## Touch panel, 24 V DC, 7z, TFTcolor, ethernet, RS232, (PLC)



Part no. XV-102-D0-70TWR-10

142535

EL Number

4521120

(Norway)	
Product name	Eaton XV-102 Touch panel
Part no.	XV-102-D0-70TWR-10
EAN	7640130096776
Product Length/Depth	210 millimetre
Product height	38 millimetre
Product width	135 millimetre
Product weight	0.62 kilogram
Certifications	Certified by UL for use in Canada CE IEC/EN 61000-6-2 DNV GL CSA-C22.2 No. 60950-1 UL File No.: E208621 EN 60950 UL Recognized IEC/EN 61000-6-4 IEC/EN 61131-2 UL report applies to both US and Canada CUL508 UL Category Control No.: NWGQ2 EN 50178 UL 60950 UL 60950 UL 60950-01 CSA Class No.: NWGQ8 EAC
Product Tradename	XV-102
Product Type	Touch panel
Product Sub Type	None
Catalog Notes	4-wire Technology 7 W for basic device + 2.5 W for USB module Can be expanded as required, see Accessories Can be fitted by user with article no. 142581 LIC-PLC-MXP-COMPACT Heat dissipation with power consumption for 24 V Optionally with SD card -> article no. 139807
Enclosure material	Plastic
Features	Slot for SD card Fanless CPU and system cooling, natural convection-based passive cooling UL508, cUL approvals Portrait format Ethernet interface USB device USB Host
Fitted with:	1 x USB device (built-in interface) Printer output Numeric keyboard Message indication 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x USB host 2.0 (built-in interface) 1 x RS232 (built-in interface) Message system (incl. buffer and confirmation) SW interfaces Color display Alpha numeric keyboard Recipes
Functions	Additional software components, loadable Process value representation (output) possible Process default value (input) possible
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Conditions of acceptability	The investigated Pollution Degree is: 2 The following end-product enclosures are required: Fire UL/CSA The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks.
Degree of protection	IP20, rear

Degree of protection (front side)	IP65 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	HMI-PLC (SPS function, retrofittable)
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Software	EPAM, Visualisation software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering XSOFT-CODESYS-3, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-2, Visualisation software, Engineering GALILEO, Visualisation software, Engineering
Voltage type	DC
Shock resistance	Mechanical, According to IEC/EN 60068-2-27
Vibration resistance	According to IEC/EN 60068-2-6
Air pressure	795 - 1080 hPa (operation)
Ambient operating temperature - min	0 °C
Ambient operating temperature - max	50 °C
Operating temperature - min	0°C
Operating temperature - max	50 °C
Relative humidity	10 - 95 % (non-condensing)
Voltage dips	5 ms from undervoltage (19.2 V DC) ≤ 10 ms from rated voltage (24 V DC)
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 %)
Power consumption	9.5 W total Max. 10 W 2.5 W (USB Slave to USB Host)
Rated control supply voltage	24 V DC (UPOW, -20 %/+25 %) 24 V DC (UAUX, -20 %/+25 %)
Rated operational voltage	24 V DC (power-supply - safety extra low voltage)
Supply voltage at AC, 50 Hz - min	0 V AC
Supply voltage at AC, 50 Hz - max	O V AC
Supply voltage at DC - min	20.4 V DC
Supply voltage at DC - max	28.8 V DC
Interfaces	USB 2.0 host (1.5 - 12 Mbit/s, not galvanically isolated) Ethernet (100Base-TX/10Base-T) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 device (not galvanically isolated)
Number of slots	1 (for SD-Card)
Protocol	MODBUS EtherNet/IP Other bus systems TCP/IP
Display contrast ratio	300:1
Display lighting	LED
Digelou eize	Dimmable via software
Display size Display type	152 x 91 mm  TFT  Standard front with standard membrane (fully enclosed) Color display, TFT

