DATASHEET - XV-102-D4-70TWR-10

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

Part no.	**XV-102-D4-70TWR-10**
	150621
EL Number (Norway)	**4521126**

Product name	Eaton XV-102 Touch panel
Part no.	XV-102-D4-70TWR-10
EAN	7640130097087
Product Length/Depth	210 millimetre
Product height	38 millimetre
Product width	135 millimetre
Product weight	0.64 kilogram
Certifications	Certified by UL for use in Canada EN 60950 UL CUL508 IEC/EN 61131-2 EN 50178 UL Category Control No.: NRAQ UL508 DNV GL UL 60950 IEC/EN 61000-6-2 CSA Class No.: none CSA File No.: UL report applies to both US and Canada UL File No.: E205091 IEC/EN 61131-2, CE IEC/EN 61000-6-4 CULus 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	Fanless CPU and system cooling, natural convection-based passive cooling USB device UL508, cUL approvals USB Host Portrait format Ethernet interface Slot for SD card
Fitted with:	1 x RS232 (built-in interface) Recipes Printer output SW interfaces Color display 1 x USB device (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x USB host 2.0 (built-in interface) Message indication 1 x RS485 (built-in interface) Numeric keyboard Alpha numeric keyboard Message system (incl. buffer and confirmation)
Functions	Process default value (input) possible Process value representation (output) possible Additional software components, loadable
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Degree of protection	IP20, rear IP20
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 Flush mounting - Inclination from vertical: ±45° (if using natural convection)
Product category	HMI-PLC (SPS function, retrofittable)
RoHs conformity	Yes
Software	XSOFT-CODESYS-2, PLC-Programming software, Engineering GALILEO, Visualisation software, Engineering XSOFT-CODESYS-2, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-3, 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
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) 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 18.0 - 31.2 V DC, absolute with ripple 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	0 V AC
Supply voltage at DC - min	20.4 V DC
Supply voltage at DC - max	28.8 V DC
Interfaces	USB 2.0 device (not galvanically isolated) Ethernet (100Base-TX/10Base-T) USB 2.0 host (1.5 - 12 Mbit/s, not galvanically isolated)
Number of slots	1 (for SD-Card)
Protocol	MODBUS TCP/IP Other bus systems EtherNet/IP
Display contrast ratio	300:1
Display lighting	LED Dimmable via software
Display type	TFT Color display, TFT Standard front with standard membrane (fully enclosed)
Luminance intensity	250 cd/m^2
Number of colors of the display	65536
Screen size (diagonal)	7 in
Touch technology	Glass with film touch sensor Touch sensor (glass with foil), Resistive touch protective screen Resistive touch

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 Yes, for supply voltage (Siemens MPI optional)
Backup time			10 years, typ. (time at zero voltage)
Memory			64 MByte internal DRAM (OS, Program and data memory) 32 kByte internal NVRAM (retained data) 128 MByte internal NAND-Flash (can be used for data backup) 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		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
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

© 04/2023 by Eaton Industries GmbH