



User interface, 24VDC, 10.1-inch PCT display, 1024x600 pixels, 2xEthernet, 1xRS232, 1xRS485, 1xCAN, 1xProfibus, 1xSD card slot, PLC function can be added



Part no. XV-303-10-C02-A00-1B
Catalog No. 179664
Alternate Catalog No. XV-303-10-C02-A00-1B

Delivery program

| | | | |
|---|--|-------|---|
| Product range | | | XV300 10.1" |
| Product range | | | XV-303 |
| Function | | | HMI-PLC (SPS function, retrofittable) |
| Description | | | Control panel with PROFIBUS and 2nd Ethernet port |
| Common features of the model series | | | Ethernet interface CAN USB device USB Host RS232 RS485 Slot for SD card Operating System Windows Embedded Compact 7 pro 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 | WSVGA 1024 x 600 |
| Portrait format | | | yes |
| Screen diagonal | | Inch | 10.1 widescreen |
| Model | | | Plastic enclosure and glass panel in plastic frame |
| Operating system | | | Windows Embedded Compact 7 Pro |
| PLC-licence | | | Can be fitted by user with article no. 181585 LIC-PLC-A |
| License certificates for onboard interfaces | | | Not required |
| built-in interfaces | | | 2 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x CANopen®/easyNet 1 x USB host 2.0 1 x USB device 1 x PROFIBUS/MPI |
| Front type | | | Anti-glare tempered glass in plastic bezel |
| 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 | 18 |

Technical data

| | | | |
|---------------------------|--|-------------------|--------------------------------|
| Display - Type | | | Color display, TFT, anti-glare |
| Screen diagonal | | Inch | 10.1 widescreen |
| Resolution | | Pixel | WSVGA 1024 x 600 |
| Visible screen area | | mm | 222.72 x 125.28 |
| Format | | | 16:9 |
| Number of colours | | | 16777216 (Color depth 24 bit) |
| Contrast ratio (Normally) | | | Normally 500:1 |
| Brightness | | cd/m ² | Normally 400 |

| | | | |
|-------------------------------|--|---|------------------------------|
| Back-lighting | | | LED dimmable via software |
| Service life of back-lighting | | h | Normally 50000 |

Operation

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

System

| | | | |
|-------------------------------|--|--|--|
| Processor | | | ARM Cortex-A9 800 MHz |
| Internal memory | | | DRAM: 512 MB RAM Flash: 1GB SLC 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 XSOFT-CODESYS |
| PLC-Programming software | | | XSOFT-CODESYS-2 XSOFT-CODESYS-3 |
| Target and web visualization | | | Yes |
| PLC-licence | | | Can be fitted by user with article no. 181585 LIC-PLC-A |
| Operating system | | | Windows Embedded Compact 7 Pro |

Interfaces, communication


| | | | |
|---------------------|--|--|--|
| built-in interfaces | | | 2 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x CANopen®/easyNet 1 x USB host 2.0 1 x USB device 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%) Absolute with ripple: 18,0-31,2 V DC Battery powered: 18,0-31,2 V DC (rated operating voltage -25%/+30%) 35 V DC for a duration of < 100 ms |
| Voltage dips | | ms | ≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC) |
| Power consumption | P _{max.} | W | 18 |
| Power consumption | | W | Normally 18 |
| Heat dissipation | | W | 18 |
| Note on heat dissipation | | | Heat dissipation with power consumption for 24 V 12 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 | | | Insulated material black |
| Front type | | | Anti-glare tempered glass in plastic bezel |
| Dimensions (W x H x D) | | mm | 269 x 174 x 58 |
| flush mounted | | | Clearance: W x H x D ≥ 30 mm (1.18") Inclination from vertical: ±45° (if using natural convection) |
| Weight | | kg | 1.13 |

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|---|--|---|---|
| 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) NEMA 4X NEMA12 (as per NEMA 250-2003) |
| Approvals | | | |
| Approvals | | | cUL 61010-2-201 |
| shipping classification | | | DNV GL |
| | | |  |
| 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 9...60 Hz +- 0.15 mm 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 Dry heat to IEC 60068-2-2 Damp heat as per EN 60068-2-3 |
| Air pressure (operation) | | hPa | 795 - 1080 |
| Temperature | | | |
| Storage / Transport | g | °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 | | | |
| Static heat dissipation, non-current-dependent | P _{Vs} | W | 18 |
| 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) NEMA 4X |
| 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. |

