DATASHEET - XV-303-10-B00-A00-1B

Control panel, 24VDC, 10 Inches PCT-Display, 1024x600 pixels, 1xEthernet, 1xRS232, 1xRS485, 1xCAN, 1xSD card slot, PLC function can be fitted by user

Part no.	**XV-303-10-B00-A00-1B**
Catalog No.	**179659**
Alternate Catalog No.	**XV-303-10-B00-A00-1B**

Similar to illustration

Delivery program

Product range		XV300 10.1"
Product range		XV-303
Function		HMI-PLC (SPS function, retrofittable)
Description		Control panel
Common features of the model series		Ethernet interface CAN USB device USB Host RS232 RS485 Slot for SD card Operating System Windows Embedded Compact 7 pro Integrated Runtime visualization software license
Display - Type		Color display, TFT, anti-glare
Touch-technology		Capacitive multi-touch technology (PCT)
Number of colours		16777216 (Color depth 24 bit)
Resolution	Pixel	WSVGA 1024 x 600
Portrait format		yes
Screen diagonal	Inch	10.1 widescreen
Model		Plastic enclosure and glass panel in plastic frame
Operating system		Windows Embedded Compact 7 Pro
PLC-licence		Can be fitted by user with article no. 181585 LIC-PLC-A
License certificates for onboard interfaces		Not required
built-in interfaces		1 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x USB host 2.0 1 x USB device 1 x CANopen®/easyNet
Front type		Anti-glare tempered glass in plastic bezel
Utilization		Flush mounting
Slots		for SD card: 1
Memory card automation		Optionally with SD card -> article no. 181638
Pluggable communication cards (optional)		no
Touch sensor		Multi-touch touch panel
Heat dissipation	W	18

Technical data
Display

Display - Type		Color display, TFT, anti-glare
Screen diagonal	Inch	10.1 widescreen
Resolution	Pixel	WSVGA 1024 x 600
Visible screen area	mm	222.72 x 125.28
Format		16:9
Number of colours		16777216 (Color depth 24 bit)
Contrast ratio (Normally)		Normally 500:1

Brightness		cd/m^2	Normally 400
Back-lighting			LED dimmable via software
Service life of back-lighting		h	Normally 50000

Operation

Technology			Projected Capacitive Touch (PCT)
Touch sensor			Multi-touch touch panel

System

Processor			ARM Cortex-A9 800 MHz
Internal memory			DRAM: 512 MB RAM Flash: 1GB SLC NVRAM: 128kB Retain
External memory			SD card, Type: SDSC, SDHC
Cooling			Fanless CPU and system cooling, natural convection-based passive cooling
Back-up of real-time clock			
Battery (service life)			non-replaceable, BR2330 soldered in
Backup (time at zero voltage)			Normally 10 years

Engineering

Visualisation software			GALILEO XSOFT-CODESYS
PLC-Programming software			XSOFT-CODESYS-2 XSOFT-CODESYS-3
Target and web visualization			Yes
PLC-licence			Can be fitted by user with article no. 181585 LIC-PLC-A
Operating system			Windows Embedded Compact 7 Pro

Interfaces, communication

built-in interfaces			1 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x USB host 2.0 1 x USB device 1 x CANopen®/easyNet
USB Host			USB 2.0, not galvanically isolated
USB device			USB 2.0, not galvanically isolated
RS-232			Not galvanically isolated, 9-pin D-sub plug, UNC
RS-485			Not galvanically isolated, 9-pin D-sub plug, UNC
CAN			Not galvanically isolated, 9-pin D-sub plug, UNC
Slots			for SD card: 1
Ethernet			10/100 Mbps
MPI			no

Power supply

Nominal voltage			24 V DC SELV (safety extra low voltage)
permissible voltage			Effective: 19.2-30.0 V DC (rated operating voltage -20%/+25%) Absolute with ripple: 18,0-31,2 V DC Battery powered: 18,0-31,2 V DC (rated operating voltage -25%/+30%) 35 V DC for a duration of < 100 ms
Voltage dips		ms	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Power consumption	P$_{max.}$	W	18
Power consumption		W	Normally 18
Heat dissipation		W	18
Note on heat dissipation			Heat dissipation with power consumption for 24 V 12 W for basic device + 2.5 W for USB module
Protection against polarity reversal			yes
Type of fuse			Yes (fuse not accessible)
Potential isolation			no

General

Housing material			Insulated material black
Front type			Anti-glare tempered glass in plastic bezel
Dimensions (W x H x D)		mm	269 x 174 x 58
flush mounted			Clearance: W x H x D ≥ 30 mm (1.18") Inclination from vertical: ±45° (if using natural convection)
Weight		kg	1.13

Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1) NEMA 4X NEMA12 (as per NEMA 250-2003)
Approvals			
Approvals			cUL 61010-2-201
shipping classification			DNV GL
Applied standards and directives			
EMC			2004/108/EEC
Emitted interference			IEC/EN 61000-6-4
Interference immunity			IEC/EN 61000-6-2
Product standards			EN50178/IEC/EN 61131-2
Mechanical shock resistance		g	15g / 11ms
Vibration			5...9 Hz +- 3.5 mm 9...60 Hz +- 0.15 mm 60…150 Hz ± 2 g
Free fall, packaged		m	IEC/EN 60068-2-31
RoHS			conform

Environmental conditions

Climatic environmental conditions			
Climatic proofing			Cold to EN 60068-2-1 Dry heat to IEC 60068-2-2 Damp heat as per EN 60068-2-3
Air pressure (operation)		hPa	795 - 1080
Temperature			
Storage / Transport	ϑ	°C	-20 - +60
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	+ 50
Relative humidity			
Condensation			Non-condensing
Relative humidity			10 - 95%, non-condensing

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	18
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	50
Degree of Protection			IP65 (in the front as per EN 60529-1), IP20 (on rear as per EN 60529-1) NEMA 4X
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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.

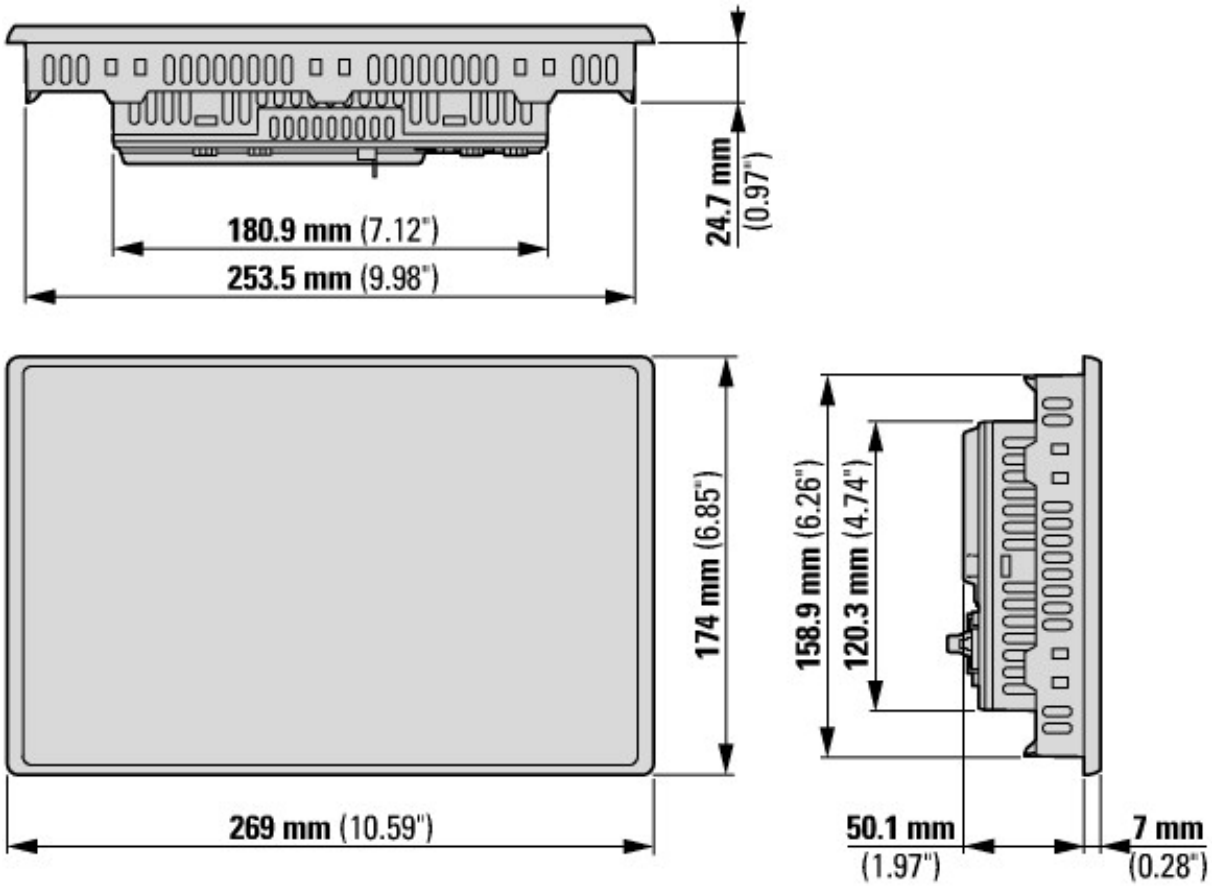|		
10.3 Degree of protection of ASSEMBLIES		Meets the product standard's requirements.
10.4 Clearances and creepage distances		Meets the product standard's requirements.
10.5 Protection against electric shock		Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching 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 Insulation properties		
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 7.0

