#### DATASHEET - XV-303-10-C02-A00-1B



User interface, 24VDC, 10.1-inch PCT display,1024x600 pixels,2xEthernet,1xRS232, 1xRS485, 1xCAN, 1xProfibus, 1xSD card slot, PLC function can be added



Part no.XV-303-10-C02-A00-1BCatalog No.179664Alternate CatalogXV-303-10-C02-A00-1BNo.No.

### **Delivery program**

Product range     K     K       Product range     K     K       Product range     K     K       Description     K     K       Common features of the model series     K     K       Display-Taype     K     Control parel with PROFIBUS and 2nd Ethernet port       Display-Taype     K     Control parel with PROFIBUS and 2nd Ethernet port       Display-Taype     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Touch technology     K     Control parel with PROFIBUS and 2nd Ethernet port       Resolution     K     K     K       Resolution     K     K				
Function         MH-PLC [SPS function, retrofittable]           Description         Control panel with PROFIBUS and 2nd Ethemet port           Common features of the model series         Series of the model series           Display - Typo         Ethematiniterface           Display - Typo         Control panel with PROFIBUS and 2nd Ethemet port           Display - Typo         Ethematiniterface           Touch-technology         Control panel with PROFIBUS and 2nd Ethemet port           Number of colours         Ethematiniterface           Resolution         Yes           Number of colours         Yes           Resolution         Yes           Note of colours         Yes           Resolution         Yes           Resolution <td>-</td> <td></td> <td></td> <td></td>	-			
Description         Control panel with PROFIBUS and 2nd Ethernet port           Common features of the model series         Figure 1 and 2 and	Product range		>	XV-303
Common features of the model series     Image: Provide serie	Function		ł	HMI-PLC (SPS function, retrofittable)
Initial State Sta	Description		(	Control panel with PROFIBUS and 2nd Ethernet port
Tuch-technology       Capacitive multi-touch technology (PCT)         Number of colours       Fixed       Fixed       Fixed       Fixed       WSVGA         Resolution       Pixed       WSVGA       VSVGA         Portrait format       Pixed       WSVGA         Screen diagonal       Pixed       Plastic enclosure and glass panel in plastic frame         Model       Pixed       Plastic enclosure and glass panel in plastic frame         PLC-licence       Windows Embedded Compact 7 Pro         License certificates for onboard interfaces       Volter quired         built-in interfaces       Not required         Visit Sin St.20       Not required         Visit Sin	Common features of the model series		(   	CAN USB device USB Host RS232 RS485 Slot for SD card Operating System Windows Embedded Compact 7 pro
Number of colours         Image:				
Resolution       Field       WSVGA 1024 × 600         Potrait format       yes         Screen diagonal       Inch       10.1         Model       Pasic enclosure and glass panel in plastic frame       Plastic enclosure and glass panel in plastic frame         Operating system       Model       Windows Embedded Compact 7 Pro         PLC-licence       Motel filted by user with article no. 181585 LIC-PLC-A         License certificates for onboard interfaces       Not required         builtin interfaces       Xe Ethernent 10/100 Mbps         Stress Passes       Arti-glare tempered glass in plastic bazel         Vilization       Ye Stress Passes         Volization       Ye Stress Passes	Touch-technology		(	Capacitive multi-touch technology (PCT)
IndexIndexIndexIndexPortait formatIndexysScreen diagonalIndexIndexModelIndexPastic enclosure and glass panel in plastic frameOperating systemIndexIndex to scheded Compect 7 ProPLC-licenceIndexIndex to scheded Compect 7 ProLicense certificates for onboard interfacesIndexIndex to scheded Compect 7 Probuilt-in interfacesIndex to scheded Compect 7 Probuilt-interfacesIndex to scheded 7 Pro	Number of colours		1	16777216 (Color depth 24 bit)
Screen diagonal       Inch	Resolution	Pix		
IndexWidescreenModelPlastic enclosure and glass panel in plastic frameOperating systemVindows Embedded Compact 7 ProPLC-licenceCan be fitted by user with article no. 181585 LIC-PLC-ALicense certificates for onboard interfacesModelbuilt-in interfacesVindows Embedded Compact 7 Probuilt-in interfacesVindows Embedded ScienceFont typeVindows Embedded ScienceFont ty	Portrait format		3	yes
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         2 x Ethernet 10/100 Mbps 1 x R5232 x R5488 1 x CANopen®/eesyNet 1 x USB host 2.0 1 x PROFIBUS/MPI           Front type         Anti-glare tempered glass in plastic bezel           Utilization         Fush mounting           Stos         For SD card: 1           Memory card automation         For SD card: 2           Pluggable communication cards (optional)         Get	Screen diagonal	Inc		
PLC-licence       Can be fitted by user with article no. 181585 LIC-PLC-A         License certificates for onboard interfaces       Not required         built-in interfaces       Z × Ethernet 10/100 Mbps 1 × R5232 1 × R5232 1 × R5232 1 × R5485 1 × CANopen®/easyNet 1 × USB host 2.0 1 × U	Model		F	Plastic enclosure and glass panel in plastic frame
License certificates for onboard interfaces       Not required         built-in interfaces       Vot required         built-in interfaces       2 × thernet 10/100 Mbps 1 × RS232         built-in interfaces       2 × thernet 10/100 Mbps 1 × RS232         Front type       Ant-glare tempered glass in plastic bezel         Utilization       Forst YPOFIBUS/MPI         Slots       Forst Scard: 1         Memory card automation       Forst Scard: 1         Pluggable communication cards (optional)       Forst Scard: 1         Tuch sensor       Mot required	Operating system		١	Windows Embedded Compact 7 Pro
built-in interfaces2 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x CANopen®/easyNet 1 x USB host 2.0 1 x DS HOST 2.0 1 x DS HOST 2.0 1 x DS HOST 2.0 1 x USB host 2.0 1 x DS HOST 2.0 1 x DS HOST 2.0 1 x DS HOST 2.0 1 x USB host 2.0 1 x DS HOST 2	PLC-licence		(	Can be fitted by user with article no. 181585 LIC-PLC-A
I x RS2321 x RS2321 x RS4851 x RS4851 x USB host 20Front typeUtilizationSlotsMemory card automationPluggable communication cards (optional)Touch sensorMemory card automationPluggable communication cards (optional)Touch sensorMemory card automationPluggable communication cards (optional)Touch sensorMemory card automationMemory card automationMemory card automationMemory card automation cards (optional)Memory card automationMemory card automation cards (optional)Memory card automationMemory card automationMemory card automation cards (optional)Memory card automationMemory card automationMemory card automation cards (optional)Memory card automationMemory card automation cards (optional)Memory card automationMemory card automation cards (optional)Memory card automation cards (optional) <td< td=""><td>License certificates for onboard interfaces</td><td></td><td>1</td><td>Not required</td></td<>	License certificates for onboard interfaces		1	Not required
Utilization     Fush mounting       Stots     for SD card: 1       Memory card automation     for SD card: 2       Pluggable communication cards (optional)     for SD card: 3       Touch sensor     for SD card: 4	built-in interfaces		1 1 1 1 1	1 x RS232 1 x RS485 1 x CANopen®/easyNet 1 x USB host 2.0 1 x USB device
Slots     For SD card: 1       Memory card automation     For SD card: 1       Pluggable communication cards (optional)     For SD card: 1       Touch sensor     For SD card: 1	Front type		ļ	Anti-glare tempered glass in plastic bezel
Memory card automation     Optionally with SD card -> article no. 181638       Pluggable communication cards (optional)     no       Touch sensor     Multi-touch touch panel	Utilization		F	Flush mounting
Pluggable communication cards (optional)     Image: Communication cards (optional)     Image: Communication cards (optional)       Touch sensor     Image: Communication cards (optional)     Image: Communication cards (optional)	Slots		f	for SD card: 1
Touch sensor Multi-touch touch panel	Memory card automation		(	Optionally with SD card -> article no. 181638
	Pluggable communication cards (optional)		r	no
Heat dissipation W 18	Touch sensor		r	Multi-touch touch panel
	Heat dissipation	W	1	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 <sup>2</sup>	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			2 x Ethernet 10/100 Mbps 1 x RS232 1 x RS485 1 x CANopen®/easyNet 1 x USB host 2.0 1 x USB device 1 x PROFIBUS/MPI
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
Profibus			PROFIBUS-DP, not galvanically isolated, 9 pole SUB-D socket, UNC
			for SD card: 1
Slots			
Ethernet			10/100 Mbps
MPI			Yes
Power supply			
Nominal voltage permissible voltage			24 V DC SELV (safety extra low 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 <sub>max.</sub>	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
			ARITIME
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			59 Hz +- 3.5 mm 960 Hz +- 0.15 mm 60150 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	9	°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			
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	18
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)

