# DATASHEET - XV-152-E6-10TVRC-10

### Touch panel, 24 V DC, 10.4z, TFTcolor, ethernet, RS485, CAN, SWDT, PLC

| Part no. | XV-152-E6-10TVRC-10 |
| --- | --- |
| | 166704 |
| EL Number (Norway) | 4521138 |

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| Product name | | | Eaton XV-152 Touch panel |
| Part no. | | | XV-152-E6-10TVRC-10 |
| EAN | | | 7640130097742 |
| Product Length/Depth | | | 345 millimetre |
| Product height | | | 54 millimetre |
| Product width | | | 260 millimetre |
| Product weight | | | 2.95 kilogram |
| Certifications | | | CSA Class No.: none<br>UL Category Control No.: NRAQ<br>EN 50178<br>IEC/EN 61131-2<br>Security:<br>CULus<br>CSA File No.: UL report applies to both US and Canada<br>IEC/EN 60079-0 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)<br>IEC/EN 60950<br>IEC/EN 61241-0 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)<br>ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)<br>IEC/EN 61131-2, CE<br>EN 60950<br>IEC/EN 61000-6-3<br>IEC/EN 61000-6-2<br>UL File No.: E205091<br>Certified by UL for use in Canada<br>IEC/EN 61000-6-4<br>UL<br>DNV GL<br>UL508<br>IEC/EN 61241-1 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)<br>UL 60950<br>UL 508<br>CUL508 |
| Product Tradename | | | XV-152 |
| Product Type | | | Touch panel |
| Product Sub Type | | | None |
| Catalog Notes | | | 12 W for basic device + 2.5 W for USB module<br>4-wire Technology<br>Heat dissipation with power consumption for 24 V<br>License certificates for onboard interfaces not required<br>Optionally with SD card -> article no. 139807<br>PLC license inclusive |
| | | | |
| Enclosure material | | | Metal, anodized |
| Features | | | USB Host<br>Slot for SD card<br>Portrait format<br>Target and web visualization<br>Overload proof<br>Fanless CPU and system cooling, natural convection-based passive cooling<br>Ethernet interface<br>USB device<br>UL508, cUL approvals |
| Fitted with: | | | SW interfaces<br>1 x Ethernet 10/100 Mbps (built-in interfaces)<br>Numeric keyboard<br>Alpha numeric keyboard<br>Message indication<br>1 x USB device (built-in interface)<br>1 x CANopen®/easyNet (built-in interfaces)<br>1 x RS485 (built-in interface)<br>Recipes<br>Printer output<br>Color display<br>1 x USB host 2.0 (built-in interface)<br>Message system (incl. buffer and confirmation)<br>1 x SmartWire-DT (built-in interface) |
| Functions | | | Process default value (input) possible<br>Process value representation (output) possible<br>Additional software components, loadable |

| | | | SmartWire-DT coordination |
|---|---|---|---|
| | | | |
| Battery runtime | | | Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered) |
| Current consumption | | | 0.6 A, continuous current, Power Supply, 24 V DC |
| Degree of protection | | | IP20, rear<br>NEMA 4X<br>IP20 |
| Degree of protection (front side) | | | NEMA 4X<br>IP65 |
| Fuse type | | | Built-in fuse (not accessible) |
| Lifespan | | | 40,000 h (Service life of back-lighting) |
| Model | | | Metal enclosure and front plate |
| Mounting method | | | Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")<br>Flush mounting - Inclination from vertical: ±45° (if using natural convection)<br>Flush mounting |
| Product category | | | SmartWire-DT coordinators |
| Repetition rate | | | 1 s |
| Residual ripple | | | ≤ 5 % (input voltage) |
| RoHs conformity | | | Yes |
| Short-circuit protection | | | Yes, Short-circuit rating, SmartWire-DT supply voltage<br>No, external fuse FAZ Z3, Supply voltage UAux |
| Software | | | GALILEO, Visualisation software, Engineering<br>XSOFT-CODESYS-3, PLC-Programming software, Engineering<br>EPAM, Visualisation software, Engineering<br>XSOFT-CODESYS-2, Visualisation software, Engineering<br>XSOFT-CODESYS-3, Visualisation software, Engineering<br>XSOFT-CODESYS-2, PLC-Programming software, Engineering |
| Terminal capacity | | | 0.2 - 1.5 mm², solid<br>24 - 16 AWG, solid or stranded<br>0.25 - 1.5 mm², 24 - 16 AWG |
| Type | | | Coordinator for the SmartWire-DT communications system |
| Voltage type | | | DC |
| | | | |
| Shock resistance | | | Mechanical, According to IEC/EN 60068-2-27 |
| Vibration resistance | | | According to IEC/EN 60068-2-6 |
| | | | |
| Air pressure | | | 795 - 1080 hPa (operation) |
| Ambient operating temperature - min | | | 0 °C |
| Ambient operating temperature - max | | | 50 °C |
| Ambient storage temperature - min | | | -20 °C |
| Ambient storage temperature - max | | | 60 °C |
| Operating temperature - min | | | 0 °C |
| Operating temperature - max | | | 50 °C |
| Relative humidity | | | 10 - 95 % (non-condensing)<br>IEC/EN 50178 |
| | | | |
| Voltage dips | | | 5 ms from undervoltage (19.2 V DC)<br>≤ 10 ms from rated voltage (24 V DC)<br>≤ 10 ms, Bridging voltage dips |
| | | | |
| Inrush current | | | 12.5 A (for 6 ms) |
| Permissible voltage | | | 35 V DC (for a duration of < 100 ms)<br>19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %)<br>18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %)<br>18.0 - 31.2 V DC, absolute with ripple |
| Power consumption | | | 2.5 W (USB Slave to USB Host)<br>9.5 W total<br>Max. 12 W |
| Rated control supply voltage | | | 24 V DC (UAUX, -20 %/+25 %)<br>24 V DC (UPOW, -20 %/+25 %) |
| Rated operational current (Ie) | | | 0.7 A |
| Rated operational voltage | | | 24 V DC (power-supply - safety extra low voltage)<br>Typically UAUX -0.2 V (for 24 V DC slaves)<br>14.5 V (± 3 % - SmartWire-DT) |
| Supply current | | | 0.7 A, Imax, SmartWire-DT supply<br>3 A, Imax, Supply voltage UAux |

