# Specifications

Photo is representative

## Eaton EP-401369

Eaton Touch panel XV-303, 24 V DC, 15.6 Inch, 2 x Ethernet, 1 x RS-232, 1 x RS-485, 1 x CAN, Linux, Capacitive multi touch

| General specifications | |
|---|---|
| **PRODUCT NAME** | Eaton XV-303 Touch panel |
| **CATALOG NUMBER** | EP-401369 |
| **MODEL CODE** | XV-303-15-C00-A00-2B |
| **EAN** | 7640130100282 |
| **PRODUCT LENGTH/DEPTH** | 403.7 mm |
| **PRODUCT HEIGHT** | 67 mm |
| **PRODUCT WIDTH** | 254.9 mm |
| **PRODUCT WEIGHT** | 3.2 kg |
| **CERTIFICATIONS** | CUL<br>CE<br>Certified by UL for use in Canada<br>IEC/EN 61000-6-2<br>IEC/EN 61000-6-4<br>UL<br>UL 61010-2-201<br>UL File No.: E205091 |

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## Features & Functions

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| **ENCLOSURE MATERIAL** | Insulated material |
| **FITTED WITH:** | 1 x RS232 (built-in interface)<br>Color display<br>2 x Ethernet 10/100 Mbps (built-in interface)<br>Printer output<br>1 x RS485 (built-in interface)<br>Message indication<br>SW interfaces<br>1 x USB host 2.0 (built-in interface)<br>Message system (incl. buffer and confirmation)<br>Recipes<br>1 x CAN (built-in interfaces) |
| **FUNCTIONS** | Process value representation (output) possible<br>Additional software components, loadable<br>Process default value (input) possible |

## General

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| **BATTERY RUNTIME** | Back-up of real-time clock: BR 2330, non-replaceable (soldered) |
| **DEGREE OF PROTECTION** | NEMA 12<br>NEMA 4X<br>IP20, rear (according to EN 60529-1) |
| **DEGREE OF PROTECTION (FRONT SIDE)** | IP65<br>NEMA 12 |
| **FUSE TYPE** | Built-in fuse (not accessible) |
| **LIFESPAN** | 50,000 h (Service life of back-lighting) |
| **MODEL** | Plastic enclosure and glass panel in plastic frame |
| **MOUNTING METHOD** | Flush mounting - Clearance: Width x Height ≥ 50 mm (1.97"), Depth ≥ 20 mm (0.79")<br>Flush mounting - Inclination from vertical: α ≤ ± 10 ° (if using natural convection)<br>Flush mounting - Mounting plate: min. 1.5 mm (0.06"), max. 4 mm<br>Flush mounting - Inclination from vertical: α ≤ ± 45° at operating temperature ≤ 45°C (113°F) (if using natural convection)<br>Flush mounting |
| **POTENTIAL ISOLATION** | Power supply: no |
| **PROTECTION AGAINST POLARITY REVERSAL** | Yes |
| **PRODUCT CATEGORY** | XV-300 |
| **ROHS CONFORMITY** | Yes |
| **SOFTWARE** | GALILEO, Visualization software, Engineering |
| **TYPE** | Control panel with 2nd Ethernet port |
| **VOLTAGE TYPE** | DC |

## Ambient conditions, mechanical

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|---|---|
| **SHOCK RESISTANCE** | 15 g, 11 ms, Mechanical |
| **VIBRATION RESISTANCE** | 5 - 9 Hz, ± 3.5 mm<br>60 - 150 Hz, ± 2 g<br>9 - 60 Hz, ± 0.15 mm<br>According to IEC/EN 60068-2-6 |

## Climatic environmental conditions

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| **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** | 60 °C |

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| **TEMPERATURE - MAX** | |
| **CLIMATIC PROOFING** | Cold to EN 60068-2-1<br>Damp heat, constant, to IEC 60068-2-3<br>Dry heat to IEC 60068-2-2 |
| **ENVIRONMENTAL CONDITIONS** | Condensation: Non-condensing |
| **OPERATING TEMPERATURE - MIN** | 0 °C |
| **OPERATING TEMPERATURE - MAX** | 50 °C |
| **RELATIVE HUMIDITY** | 10 - 95 % (non-condensing) |

## Electro magnetic compatibility

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| **EMITTED INTERFERENCE** | According to IEC/EN 61000-6-4 |
| **INTERFERENCE IMMUNITY** | According to EN 61000-6-2 |
| **VOLTAGE DIPS** | 5 ms from undervoltage (19.2 V DC)<br>≤ 10 ms from rated voltage (24 V DC) |