PLC's (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 WLAN 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			16777.216
Number of grey-scales/blue-scales of display			0
Screen diagonal		inch	10.1
Number of pixels, horizontal			1.024
Number of pixels, vertical			600
Useful project memory/user memory		kByte	512
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
Operation temperature		°C	0 - 50
Rail mounting possible			No
Wall mounting/direct mounting			No
Suitable for safety functions			No
Width of the front		mm	269
Height of the front		mm	174
Built-in depth		mm	50.1

Approvals

Product Standards			UL 61010-2-201; IEC/EN 61131-2; CE
UL File No.			E205091
North America Certification			UL listed, certified by UL for use in Canada
Specially designed for North America			No
Current Limiting Circuit-Breaker			No
Degree of Protection			IEC: IP65, NA: NEMA4X, NEMA12

Dimensions

180.9 mm (7.12")
253.5 mm (9.98")
24.7 mm (0.97")

174 mm (6.85")
269 mm (10.59")

158.9 mm (6.26")
120.3 mm (4.74")
50.1 mm (1.97")
7 mm (0.28")

XV-303-... multi-touch panel with 10.1" screen diagonal; version: flush mounting
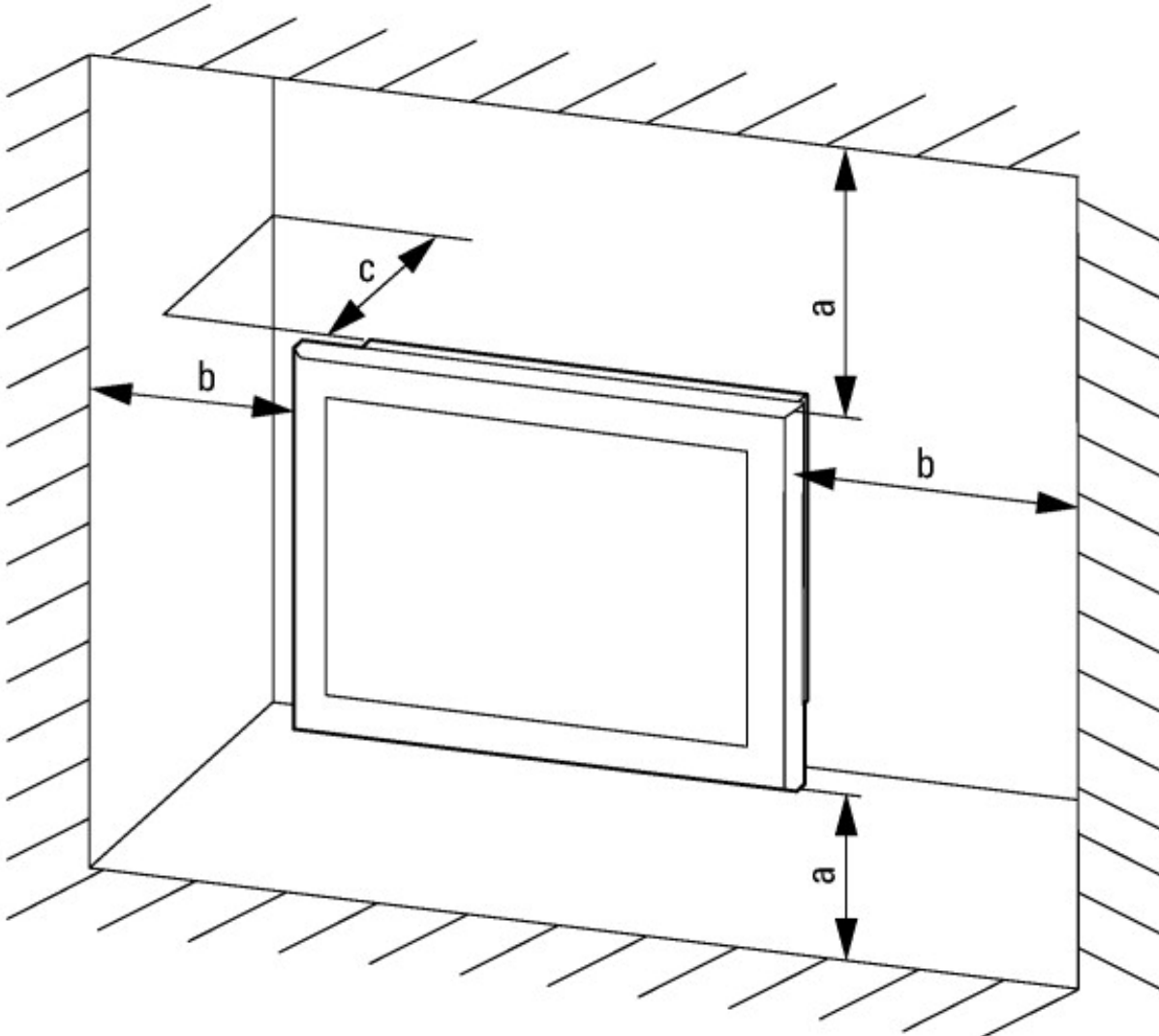
a, b, c ≧ 30 mm, ϑ 0 ≦ T ≦ 50 °C
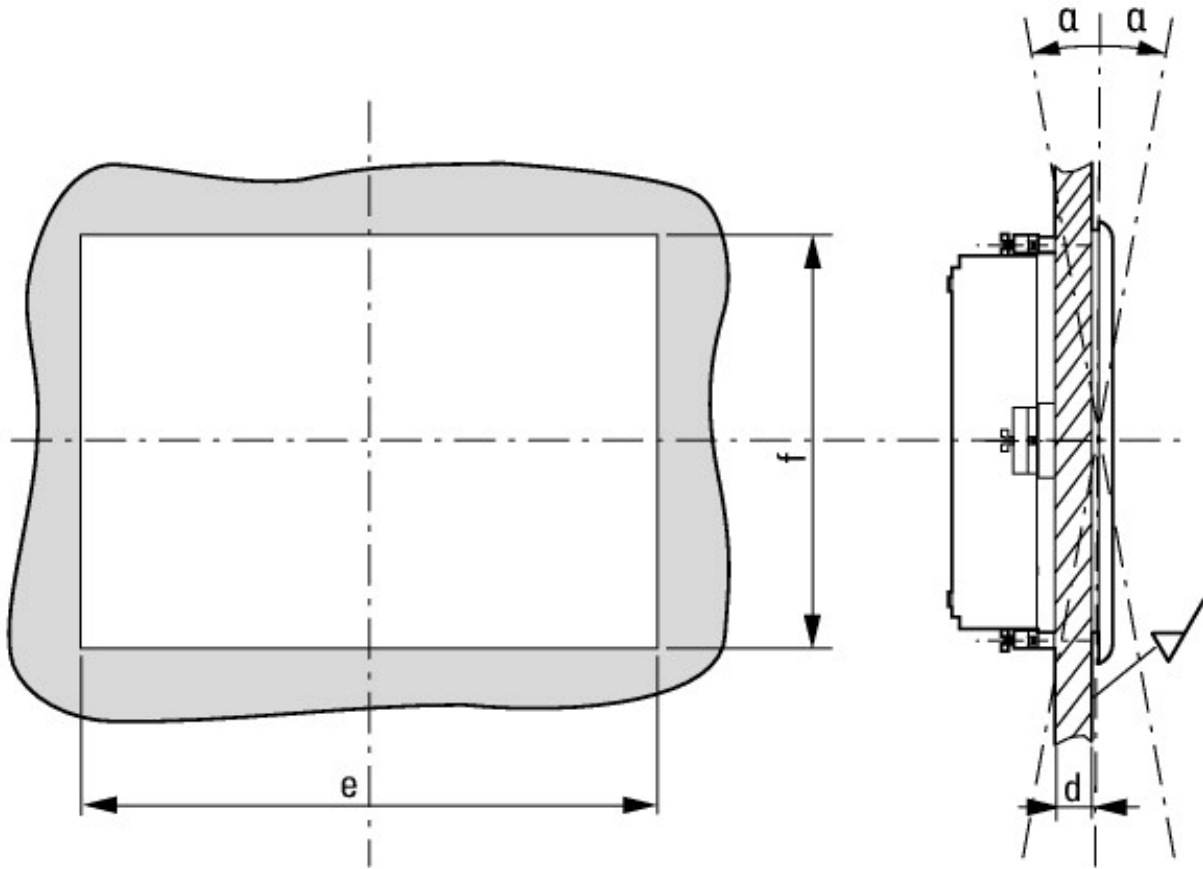
2 mm ≦ d ≦ 5 mm, e = 255.5 mm , f = 160.5 mm, # = 45°