DATASHEET - XV-102-D6-70TWRC-10

Touch panel, 24 V DC, 7z, TFTcolor, ethernet, RS232, RS485, CAN, PLC

Powering Business Worldwide

Part no.	**XV-102-D6-70TWRC-10**
	142538
EL Number (Norway)	**4521123**

Product name	Eaton XV-102 Touch panel
Part no.	XV-102-D6-70TWRC-10
EAN	7640130096806
Product Length/Depth	210 millimetre
Product height	38 millimetre
Product width	135 millimetre
Product weight	0.64 kilogram
Certifications	CSA Class No.: NWGQ8 IEC/EN 61131-2 Certified by UL for use in Canada CUL508 EN 50178 CSA-C22.2 No. 60950-1 UL Recognized IEC/EN 61000-6-2 UL 60950 UL 60950-01 UL Category Control No.: NWGQ2 UL File No.: E208621 DNV GL UL report applies to both US and Canada CE IEC/EN 61000-6-4 EN 60950 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 Heat dissipation with power consumption for 24 V Optionally with SD card -> article no. 139807 PLC license inclusive
Enclosure material	Plastic
Features	USB device UL508, cUL approvals Portrait format Fanless CPU and system cooling, natural convection-based passive cooling Slot for SD card Ethernet interface USB Host
Fitted with:	Message indication Color display 1 x RS232 (built-in interface) Alpha numeric keyboard 1 x USB device (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x CANopen®/easyNet (built-in interfaces) Printer output 1 x USB host 2.0 (built-in interface) SW interfaces 1 x RS485 (built-in interface) Message system (incl. buffer and confirmation) Recipes Numeric keyboard
Functions	Additional software components, loadable Process default value (input) possible Process value representation (output) possible
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Conditions of acceptability	UL/CSA The investigated Pollution Degree is: 2 The provided Ethernet Connection is only allowed to connect to inhouse networks. The following end-product enclosures are required: Fire

	The unit must be supplied via a SELV source.
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 - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting Flush mounting - Inclination from vertical: ±45° (if using natural convection)
Product category	HMI-PLC (integrated SPS function)
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Software	XSOFT-CODESYS-2, PLC-Programming software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-3, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering GALILEO, Visualisation software, Engineering XSOFT-CODESYS-2, 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	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Permissible voltage	18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 35 V DC (for a duration of < 100 ms) 18.0 - 31.2 V DC, absolute with ripple
Power consumption	Max. 10 W 2.5 W (USB Slave to USB Host) 9.5 W total
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	0 V AC
Supply voltage at DC - min	20.4 V DC
Supply voltage at DC - max	28.8 V DC
Interfaces	Ethernet (100Base-TX/10Base-T) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) CAN, not galvanically isolated (SUB-D plug 9 pole, UNC) USB 2.0 host (1.5 - 12 Mbit/s, not galvanically isolated) USB 2.0 device (not galvanically isolated) RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC)
Number of slots	1 (for SD-Card)
Protocol	CAN Other bus systems TCP/IP MODBUS EtherNet/IP
Display contrast ratio	300:1
Display lighting	Dimmable via software LED

Display size	152 x 91 mm
Display type	Color display, TFT Standard front with standard membrane (fully enclosed) TFT
Luminance intensity	250 cd/m²
Number of colors of the display	65536
Screen size (diagonal)	7 in
Touch technology	Glass with film touch sensor Resistive touch Touch sensor (glass with foil), Resistive touch protective screen
Resolution	800 x 480 px WVGA
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
Potential isolation	Power supply: no Supply voltage UAUX: no
Protection against polarity reversal	Yes, for supply voltage (Siemens MPI optional) Yes
Backup time	10 years, typ. (time at zero voltage)
Memory	64 MByte internal DRAM (OS, Program and data memory) 128 MByte internal NAND-Flash (can be used for data backup) 32 kByte internal NVRAM (retained data) SD Memory Card Slot: SDA Specification 1.00 (External)
Memory capacity	64,000 kByte
Operating system	Windows CE 5.0 (license included)
Processor	RISC CPU, 32 Bit, 400 MHz
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
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.
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.

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
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		1
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		1
With SW interfaces		Yes
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		Yes
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
IO 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	inch	7
Number of pixels, horizontal		800
Number of pixels, vertical		480
Useful project memory/user memory	kByte	64,000
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

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