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|---|---|---|
| | | If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used; SmartWire-DT supply<br>If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used, Supply voltage UAux |
| Supply voltage at AC, 50 Hz - min | | 0 |
| Supply voltage at AC, 50 Hz - max | | 0 |
| Supply voltage at DC - min | | 20.4 |
| Supply voltage at DC - max | | 28.8 |
| | | |
| Addressing | | Address set automatically |
| Communication interface | | SmartWire-DT master |
| Connection | | SmartWire-DT blade terminal SWD4-8MF2 |
| Connection to SmartWire-DT | | Yes |
| Connection type | | SWD: Plug, 8-pole<br>Push in terminals, Supply voltage |
| Data transfer rate | | 250 kBit/s, SmartWire-DT<br>125 kBit/s, SmartWire-DT |
| Interfaces | | CAN<br>easyNet<br>Ethernet (100Base-TX/10Base-T)<br>USB 2.0 device (not galvanically isolated)<br>RS485 |
| LED indicator | | Status indication of Supply voltage: LED<br>Status indication of SmartWire-DT master: Green and red LEDs<br>Status indication of SmartWire-DT network: Configurable green or red LED |
| Number of slots | | 1 (for SD-Card) |
| Number of SmartWire-DT slaves | | 99 |
| Protocol | | MODBUS<br>TCP/IP<br>EtherNet/IP<br>Other bus systems<br>CAN |
| Station | | SmartWire-DT master, SmartWire-DT network |
| | | |
| Display contrast ratio | | 300:1 |
| Display lighting | | Dimmable via software<br>LED |
| Display size | | 211 x 158 mm |
| Display type | | Color display, TFT<br>Standard front with standard membrane (fully enclosed)<br>TFT |
| Luminance intensity | | 250 cd/m$^2$ |
| Number of colors of the display | | 65536 |
| Screen size (diagonal) | | 10.4 in |
| Touch technology | | Resistive touch<br>Glass with film touch sensor<br>Touch sensor (glass with foil), Resistive touch protective screen |
| | | |
| Resolution | | 640 x 480 px<br>VGA |
| | | |
| Explosion safety category for dust | | ATEX dust-ex-protection, in relation to CE<br>ATEX dust-ex-protection, II 3D Ex II T70°C IP5x: Zone 22, Category 3D |
| Potential isolation | | Between UPow and 15 V SmartWire-DT supply voltage: no<br>UAUX: no<br>Power supply: no |
| Protection against polarity reversal | | Yes<br>Yes, for supply voltage (Siemens MPI optional) |
| | | |
| Backup time | | 10 years, typ. (time at zero voltage) |
| Memory | | 64 MByte internal DRAM (OS, Program and data memory)<br>NVRAM (Retain data): 125 kByte<br>NAND-Flash (can be used for data backup): approx. 64 MByte available<br>NOR-Flash: 2 MByte<br>SD Memory Card Slot: SDA Specification 1.00 (External) |
| Memory capacity | | 64,000 kByte |
| Operating system | | Windows CE 5.0 (license included) |

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|---|---|---|
| Processor | | RISC CPU, 32 Bit, 400 MHz |
| | | |
| Equipment heat dissipation, current-dependent Pvid | | 14.5 W |
| Heat dissipation capacity Pdiss | | 0 W |
| Heat dissipation per pole, current-dependent Pvid | | 0 W |
| Rated operational current for specified heat dissipation (In) | | 0 A |
| Static heat dissipation, non-current-dependent Pvs | | 14.5 W |
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |
| 10.9.2 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 8.0

Programmable logic controllers PLC (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 | 20.4 - 28.8 |
| Voltage type of supply voltage | | DC |
| Number of HW-interfaces industrial Ethernet | | 1 |
| Number of interfaces PROFINET | | 0 |
| Number of HW-interfaces RS-232 | | 0 |
| 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 | | No |
| 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 | | Yes |
| Radio standard Bluetooth | | No |
| Radio standard Wi-Fi 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 | | 65,536 |
| Number of grey-scales/blue-scales of display | | 0 |
| Screen diagonal | inch | 10.4 |
| Number of pixels, horizontal | | 640 |
| Number of pixels, vertical | | 480 |
| Useful project memory/user memory | kByte | 64,000 |
| With numeric keyboard | | Yes |
| With alpha numeric keyboard | | Yes |
| Number of function buttons, programmable | | 0 |
| Number of buttons with LED | | 0 |
| Number of system buttons | | 1 |
| Touch technology | | Resistive touch |
| 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 | | 4X |
| Operating temperature | °C | 0 - 50 |
| Rail mounting possible | | No |
| Wall mounting/direct mounting | | No |
| Suitable for safety functions | | No |
| Width of the front | mm | 345 |
| Height of the front | mm | 260 |
| Built-in depth | mm | 49 |