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| 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

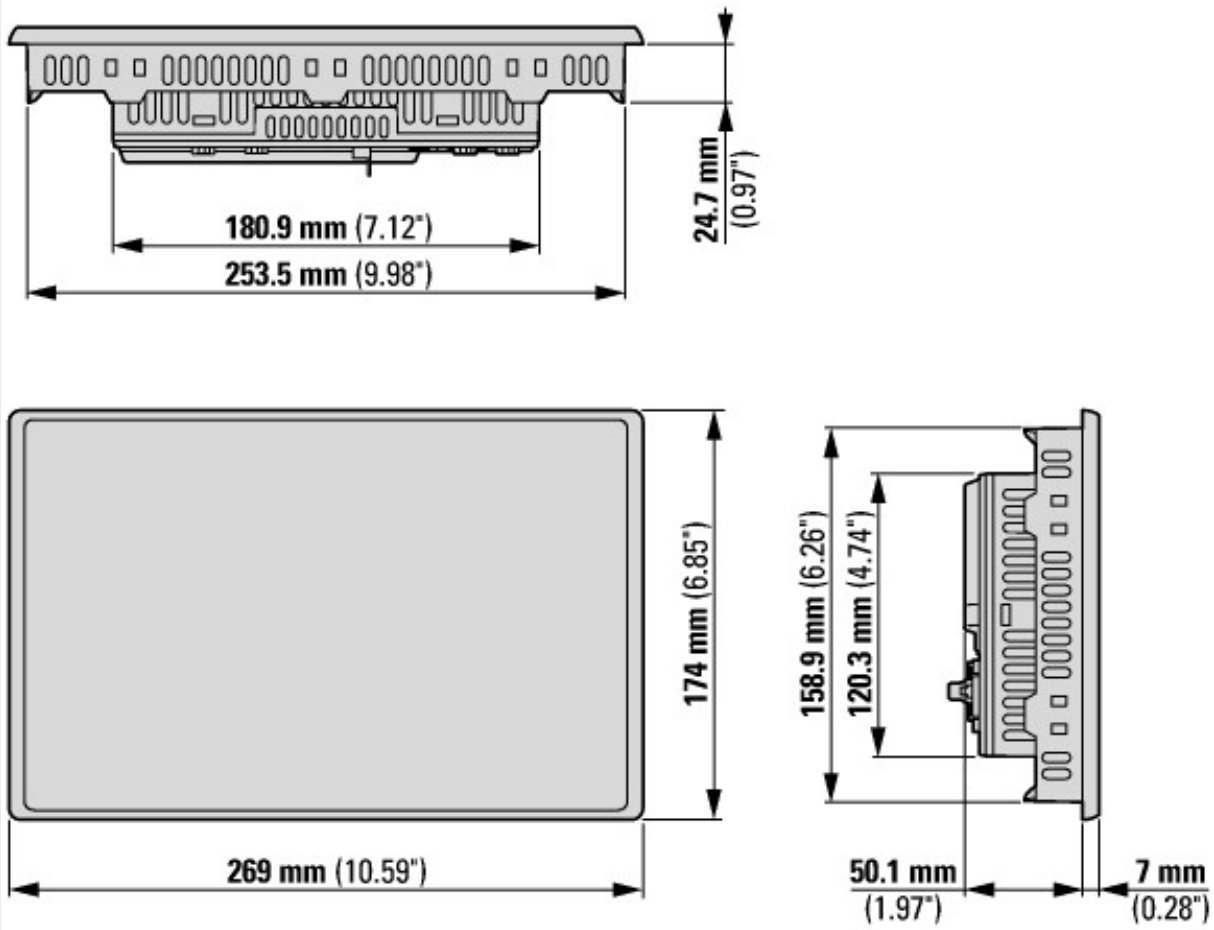
| | | |
|--|---|-----------|
| PLC's (EG000024) / Graphic panel (EC001412) | | |
| Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ec1@ss10.0.1-27-33-02-01 [AFX016003]) | | |
| Supply voltage AC 50 Hz | V | 0 - 0 |
| Supply 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 | | 2 |
| 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 | | 16777216 |
| Number of grey-scales/blue-scales of display | | 0 |
| Screen diagonal | inch | 10.1 |
| Number of pixels, horizontal | | 1024 |
| Number of pixels, vertical | | 600 |
| Useful project memory/user memory | kByte | 512000 |
| 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 | 269 |
| Height of the front | mm | 174 |
| Built-in depth | mm | 50.1 |

