

Touch panel, 24 V DC, 3.5z, TFTcolor, ethernet, profibus, (PLC)



Part no. **XV-102-B2-35TQR-10**
140008
EL Number **4521103**
(Norway)

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| Product name | Eaton XV-102 Touch panel |
| Part no. | XV-102-B2-35TQR-10 |
| EAN | 7640130095526 |
| Product Length/Depth | 136 millimetre |
| Product height | 30 millimetre |
| Product width | 100 millimetre |
| Product weight | 0.265 kilogram |
| Certifications | CSA Class No.: NWGQ8 Certified by UL for use in Canada UL report applies to both US and Canada CSA-C22.2 No. 60950-1 IEC/EN 61131-2 EN 50178 UL 60950-01 CUL508 DNV GL UL Category Control No.: NWGQ2 EN 60950 UL File No.: E208621 IEC/EN 61000-6-2 UL Recognized CE IEC/EN 61000-6-4 UL 60950 EAC |
| Product Tradename | XV-102 |
| Product Type | Touch panel |
| Product Sub Type | None |
| Catalog Notes | 4-wire Technology Can be expanded as required, see Accessories Can be fitted by user with article no. 142581 LIC-PLC-MXP-COMPACT Heat dissipation with power consumption for 24 V, all ports and interfaces connected Optionally with SD card -> article no. 139807 |
| Enclosure material | Plastic |
| Features | Portrait format Slot for SD card UL508, cUL approvals Fanless CPU and system cooling, natural convection-based passive cooling USB device Ethernet interface |
| Fitted with: | Numeric keyboard Alpha numeric keyboard 1 x PROFIBUS/MPI (built-in interface) 1 x USB device (built-in interface) SW interfaces 1 x Ethernet 10/100 Mbps (built-in interfaces) Message system (incl. buffer and confirmation) Recipes Color display Printer output Message indication |
| Functions | Process value representation (output) possible Process default value (input) possible Additional software components, loadable |
| Battery runtime | Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered) |
| Conditions of acceptability | The unit must be supplied via a SELV source. The following end-product enclosures are required: Fire The provided Ethernet Connection is only allowed to connect to inhouse networks. The investigated Pollution Degree is: 2 UL/CSA |
| Degree of protection | IP20, rear IP65 |

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| Degree of protection (front side) | | IP65 NEMA 4X |
| Fuse type | | Built-in fuse (not accessible) |
| Lifespan | | 40,000 h (Service life of back-lighting) |
| Model | | Insulating enclosure and front plate |
| Mounting method | | Flush mounting Flush mounting - Clearance: Width x Height x Depth \geq 30 mm (1.18") Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection) |
| Product category | | HMI-PLC (SPS function, retrofittable) |
| Residual ripple | | \leq 5 % (input voltage) |
| RoHs conformity | | Yes |
| Software | | XSOFT-CODESYS-3, Visualisation software, Engineering GALILEO, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-2, Visualisation software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering |
| 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 |
| Operating temperature - min | | 0 °C |
| Operating temperature - max | | 50 °C |
| Relative humidity | | 10 - 95 % (non-condensing) |
| Voltage dips | | \leq 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC) |
| Permissible voltage | | 35 V DC (for a duration of < 100 ms) 18.0 - 31.2 V DC, absolute with ripple 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) |
| Power consumption | | Max. 5 W |
| Rated control supply voltage | | 24 V DC (UPDW, -20 %/+25 %) 24 V DC (UAUX, -20 %/+25 %) |
| Rated operational voltage | | 24 V DC (power-supply - safety extra low voltage) |
| Supply voltage at AC, 50 Hz - min | | 0 V AC |
| Supply voltage at AC, 50 Hz - max | | 0 V AC |
| Supply voltage at DC - min | | 20.4 V DC |
| Supply voltage at DC - max | | 28.8 V DC |
| Communication interface | | PROFIBUS, not galvanically isolated, max. 1.5 MBit/s (SUB-D socket 9 pole, UNC) |
| Interfaces | | USB 2.0 device (not galvanically isolated) Ethernet (100Base-TX/10Base-T) |
| Number of slots | | 1 (for SD-Card) |
| Protocol | | PROFIBUS EtherNet/IP TCP/IP Other bus systems MODBUS |
| Display contrast ratio | | 300:1 |
| Display lighting | | LED Dimmable via software |
| Display size | | 70 x 53 mm |
| Display type | | Standard front with standard membrane (fully enclosed) Color display, TFT TFT |
| Luminance intensity | | 250 cd/m ² |
| Number of colors of the display | | 65536 |

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| Screen size (diagonal) | | 3.5 in |
| Touch technology | | Touch sensor (glass with foil), Resistive touch protective screen Glass with film touch sensor Resistive touch |
| Resolution | | 320 x 240 px QVGA |
| Explosion safety category for dust | | ATEX dust-ex-protection, in relation to CE ATEX dust-ex-protection, II 3D Ex II T70°C IP5x: Zone 22, Category 3D |
| Potential isolation | | Supply voltage UAUX: no Power supply: no |
| Protection against polarity reversal | | Yes, for supply voltage (Siemens MPI optional) Yes |
| Backup time | | 10 years, typ. (time at zero voltage) |
| Memory | | SD Memory Card Slot: SDA Specification 1.00 (External) 128 MByte internal NAND-Flash (can be used for data backup) 64 MByte internal DRAM (OS, Program and data memory) 32 kByte internal NVRAM (retained data) |
| Memory capacity | | 64,000 kByte |
| Operating system | | Windows CE 5.0 (license included) |
| Processor | | RISC CPU, 32 Bit, 400 MHz |
| Equipment heat dissipation, current-dependent P _{vid} | | 5 W |
| Heat dissipation capacity P _{diss} | | 0 W |
| Heat dissipation per pole, current-dependent P _{vid} | | 0 W |
| Rated operational current for specified heat dissipation (I _n) | | 0 A |
| Static heat dissipation, non-current-dependent P _{vs} | | 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

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| Programmable logic controllers PLC (EG000024) / Graphic panel (EC001412) | | |
| Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecI@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 |

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| 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 | | 1 |
| Number of HW-interfaces parallel | | 0 |
| Number of HW-interfaces Wireless | | 0 |
| Number of HW-interfaces other | | 0 |
| With SW interfaces | | Yes |
| Supporting protocol for TCP/IP | | Yes |
| Supporting protocol for PROFIBUS | | Yes |
| Supporting protocol for CAN | | No |
| 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 | 3.5 |
| Number of pixels, horizontal | | 320 |
| Number of pixels, vertical | | 240 |
| 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 |

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| 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 | 136 |
| Height of the front | | mm | 100 |
| Built-in depth | | mm | 25 |