Specifications



Photo is representative



Eaton EP-401351

Eaton Touch panel XV-102, 24 V DC, 7 Inch, 1 x USB, 1 x RS-232, 1 x RS-485, 1 x CAN, Linux, Resistive touch, PLC

General specifications	
PRODUCT NAME	Eaton XV-102 Touch panel
CATALOG NUMBER	EP-401351
MODEL CODE	XV-102-L6-70TWRC-10
EAN	7640130100145
PRODUCT LENGTH/DEPTH	210 mm
PRODUCT HEIGHT	38 mm
PRODUCT WIDTH	135 mm
PRODUCT WEIGHT	0.6 kg
CERTIFICATIONS	IEC/EN 61000-6-4 IEC/EN 61131-2 CE Certified by UL for use in Canada CUL IEC/EN 61000-6-3 UL UL 508 UL File No.: E205091 DNV DNV TAA00000NC

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Ambient conditions, mechanical

SHOCK RESISTANCE	Mechanical, According to IEC/EN 60068-2-27
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6

Climatic environmental conditions

AIR PRESSURE	795 - 1080 hPa (operation)
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT STORAGE TEMPERATURE - MAX	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	0 °C
AMBIENT STORAGE TEMPERATURE - MIN	-20 °C
OPERATING TEMPERATURE - MAX	50 °C
RELATIVE HUMIDITY	10 - 95 % (non-condensing)

Communication

INTERFACES	RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) CAN, not galvanically isolated (SUB-D plug 9 pole, UNC) Ethernet (100Base-TX/10Base-T) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 host (not galvanically isolated)
NUMBER OF SLOTS	1 (for SD-Card)
PROTOCOL	TCP/IP CAN EtherNet/IP Other bus systems MODBUS

Design verification

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.
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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	9.5 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	9.5 W

Display

DISPLAY CONTRAST RATIO	300:1
DISPLAY LIGHTING	LED Dimmable via software
DISPLAY SIZE	152 x 91 mm
DISPLAY TYPE	TFT Standard front with standard membrane (fully enclosed) Color display, TFT
LUMINANCE INTENSITY	250 cd/m²
NUMBER OF COLORS OF THE DISPLAY	65536
SCREEN SIZE (DIAGONAL)	7 in
TOUCH TECHNOLOGY	Touch sensor (glass with foil), Resistive touch protective screen Glass with film touch sensor Resistive touch

Electrical rating

PERMISSIBLE VOLTAGE	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 %) 35 V DC (for a duration of < 100 ms)
POWER CONSUMPTION	Max. 10 W 9.5 W total 2.5 W (USB Slave to USB Host) 7 W
RATED OPERATIONAL VOLTAGE	24 V DC (power-supply - safety extra low voltage)
SUPPLY VOLTAGE AT DC - MAX	30 VDC
SUPPLY VOLTAGE AT DC - MIN	19.2 VDC

Electro magnetic compatibility

VOLTAGE DIPS	5 ms from undervoltage (19.2 V DC) ≤ 10 ms from rated voltage (24 V DC)

Features & functions

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

General information

BATTERY RUNTIME	Back-up of real-time clock: CR 1025 (30 mAh), zero maintenance (soldered)
CONDITIONS OF ACCEPTABILITY	The unit must be supplied via a SELV source. UL/CSA 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
DEGREE OF PROTECTION	IP65 IP20, rear
DEGREE OF PROTECTION (FRONT SIDE)	NEMA 4X IP65
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 - Inclination from vertical: ±45° (if using natural convection) Flush mounting Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")
PRODUCT CATEGORY	XV-100
ROHS CONFORMITY	Yes
SOFTWARE	XSOFT-CODESYS-3, Visualization software, Engineering GALILEO, Visualization software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering
VOLTAGE TYPE	DC

Input/Output

RESOLUTION	• 800 x 480 px • WVGA

Safety

POTENTIAL ISOLATION	Power supply: no
PROTECTION AGAINST POLARITY REVERSAL	Yes

System

BACKUP TIME	10 years, typ. (time at zero voltage)
MEMORY	DRAM: 512 MByte RAM NVRAM: 128kByte Retain

	SD card, Type: SDSC, SDHC (external memory) Flash: 4 Gbyte
MEMORY CAPACITY	512,000 kByte
OPERATING SYSTEM	Linux
PROCESSOR	RISC CPU, 32 Bit, 800 MHz

Resources

APPLICATION NOTES	eaton-codesys-sae-j1939-first-steps-v3-ap050019en-us eaton-connection-plc-sql-database-ap050018en-us eaton-codesys-managing-ssl-certificates-v3-ap050017en-us
BROCHURES	eaton-xv102-touch-display-brochure-br050015-en-us
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-touch-panel-declaration-of-conformity-eu251390en.pdf
INSTALLATION INSTRUCTIONS	eaton-hmi-xv-102-il048021zu.pdf
MANUALS AND USER GUIDES	eaton-hmi-xv100-touchdisplay-manual-mn048030en-us.pdf eaton-systemdescription-with-embedded-linux-mn050017en-us.pdf
MCAD MODEL	eaton-programmable-displays-mcad-3d-models-xv-102-l6-70twr.stp eaton-programmable-displays-mcad-drawings-xv-102-l6-70twr.dwg
PEP ECO-PASSPORT	eaton-programmable-displays-pep-eato-00330-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-xv102-product-cybersecurity-guideline-mz048007-en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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