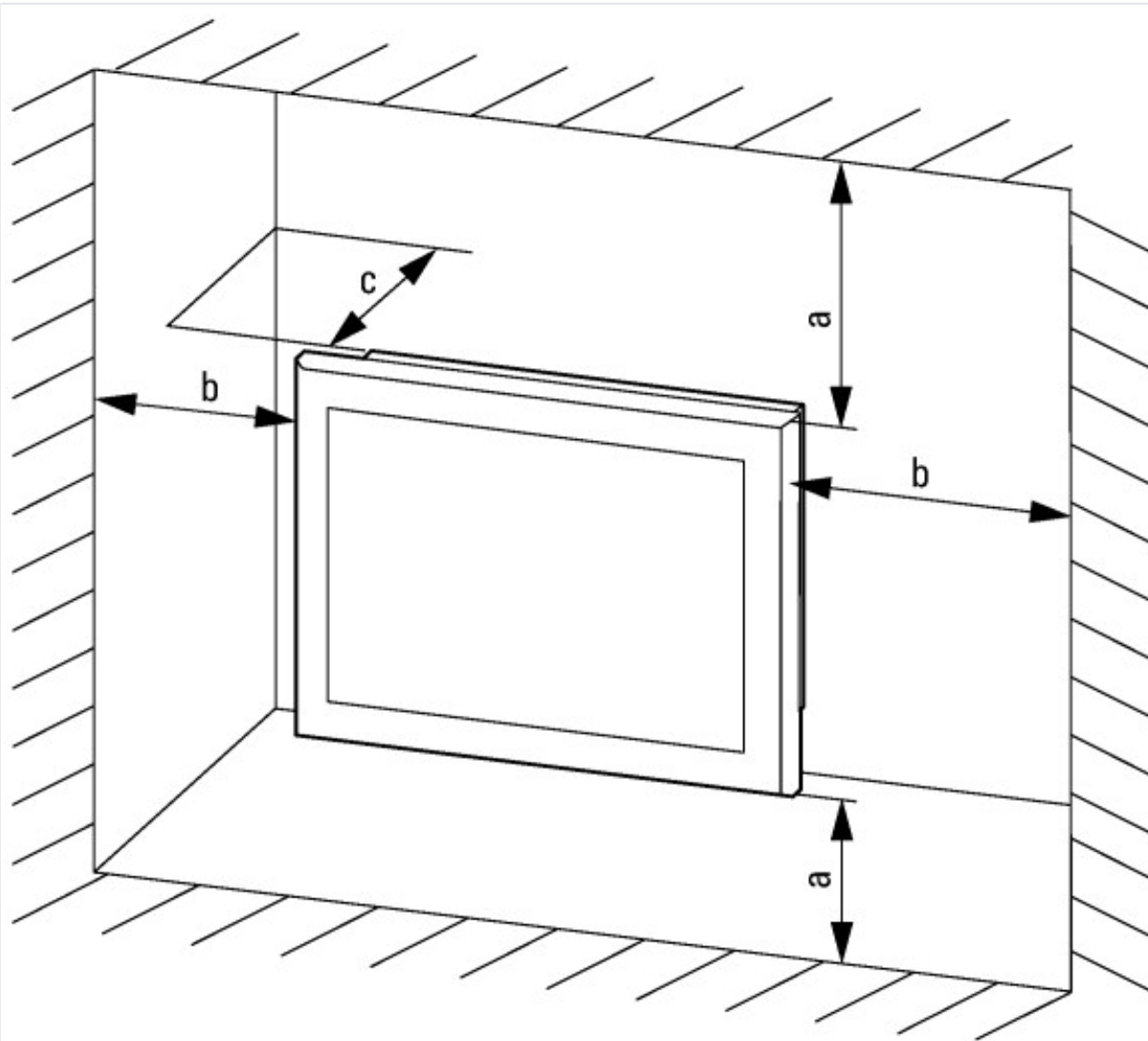
Approvals

| | | |
|--------------------------------------|--|--|
| Product Standards | | UL 61010-2-201; IEC/EN 61131-2; CE |
| UL File No. | | E205091 |
| North America Certification | | UL listed, certified by UL for use in Canada |
| Specially designed for North America | | No |
| Current Limiting Circuit-Breaker | | No |
| Degree of Protection | | IEC: IP65, NA: NEMA4X, NEMA12 |

