Specifications



Photo is representative





Eaton EP-401718

Eaton XV-102 Touch panel, used with easyE4, 24 V DC, 3.5 Inch, 1 x USB, 1 x Ethernet, Linux, Resistive touch

General specifications	
PRODUCT NAME	Eaton XV-102 Touch panel
CATALOG NUMBER	EP-401718
MODEL CODE	XV-102-L0-35TQRB-1E4
EAN	4015082973216
PRODUCT LENGTH/DEPTH	136 mm
PRODUCT HEIGHT	30 mm
PRODUCT WIDTH	100 mm
PRODUCT WEIGHT	0.3 kg
CERTIFICATIONS	IEC/EN 61131-2 CUL IEC/EN 61000-6-3 UL UL 508 UL File No.: E205091 DNV CE Certified by UL for use in Canada IEC/EN 61000-6-4 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
OPERATING TEMPERATURE - MIN	0 °C
RELATIVE HUMIDITY	10 - 95 % (non-condensing)

Communication

INTERFACES	Ethernet (100Base-TX/10Base-T) USB 2.0 host (not galvanically isolated)
NUMBER OF SLOTS	1 (for SD-Card)
PROTOCOL	MODBUS TCP/IP

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. The specifications for the switchgear must be observed.
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	7.5 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	7.5 W

Display

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) TFT Color display, TFT
LUMINANCE INTENSITY	250 cd/m²
NUMBER OF COLORS OF THE DISPLAY	65536
SCREEN SIZE (DIAGONAL)	3.5 in
TOUCH TECHNOLOGY	Resistive touch Touch sensor (glass with foil), Resistive touch protective screen

Electro magnetic compatibility

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

Electrical rating

PERMISSIBLE VOLTAGE	18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 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 %)
POWER CONSUMPTION	5 W Max. 7.5 W 2.5 W (USB Host)
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

Features & functions

ENCLOSURE MATERIAL	Plastic
FEATURES	USB Host Slot for SD card Ethernet interface UL508, cUL approvals Fanless CPU and system cooling, natural convection-based passive cooling
FITTED WITH:	1 x USB host 2.0 (built-in interface) 1 x Ethernet 100base-TX/10base-T (built-in interface) Alpha numeric keyboard Color display Message indication Message system (incl. buffer and confirmation) Numeric keyboard Printer output Recipes SW interfaces
FUNCTIONS	HMI Additional software components, loadable Process value representation (output) possible Process default value (input) possible

General information

BATTERY RUNTIME	Back-up of real-time clock: CR 1025 (30 mAh), zero maintenance (soldered)
CONDITIONS OF ACCEPTABILITY	The following end-product enclosures are required: Fire The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks. UL/CSA The investigated Pollution Degree is: 2
DEGREE OF PROTECTION	IP20, rear IP65
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 - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting - Inclination from vertical: ±45° (if using natural convection) Flush mounting
PRODUCT CATEGORY	XV-100
ROHS CONFORMITY	Yes
SOFTWARE	GALILEO, Visualization software, Engineering
USED WITH	EASY-E4
VOLTAGE TYPE	DC

Input/Output

RESOLUTION	• 320 x 240 px • QVGA

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

CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
INSTALLATION INSTRUCTIONS	eaton-hmi-xv-102-il048021zu.pdf
MANUALS AND USER GUIDES	eaton-hmi-xv100-touchdisplay-manual-mn048030en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

Eaton Corporation plc Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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