## Electrical rating

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| **PERMISSIBLE VOLTAGE** | 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %)<br>35 V DC (for a duration of < 100 ms)<br>18.0 - 31.2 V DC, absolute with ripple<br>18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) |
| **POWER CONSUMPTION** | Max. 21.6 W<br>16 W typ.<br>19.1 W |
| **RATED OPERATIONAL VOLTAGE** | 24 V DC (power-supply - safety extra low voltage) |
| **SUPPLY VOLTAGE AT AC, 50 HZ - MIN** | 0 VAC |
| **SUPPLY VOLTAGE AT AC, 50 HZ - MAX** | 0 VAC |
| **SUPPLY VOLTAGE AT DC - MIN** | 19.2 VDC |
| **SUPPLY VOLTAGE AT DC - MAX** | 30 VDC |

## Communication

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| **INTERFACES** | 10/100 Mbps Ethernet connection<br>CAN (not galvanically isolated, 9-pin SUB-D plug, UNC)<br>RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC)<br>USB 2.0 host (not galvanically isolated)<br>RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) |
| **NUMBER OF SLOTS** | 1 (for SD-Card) |
| **PROTOCOL** | EtherNet/IP<br>CAN<br>TCP/IP<br>MODBUS |

## Display

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| **DISPLAY CONTRAST RATIO** | 500:1 |
| **DISPLAY LIGHTING** | LED<br>Dimmable via software |
| **DISPLAY SIZE** | 16:9<br>344.23 x 193.54 mm |
| **DISPLAY TYPE** | TFT<br>Color display, TFT, anti-glare<br>Anti-glare tempered glass in plastic bezel |
| **LUMINANCE INTENSITY** | 400 cd/m² |
| **NUMBER OF COLORS OF THE DISPLAY** | 16777216 |

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| | EtherCAT |

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| **RESOLUTION** | • 1366 x 768 px<br>• WXGA |
| **SCREEN SIZE (DIAGONAL)** | 15.6 in |
| **TOUCH TECHNOLOGY** | Multi-touch touch panel touch sensor<br>Capacitive multitouch<br>Projected Capacitive Touch (PCT) |

## System

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| **BACKUP TIME** | 10 years, typ. (time at zero voltage) |
| **MEMORY** | DRAM: 512 MByte RAM<br>NVRAM: 128kByte Retain<br>Flash: 1 GByte SLC<br>SD card, Type: SDSC, SDHC (external memory) |
| **MEMORY CAPACITY** | 512,000 kByte |
| **OPERATING SYSTEM** | Linux |
| **PROCESSOR** | ARM Cortex-A9 800 MHz |

## Design verification

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| **EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID** | 21.6 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** | 21.6 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. |

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| **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. |

## Resources

| | |
|---|---|
| **BROCHURES** | eaton-xv-303-xv313-hmi-plc-brochure-br050003-en-us |
| **CATALOGUES** | eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf<br><br>eaton-hmi-plc-touch-panel-xv-363-flyer-fl048001en-en-us.pdf |
| **DECLARATIONS OF CONFORMITY** | DA-DC-00005047.pdf<br><br>DA-DC-00005053.pdf |
| **INSTALLATION INSTRUCTIONS** | eaton-hmi-xv-303-il048022zu.pdf |
| **MANUALS AND USER GUIDES** | eaton-hmi-xv300-multi-touchdisplay-manual-mn048031en-us.pdf<br><br>eaton-systemdescription-with-embedded-linux-mn050017en-us.pdf |
| **MCAD MODEL** | eaton-xv_303_15_c00_a00_xb-drawing.dwg |

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| | eaton-cadenas-path-panels-xv_300-assemblies-xv_303_15_c00_1b_asmtpl.prj<br><br>eaton-cadenas-front_view-xv_303_15_asmtpl_front_1_front.pra<br><br>eaton-xv_303_15_c00_a00_xb-3d-model.stp<br><br>eaton-cadenas-side_view-xv_303_15_asmtpl_side_1_side.pra<br><br>eaton-cadenas-top_view-xv_303_15_asmtpl_top_1_top.pra |
| **MULTIMEDIA** | System solutions based on EtherCAT |
| **PRODUCT NOTIFICATIONS** | eaton-xv303-xv313-end-user-license-agreement-mz048008-en-us.pdf<br><br>eaton-xv303-xv313-product-cybersecurity-guideline-mz048009-en-us.pdf |

| | |
|---|---|
| **PROJECT NAME:** | |
| **PROJECT NUMBER:** | |
| **PREPARED BY:** | |
| **DATE:** | |

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