

# Specifications



Photo is representative



## Eaton EP-401364

Eaton Touch panel XV-303, 24 V DC, 7 Inch,  
2 x Ethernet, 1 x RS-232, 1 x RS-485, 1 x  
CAN, Linux, Capacitive multi touch, PLC

### General specifications

<b>PRODUCT NAME</b>	Eaton XV-303 Touch panel
<b>CATALOG NUMBER</b>	EP-401364
<b>MODEL CODE</b>	XV-303-70-C00-A00-2C
<b>EAN</b>	7640130100190
<b>PRODUCT LENGTH/DEPTH</b>	196 mm
<b>PRODUCT HEIGHT</b>	51 mm
<b>PRODUCT WIDTH</b>	135 mm
<b>PRODUCT WEIGHT</b>	0.78 kg

### CERTIFICATIONS

Certified by UL for use in  
Canada  
CE  
UL  
UL File No.: E205091  
CUL  
UL 61010-2-201  
IEC/EN 61000-6-2  
IEC/EN 61000-6-4  
DNV  
DNV TAA00000NC



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

Ambient conditions, mechanical	
SHOCK RESISTANCE	15 g, 11 ms, Mechanical
VIBRATION RESISTANCE	5 - 9 Hz, $\pm 3.5$ mm 9 - 60 Hz, $\pm 0.15$ mm 60 - 150 Hz, $\pm 2$ g

General	
BATTERY RUNTIME	Back-up of real-time clock: BR 2330, non-replaceable (soldered)
DEGREE OF PROTECTION	NEMA 12 NEMA 4X IP20, rear (according to EN 60529-1)
DEGREE OF PROTECTION (FRONT SIDE)	NEMA 12 IP65
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 x Depth $\geq 30$ mm (1.18") Flush mounting Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection)
POTENTIAL ISOLATION	Power supply: no
PROTECTION AGAINST POLARITY REVERSAL	Yes
PRODUCT CATEGORY	XV-300
ROHS CONFORMITY	Yes
SOFTWARE	GALILEO, Visualization software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-3, Visualization software, Engineering
TYPE	Control panel with PLC and 2nd Ethernet port
VOLTAGE TYPE	DC

Climatic environmental conditions	
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
CLIMATIC PROOFING	Dry heat to IEC 60068-2-2 Damp heat, constant, to IEC 60068-2-3 Cold to EN 60068-2-1
ENVIRONMENTAL	Condensation: Non-condensing

Electro magnetic compatibility	
EMITTED INTERFERENCE	According to IEC/EN 61000-6-4
INTERFERENCE IMMUNITY	According to EN 61000-6-2
VOLTAGE DIPS	$\leq 10$ ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)

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

CONDITIONS	
OPERATING TEMPERATURE - MIN	0 °C
OPERATING TEMPERATURE - MAX	50 °C
RELATIVE HUMIDITY	10 - 95 % (non-condensing)

Electrical rating	
PERMISSIBLE VOLTAGE	18.0 - 31.2 V DC, absolute with ripple 35 V DC (for a duration of < 100 ms) 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. 14.4 W 14 W typ. 11.9 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

Display	
DISPLAY CONTRAST RATIO	850:1
DISPLAY LIGHTING	LED Dimmable via software
DISPLAY SIZE	153.6 x 90.0 mm 16:9
DISPLAY TYPE	Anti-glare tempered glass in plastic bezel Color display, TFT, anti-glare TFT
LUMINANCE INTENSITY	400 cd/m <sup>2</sup>
NUMBER OF COLORS OF THE DISPLAY	16777216
RESOLUTION	<ul style="list-style-type: none"> <li>1024 x 600 px</li> <li>WSVGA</li> </ul>
SCREEN SIZE (DIAGONAL)	7 in
TOUCH TECHNOLOGY	Capacitive multitouch Multi-touch touch panel touch

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sensor  
Projected Capacitive Touch  
(PCT)

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## System

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

## Design verification

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	14.4 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	0 W
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	0 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	14.4 W
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Please enquire
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Meets the product standard's requirements.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS</b>	Is the panel builder's responsibility.

AND CONNECTIONS	
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Resources	
<b>BROCHURES</b>	<a href="#">eaton-xv-303-xv313-hmi-plc-brochure-br050003-en-us</a>
<b>CATALOGUES</b>	<a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a> <a href="#">eaton-hmi-plc-touch-panel-xv-363-flyer-fl048001en-en-us.pdf</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-00005053.pdf</a> <a href="#">DA-DC-00005047.pdf</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-hmi-xv-303-il048022zu.pdf</a>
<b>MANUALS AND USER GUIDES</b>	<a href="#">eaton-systemdescription-with-embedded-linux-mn050017en-us.pdf</a> <a href="#">eaton-hmi-xv300-multi-touchdisplay-manual-mn048031en-us.pdf</a>
<b>MCAD MODEL</b>	<a href="#">eaton-xv_303_70_c00_a00_xc-3d-model.stp</a> <a href="#">eaton-xv_303_70_c00_a00_xc-drawing.dwg</a> <a href="#">eaton-cadenas-side_view-179650_side.pra</a> <a href="#">eaton-cadenas-top_view-179650_top.pra</a>

	<a href="#">eaton-cadenas-path-panels-xv_300-179650.3db</a> <a href="#">eaton-cadenas-front_view-179650_front.pra</a>
MULTIMEDIA	<a href="#">System solutions based on EtherCAT</a>
PRODUCT NOTIFICATIONS	<a href="#">eaton-xv303-xv313-end-user-license-agreement-mz048008-en-us.pdf</a> <a href="#">eaton-xv303-xv313-product-cybersecurity-guideline-mz048009-en-us.pdf</a>

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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