Number of colors of the displaye  Screen sind filiagened  Tooch technicacy  Residuation  Residua	Luminance intensity	250 cd/m <sup>2</sup>
Facultican  Facult	Number of colors of the display	65536
Facultican  Facult	Screen size (diagonal)	7 in
Explosion safety category for dust  ATEX dust ex- protection, it side to It TAP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection, it side to It TAP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection, it side to It IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection, it side to It IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection against polarity reversal  Protection against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection against polarity reversal  Protection against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust ex- protection against polarity reversal  Protection against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust dust ex- protection against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust dust against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust dust against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust dust against polarity reversal  ATEX dust ex- protection, it is desired to IT AP'C IPSe. Zone 22. Caregory 3D  ATEX dust dust against polarity reversal  ATEX dust ex- protection against polarity responsibility.  ATEX dust ex- protection against electric shock to a decirate and components  ATEX	Touch technology	Touch sensor (glass with foil), Resistive touch protective screen
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Memory  Memory capachy  Mindows CE 50 (Icensa included)  Memory  Memory capachy  Memory capach		
Memory capacity Operating system Operati	Backup time	10 years, typ. (time at zero voltage)
Processor  RISC CPU, 32 Bit, 400 MHz  Figuipment heat dissipation, current-dependent Pvid  Heat dissipation capacity Pdiss  Heat dissipation capacity Pdiss  OW  Rated operational current for specified heat dissipation (In)  Rated operational dissipation, current-dependent Pvid  Meets the product standard's requirements.  Rated produc	Memory	SD Memory Card Slot: SDA Specification 1.00 (External) 64 MByte internal DRAM (OS, Program and data memory)
Processor  RISC CPU, 32 Bit, 400 MHz  Equipment heat dissipation, current-dependent Pvid  Heat dissipation per pole, current-dependent Pvid  Bated operational current for specified heat dissipation (In)  Static heat dissipation ner pole, current-dependent Pvid  Bated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvis  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.  10.2.3.3 Resist, of insul, mat, to abnormal heat/fire by internal elect. effects  Meets the product standard's requirements.  10.2.3.4 Resistance to ultra-violet (I/V) radiation  10.2.5 Lifting  Does not apply, since the entire switchgear needs to be evaluated.  10.2.6 Machanical 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.  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 Internal electrical circuits and connections  Is the panel builder's responsibility.  10.8 Commercions for external conductors  10.9 Internal electrical circuits and connections  Is the panel builder's responsibility.  10.9 Internal electric strength  10.1 Temperature rise  10.1 Temperature rise  10.1 Temperature rise  10.2 Temperature rise  10.3 Imperature rise  10.4 Temperature rise  10.5 Temperature rise  10.6 Temperature rise  10.7 Internal electric responsibility.  10.8 Commercions for external conductors  10.9 Imperature rise  10.1 Temperature rise  10.1 Te	Memory capacity	64,000 kByte
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	10.12 Electromagnetic compatibility	Is the panel builder's responsibility.
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## **Technical data ETIM 8.0**

Programmable logic controllers PLC (EG000024) / Graphic panel (EC001412)			
Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecl@ss10.0.1-27-33-02-01 [AFX016003])			
Supply voltage AC 50 Hz	V	0 - 0	
Supply voltage AC 60 Hz	V	0 - 0	

Curah walkara DC	V	20.4. 20.0
Supply voltage DC	V	20.4 - 28.8
Voltage type of supply voltage		DC .
Number of HW-interfaces industrial Ethernet		1
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		1
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		2
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces other		0
With SW interfaces		Yes
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for Modbus		Yes
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		Yes
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		Yes
Radio standard Bluetooth		No
Radio standard Wi-Fi 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
10 link master		No
Type of display		TFT
With colour display		Yes
Number of colours of the display		65,536
Number of grey-scales/blue-scales of display		0
Screen diagonal	incl	
Number of pixels, horizontal		800
Number of pixels, vertical		480
Useful project memory/user memory	kBy	
With numeric keyboard	,	Yes
With alpha numeric keyboard		Yes
Number of function buttons, programmable		0
Number of buttons with LED		0
Number of system buttons		1
Touch technology		Resistive touch

With message indication		Yes
With message system (incl. buffer and confirmation)		Yes
Process value representation (output) possible		Yes
Process default value (input) possible		Yes
With recipes		Yes
Number of password levels		200
With printer output		Yes
Number of online languages		100
Additional software components, loadable		Yes
Degree of protection (IP), front side		IP65
Degree of protection (NEMA), front side		4X
Operating temperature	°C	0 - 50
Rail mounting possible		No
Wall mounting/direct mounting		No
Suitable for safety functions		No
Width of the front	mm	210
Height of the front	mm	135
Built-in depth	mm	33