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Eaton 140012

Eaton XV-102 Touch panel, 24 V DC, 3.5z,
TFTmono, ethernet, PLC

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PRODUCT NAME	Eaton XV-102 Touch panel
CATALOG NUMBER	140012
PRODUCT LENGTH/DEPTH	136 mm
PRODUCT HEIGHT	30 mm
PRODUCT WIDTH	100 mm
PRODUCT WEIGHT	0.245 kg
CERTIFICATIONS	UL 60950 DNV GL CSA-C22.2 No. 60950-1 CSA Class No.: NWGQ8 IEC/EN 61131-2 UL Category Control No.: NWGQ2 UL Recognized Certified by UL for use in Canada UL File No.: E208621 CE UL 60950-01 IEC/EN 61000-6-4 EN 50178 CUL508 EN 60950 UL report applies to both US and Canada IEC/EN 61000-6-2 EAC

FEATURES

Fanless CPU and system cooling, natural convection-based passive cooling
USB device
UL508, cUL approvals
Portrait format
Ethernet interface
Slot for SD card

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.

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[eaton-electronics-dimensions-xv-touch-panel-dimensions.eps](#)

[eaton-electronics-dimensions-xv-touch-panel-dimensions-002.eps](#)

[eaton-operator-panels-xv-touch-panel-3d-drawing-004.eps](#)

[eaton-general-xv-touch-panel-symbol.eps](#)

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.
FITTED WITH:	1 x Ethernet 10/100 Mbps (built-in interfaces) Message system (incl. buffer and confirmation) SW interfaces Numeric keyboard Alpha numeric keyboard Message indication Printer output Recipes 1 x USB device (built-in interface)
FUSE TYPE	Built-in fuse (not accessible)
ENCLOSURE MATERIAL	Plastic
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
SUPPLY VOLTAGE AT DC - MIN	20.4 VDC
WIDTH OF THE FRONT	136 mm
PRODUCT CATEGORY	HMI-PLC (integrated SPS function)

RESOLUTION	• 320 x 240 px • QVGA
AIR PRESSURE	795 - 1080 hPa (operation)
EXPLOSION SAFETY CATEGORY FOR DUST	ATEX dust-ex-protection, II 3D Ex II T70°C IP5x: Zone 22, Category 3D ATEX dust-ex-protection, in relation to CE
DISPLAY SIZE	70 x 53 mm
BACKUP TIME	10 years, typ. (time at zero voltage)
MEMORY CAPACITY	64,000 kByte
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE - MIN	0 °C
AMBIENT STORAGE TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MIN	-20 °C
BUILT-IN DEPTH	25 mm
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	5 W
FRONT HEIGHT	100 mm
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
NUMBER OF BUTTONS (PROGRAMMABLE FUNCTION)	0
NUMBER OF BUTTONS WITH LED	0
NUMBER OF GREY-SCALES/BLUE-SCALES OF DISPLAY	32
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	1
NUMBER OF HW-INTERFACES (OTHER)	0
BATTERY RUNTIME	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
VOLTAGE TYPE	DC
CONDITIONS OF ACCEPTABILITY	The provided Ethernet Connection is only allowed

	to connect to inhouse networks. The unit must be supplied via a SELV source. The investigated Pollution Degree is: 2 UL/CSA The following end-product enclosures are required: Fire
OPERATING SYSTEM	Windows CE 5.0 (license included)
SOFTWARE	GALILEO, Visualization software, Engineering EPAM, Visualization software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-2, Visualization software, Engineering XSOFT-CODESYS-3, Visualization software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering
MOUNTING METHOD	Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection) Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting
DISPLAY CONTRAST RATIO	300:1
NUMBER OF SLOTS	1 (for SD-Card)
DISPLAY LIGHTING	LED Dimmable via software
DISPLAY TYPE	B/W display, TFT Standard front with standard membrane (fully enclosed) TFT
PROTECTION AGAINST POLARITY REVERSAL	Yes Yes, for supply voltage (Siemens MPI optional)
RELATIVE HUMIDITY	10 - 95 % (non-condensing)
LIFESPAN	40,000 h (Service life of back-lighting)
RESIDUAL RIPPLE	≤ 5 % (input voltage)
RATED CONTROL SUPPLY	24 V DC (UAUX, -20 %/+25

VOLTAGE	%) 24 V DC (UPOW, -20 %/+25 %)
DEGREE OF PROTECTION	IP20, rear IP65
LUMINANCE INTENSITY	250 cd/m ²
DEGREE OF PROTECTION (FRONT SIDE)	IP65 NEMA 4X
NUMBER OF COLORS OF THE DISPLAY	32
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6
PROCESSOR	RISC CPU, 32 Bit, 400 MHz
ROHS CONFORMITY	Yes
MEMORY	64 MByte internal DRAM (OS, Program and data memory) SD Memory Card Slot: SDA Specification 1.00 (External) 32 kByte internal NVRAM (retained data) 128 MByte internal NAND-Flash (can be used for data backup)
FUNCTIONS	Additional software components, loadable Process value representation (output) possible Process default value (input) possible
TOUCH TECHNOLOGY	Resistive touch Glass with film touch sensor Touch sensor (glass with foil), Resistive touch protective screen
MODEL	Insulating enclosure and front plate
INTERFACES	USB 2.0 device (not galvanically isolated) Ethernet (100Base-TX/10Base-T)
VOLTAGE DIPS	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
NUMBER OF HW-INTERFACES (PARALLEL)	0
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF HW-	0

INTERFACES (RS-422)	
NUMBER OF HW-INTERFACES (RS-485)	0
NUMBER OF HW-INTERFACES (SERIAL TTY)	0
NUMBER OF HW-INTERFACES (USB)	1
NUMBER OF HW-INTERFACES (WIRELESS)	0
NUMBER OF INTERFACES (PROFINET)	0
NUMBER OF ONLINE/RUNTIME LANGUAGES	100
NUMBER OF PASSWORD LEVELS	200
NUMBER OF PIXELS (HORIZONTAL)	320
NUMBER OF PIXELS (VERTICAL)	240
NUMBER OF SYSTEM BUTTONS	1
OPERATING TEMPERATURE - MAX	50 °C
OPERATING TEMPERATURE - MIN	0 °C
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
SCREEN SIZE (DIAGONAL)	3.5 in
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	5 W
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 %)
POTENTIAL ISOLATION	Power supply: no Supply voltage UAUX: no
POWER CONSUMPTION	Max. 5 W 5 W
PROTOCOL	EtherNet/IP Other bus systems MODBUS TCP/IP

RATED OPERATIONAL VOLTAGE	24 V DC (power-supply - safety extra low voltage)
SHOCK RESISTANCE	Mechanical, According to IEC/EN 60068-2-27

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