DATASHEET - XV-303-70-B00-A00-1B

Control panel, 24VDC, 7 Inches PCT-Display, 1024x600 pixels, 1xEthernet, 1xRS232, 1xRS485, 1xCAN, 1xSD card slot, PLC function can be fitted by user

Part no.	**XV-303-70-B00-A00-1B**
	179647
EL Number (Norway)	**4501305**

General specifications

Product name	Eaton XV-303 Touch panel
Part no.	XV-303-70-B00-A00-1B
EAN	7640130098589
Product Length/Depth	196 millimetre
Product height	51 millimetre
Product width	135 millimetre
Product weight	0.78 kilogram
Certifications	Certified by UL for use in Canada EMC according to 2014/30/EU IEC/EN 61131-2 EN 50178 UL File No.: E205091 CUL UL DNV GL CE UL 61010-2-201
Product Tradename	XV-303
Product Type	Touch panel
Product Sub Type	None
Catalog Notes	11.9 W for basic device + 2.5 W for USB module Can be fitted by user with article no. 181585 LIC-PLC-A Heat dissipation with power consumption for 24 V License certificates for onboard interfaces not required Optionally with SD card -> article no. 181638

Features & Functions

Enclosure material	Insulated material
Features	Ethernet interface USB Host Operating System Windows Embedded Compact 7 pro Slot for SD card Portrait format Target and web visualization CAN RS485 Fanless CPU and system cooling, natural convection-based passive cooling Integrated Runtime visualization software license USB device RS232
Fitted with:	Color display 1 x USB device (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x CANopen®/easyNet (built-in interfaces) Message system (incl. buffer and confirmation) Recipes 1 x USB host 2.0 (built-in interface) SW interfaces Message indication 1 x RS232 (built-in interface) 1 x RS485 (built-in interface) Printer output
Functions	Additional software components, loadable Process value representation (output) possible Process default value (input) possible

General information

Battery runtime	Back-up of real-time clock: BR 2330, non-replaceable (soldered)
Degree of protection	IP20, rear (according to EN 60529-1) NEMA 12 NEMA 4X
Degree of protection (front side)	IP65 NEMA 12

Fuse type		Built-in fuse (not accessible)
Lifespan		50,000 h (Service life of back-lighting)
Model		Plastic enclosure and glass panel in plastic frame
Mounting method		Flush mounting - Inclination from vertical: ±45° (if using natural convection) Flush mounting Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")
Potential isolation		Power supply: no
Protection against polarity reversal		Yes, for supply voltage (Siemens MPI optional)
Product category		HMI-PLC (SPS function, retrofittable)
RoHs conformity		Yes
Software		XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering GALILEO, Visualization software, Engineering XSOFT-CODESYS, Visualization software, Engineering
Type		Control panel
Voltage type		DC

Ambient conditions, mechanical

Shock resistance		15 g, 11 ms, Mechanical
Vibration resistance		5 - 9 Hz, ± 3.5 mm 60 - 150 Hz, ± 2 g 9 - 60 Hz, ± 0.15 mm According to IEC/EN 60068-2-6

Climatic environmental conditions

Air pressure		795 - 1080 hPa (operation)
Ambient operating temperature - min		0 °C
Ambient operating temperature - max		50 °C
Ambient storage temperature - min		-20 °C
Ambient storage temperature - max		60 °C
Climatic proofing		Dry heat to IEC 60068-2-2 Damp heat, constant, to IEC 60068-2-3 Cold to EN 60068-2-1
Environmental conditions		Condensation: Non-condensing
Operating temperature - min		0 °C
Operating temperature - max		50 °C
Relative humidity		10 - 95 % (non-condensing)

Electro magnetic compatibility

Emitted interference		According to IEC/EN 61000-6-4
Interference immunity		According to EN 61000-6-2
Voltage dips		≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 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 19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 35 V DC (for a duration of < 100 ms)
Power consumption		Max. 14.4 W 14 W typ. 11.9 W
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		19.2 V DC
Supply voltage at DC - max		30 V DC

Communication

Interfaces		USB 2.0 device (not galvanically isolated) RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 host (not galvanically isolated) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) CAN (not galvanically isolated, 9-pin SUB-D plug, UNC) 10/100 Mbps Ethernet connection
Number of slots		1 (for SD-Card)
Protocol		TCP/IP EtherNet/IP MODBUS CAN

		EtherCAT

Display

Display contrast ratio		850:1
Display lighting		Dimmable via software LED
Display size		16:9 153.6 x 90.0 mm
Display type		Color display, TFT, anti-glare Anti-glare tempered glass in plastic bezel TFT
Luminance intensity		400 cd/m²
Number of colors of the display		16777216
Resolution		1024 x 600 px WSVGA
Screen size (diagonal)		7 in
Touch technology		Capacitive multitouch Multi-touch touch panel touch sensor Projected Capacitive Touch (PCT)

System

Backup time		10 years, typ. (time at zero voltage)
Memory		Flash: 1 GByte SLC NVRAM: 128kByte Retain DRAM: 512 MByte RAM SD card, Type: SDSC, SDHC (external memory)
Memory capacity		512,000 kByte
Operating system		Windows Embedded Compact 7 Pro
Processor		ARM Cortex-A9 800 MHz

Design verification

Equipment heat dissipation, current-dependent Pvid		14.4 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		14.4 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	19.2 - 30
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			No
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			16777216
Number of grey-scales/blue-scales of display			0
Screen diagonal		inch	7
Number of pixels, horizontal			1024
Number of pixels, vertical			600
Useful project memory/user memory		kByte	512000
With numeric keyboard			No
With alpha numeric keyboard			No
Number of function buttons, programmable			0
Number of buttons with LED			0

Number of system buttons			1
Touch technology			Capacitive multitouch
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			12
Operating temperature		°C	0 - 50
Rail mounting possible			No
Wall mounting/direct mounting			No
Suitable for safety functions			No
Width of the front		mm	196
Height of the front		mm	135
Built-in depth		mm	43.1