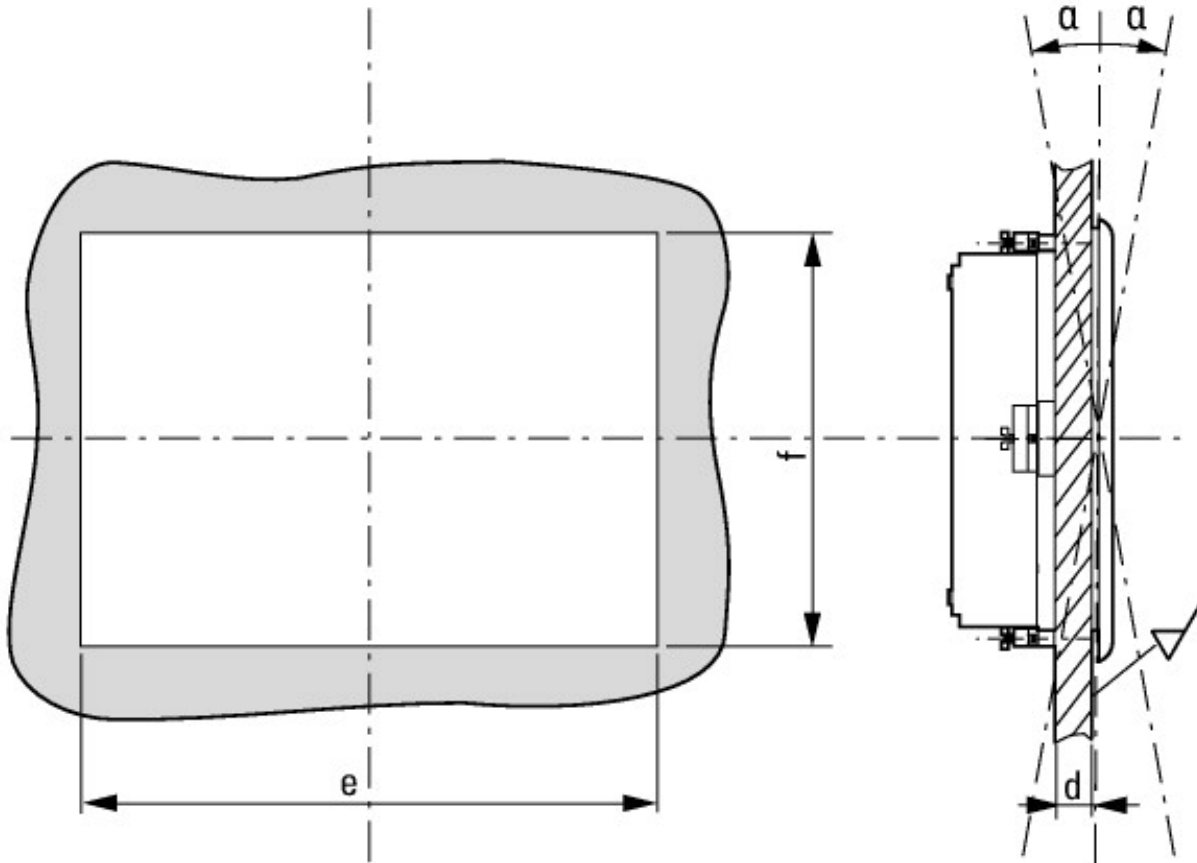
## Dimensions



XV-303-... multi-touch panel with 15.6" screen diagonal; version: flush mounting



a, b ≥ 50 mm, c ≥ 20 mm, θ 0 ≤ T ≤ 50 °C



1.5 mm ≤ d ≤ 4 mm, e = 388 mm, f = 239 mm, θ = 10°

## Additional product information (links)

### Instruction leaflet XV-303-... IL048009ZU

Instruction leaflet XV-303-... IL048009ZU [https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL048009ZU.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL048009ZU.pdf)

Instruction leaflet XV-303-... IL048009ZU [https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL048009ZU2018\\_06.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL048009ZU2018_06.pdf)

### Manual multi-touchpanel XV300 MN048017

Handbuch Multi-Touch-Panel XV300 MN048017 - Deutsch [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN048017\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN048017_DE.pdf)

Manual multi-touchpanel XV300 MN048017 - English [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN048017\\_EN.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN048017_EN.pdf)

### Communications manual MN048019ZU

Kommunikationshandbuch MN048019ZU - Deutsch [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN048019ZU\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN048019ZU_DE.pdf)

Communications manual MN048019ZU - English [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN048019ZU\\_EN.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN048019ZU_EN.pdf)

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

Product overview (WEB) <http://www.eaton.eu/XV300>