DATASHEET - XV-303-70-BE2-A00-1C

Control panel with PLC as SWD coordinator, 24 VDC, 7 Inches PCT-Display, 1024x600, 1xEthernet, 1xRS232, 1xRS485, 1xCAN,1xSWD, 1xProfibus

Powering Business Worldwide

Part no.	**XV-303-70-BE2-A00-1C**
	179657
EL Number (Norway)	**4501322**

Product name	Eaton XV-303 Touch panel
Part no.	XV-303-70-BE2-A00-1C
EAN	7640130098626
Product Length/Depth	196 millimetre
Product height	51 millimetre
Product width	135 millimetre
Product weight	0.84 kilogram
Certifications	EN 50178 EMC according to 2014/30/EU Certified by UL for use in Canada CUL DNV GL UL CE UL 61010-2-201 UL File No.: E205091 IEC/EN 61131-2
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 Heat dissipation with power consumption for 24 V License certificates for onboard interfaces not required Optionally with SD card -> article no. 181638 PLC license inclusive
Enclosure material	Insulated material
Features	RS485 Fanless CPU and system cooling, natural convection-based passive cooling Ethernet interface Slot for SD card USB Host Portrait format Target and web visualization Operating System Windows Embedded Compact 7 pro USB device RS232 Integrated Runtime visualization software license CAN Overload proof
Fitted with:	1 x CANopen®/easyNet (built-in interfaces) 1 x USB host 2.0 (built-in interface) Message indication 1 x PROFIBUS/MPI (built-in interface) 1 x SmartWire-DT (built-in interface) Message system (incl. buffer and confirmation) Printer output 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x RS485 (built-in interface) Recipes 1 x RS232 (built-in interface) MPI interface SW interfaces 1 x USB device (built-in interface) Color display
Functions	Process value representation (output) possible Process default value (input) possible Additional software components, loadable SmartWire-DT coordination
Battery runtime	Back-up of real-time clock: BR 2330, non-replaceable (soldered)
Degree of protection	NEMA 12 NEMA 4X IP20, rear (according to EN 60529-1)

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 - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting - Inclination from vertical: ±45° (if using natural convection) Flush mounting
Potential isolation	Supply voltage UAUX: no Power supply: no Between UPow and 15 V SmartWire-DT supply voltage: no
Protection against polarity reversal	Yes, for supply voltage (Siemens MPI optional) Yes
Product category	SmartWire-DT coordinators
Repetition rate	1 s
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Short-circuit protection	Yes, Short-circuit rating, SmartWire-DT supply voltage No, external fuse FAZ Z3, Supply voltage UAux
Software	XSOFT-CODESYS-2, PLC-Programming software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering GALILEO, Visualisation software, Engineering XSOFT-CODESYS, Visualisation software, Engineering
Terminal capacity	0.25 - 1.5 mm^2, flexible with ferrule 24 - 16 AWG, solid or stranded 0.2 - 1.5 mm^2, solid
Type	Control panel with PLC as a SmartWire-DT coordinator and PROFIBUS
Voltage type	DC
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
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	Cold to EN 60068-2-1 Damp heat, constant, to IEC 60068-2-3 Dry heat to IEC 60068-2-2
Environmental conditions	Condensation: Non-condensing
Operating temperature - min	0 °C
Operating temperature - max	50 °C
Relative humidity	10 - 95 % (non-condensing)
Emitted interference	According to IEC/EN 61000-6-4
Interference immunity	According to EN 61000-6-2
Voltage dips	5 ms from undervoltage (19.2 V DC) ≤ 10 ms, Bridging voltage dips ≤ 10 ms from rated voltage (24 V DC)
Inrush current	12.5 A (for 6 ms)
Permissible voltage	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 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %)
Power consumption	14 W typ. Max. 14.4 W
Rated control supply voltage	24 V DC (UPOW, -15 %/+20 %) 24 V DC (UAUX, -15 %/+20 %)
Rated operational current (Ie)	0.7 A
Rated operational voltage	Typically UAUX -0.2 V (for 24 V DC slaves) 14.5 V (± 3 % - SmartWire-DT) 24 V DC (power-supply - safety extra low voltage)

Supply current	If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used; SmartWire-DT supply 3 A, Imax, Supply voltage UAux If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used, Supply voltage UAux 0.7 A, Imax, SmartWire-DT supply
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
Addressing	Address set automatically
Communication interface	SmartWire-DT master PROFIBUS-DP, not galvanically isolated, 9 pole SUB-D socket, UNC
Connection	SmartWire-DT blade terminal SWD4-8MF2
Connection to SmartWire-DT	Yes
Connection type	Push in terminals, Supply voltage SWD: Plug, 8-pole
Data transfer rate	250 kBit/s, SmartWire-DT 125 kBit/s, SmartWire-DT
Interfaces	USB 2.0 device (not galvanically isolated) USB 2.0 host (not galvanically isolated) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) 10/100 Mbps Ethernet connection RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) CAN (not galvanically isolated, 9-pin SUB-D plug, UNC)
LED indicator	Status indication of SmartWire-DT master: Green and red LEDs Status indication of SmartWire-DT network: Configurable green or red LED Status indication of Supply voltage: LED
Number of slots	1 (for SD-Card)
Number of SmartWire-DT slaves	99
Protocol	TCP/IP MODBUS PROFIBUS EtherNet/IP Other bus systems CAN
Station	SmartWire-DT master, SmartWire-DT network
Display contrast ratio	850:1
Display lighting	LED Dimmable via software
Display size	153.6 x 90.0 mm 16:9
Display type	Anti-glare tempered glass in plastic bezel TFT Color display, TFT, anti-glare
Luminance intensity	400 cd/m^2
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)
Backup time	10 years, typ. (time at zero voltage)
Memory	Flash: 1 GByte SLC SD card, Type: SDSC, SDHC (external memory) NVRAM: 128kByte Retain DRAM: 512 MByte RAM
Memory capacity	512,000 kByte
Operating system	Windows Embedded Compact 7 Pro
Processor	ARM Cortex-A9 800 MHz
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		3
With SW interfaces		Yes
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		Yes
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		16,777,216
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	7
Number of pixels, horizontal		1,024
Number of pixels, vertical		600
Useful project memory/user memory	kByte	512,000
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