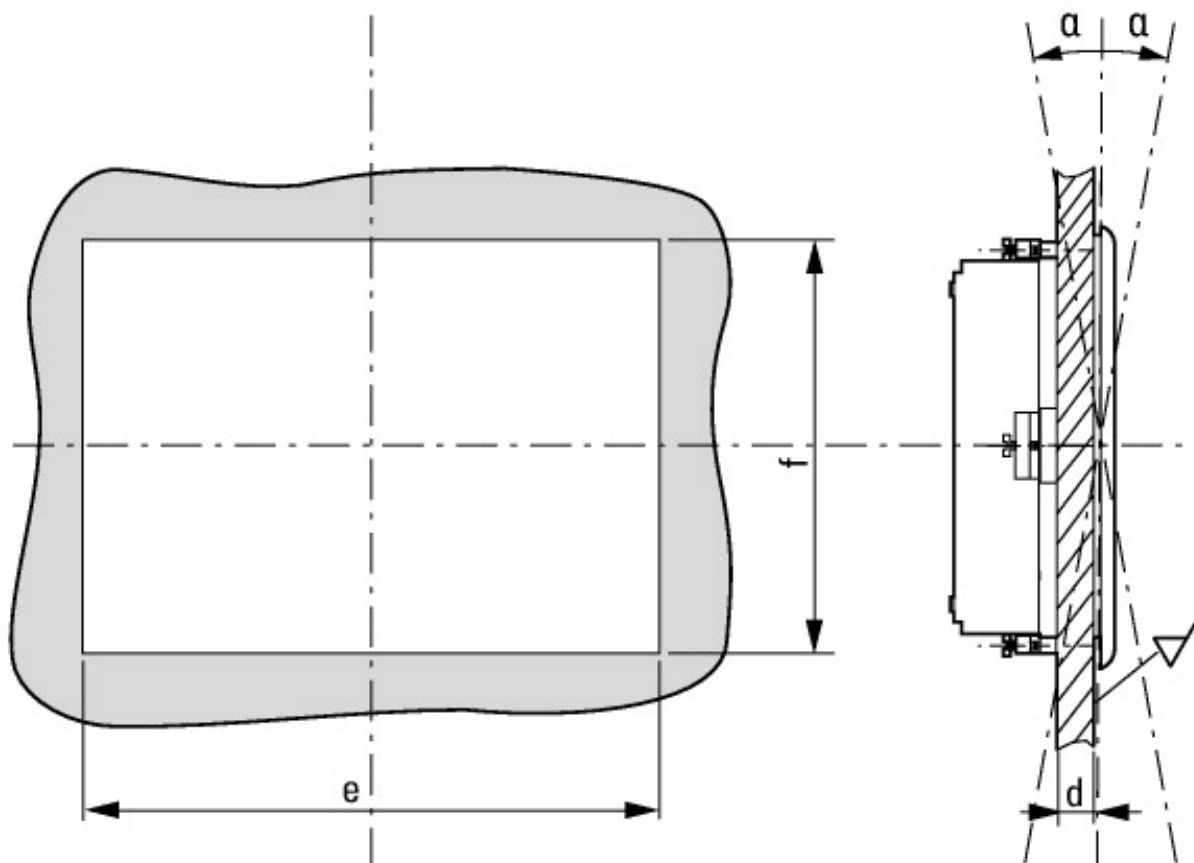
Dimensions



XV-303-... multi-touch panel with 10.1" screen diagonal; version: flush mounting



$a, b, c \geq 30 \text{ mm}, 90 \leq T \leq 50 \text{ }^\circ\text{C}$



$2 \text{ mm} \leq d \leq 5 \text{ mm}, e = 255.5 \text{ mm}, f = 160.5 \text{ mm}, \# = 45^\circ$