ectric engineering, automation, process control engineering / Display and contr	rol component / Panel (I	HMI) / Graphic panel (HMI) (ecl@ss10.0.1-27-33-02-01 [AFX016003	3])
upply voltage AC 50 Hz	V	0 - 0	
upply voltage AC 60 Hz	V	0 - 0	
upply voltage DC	V	19.2 - 30	
oltage type of supply voltage		DC	
umber of HW-interfaces industrial Ethernet		2	
umber of interfaces PROFINET		0	
umber of HW-interfaces RS-232		1	
umber of HW-interfaces RS-422		0	
umber of HW-interfaces RS-485		1	
umber of HW-interfaces serial TTY		0	
umber of HW-interfaces USB		2	
umber of HW-interfaces parallel		0	
umber of HW-interfaces Wireless		0	
umber of HW-interfaces other		2	
/ith SW interfaces		Yes	
upporting protocol for TCP/IP		Yes	
upporting protocol for PROFIBUS		Yes	
upporting protocol for CAN		Yes	
upporting protocol for INTERBUS		No	
upporting protocol for ASI		No	
upporting protocol for KNX		No	
upporting protocol for MODBUS		Yes	
upporting protocol for Data-Highway		No	
upporting protocol for DeviceNet		No	
upporting protocol for SUCONET		No	
upporting protocol for LON		No	
upporting protocol for PROFINET IO		No	
upporting protocol for PROFINET CBA		No	
upporting protocol for SERCOS		No	
upporting protocol for Foundation Fieldbus		No	
upporting protocol for EtherNet/IP		Yes	
upporting protocol for AS-Interface Safety at Work		No	
upporting protocol for DeviceNet Safety		No	
upporting protocol for INTERBUS-Safety		No	
upporting protocol for PROFIsafe		No	
upporting protocol for SafetyBUS p		No	
upporting protocol for other bus systems		No	
adio standard Bluetooth		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	10.1
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
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**



