DATASHEET - XV-102-A3-35MQR-10

Touch panel, 24 V DC, 3.5z, TFTmono, ethernet, RS232

Part no.	**XV-102-A3-35MQR-10**
Catalog No.	**141821**
EL-Nummer (Norway)	**0004560861**

Powering Business Worldwide

Delivery program

Product range			XV100 3.5"
Product range			XV-102
Function			HMI
Common features of the model series			Ethernet interface USB device Slot for SD card UL508, cUL approvals
Display - Type			B/W display, TFT
Touch-technology			Resistive-Touch
Number of colours			32 grey levels
Resolution		Pixel	QVGA 320 x 240
Portrait format			yes
Screen diagonal		Inch	3.5
Model			Insulating enclosure and front plate
Operating system			Windows CE 5.0 (licence incl.)
PLC-licence			no PLC function possible
License certificates for onboard interfaces			Can be expanded as required, see Accessories -> License product certificates
built-in interfaces			1 x Ethernet 10/100 Mbps 1 x USB device 1 x RS232
Front type			Standard front with standard membrane (fully enclosed)
Utilization			Flush mounting
Slots			for SD card: 1
Memory card automation			Optionally with SD card -> article no. 139807
Pluggable communication cards (optional)			no
Heat dissipation		W	5

Technical data

Display

Display - Type			B/W display, TFT
Screen diagonal		Inch	3.5
Resolution		Pixel	QVGA 320 x 240
Visible screen area		mm	70 x 53
Number of colours			32 grey levels
Contrast ratio (Normally)			Normally 300:1
Brightness		cd/m^2	Normally 250
Back-lighting			LED dimmable via software
Service life of back-lighting		h	Normally 40000
Resistive touch protective screen			Touch sensor (glass with foil)

Operation

Technology			Resistive-Touch 4 wire

System

Processor			RISC CPU, 32 Bit, 400 MHz
Internal memory			DRAM (OS, Program and data memory): 64 MByte NAND-Flash (can be used for data backup): approx. 128 MByte available
External memory			SD Memory Card Slot: SDA Specification 1.00
Back-up of real-time clock			

Battery (service life)			non-replaceable, CR2032 soldered in
Backup (time at zero voltage)			Normally 10 years

Engineering

Visualisation software			GALILEO/EPAM
PLC-licence			no PLC function possible
Operating system			Windows CE 5.0 (licence incl.)

Interfaces, communication

built-in interfaces			1 x Ethernet 10/100 Mbps 1 x USB device 1 x RS232
USB device			USB 2.0, not galvanically isolated
RS-232			RS-232, not galvanically isolated (SUB-D plug 9 pole, UNC)
Slots			for SD card: 1
Ethernet			100Base-TX/10Base-T

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	5
Heat dissipation		W	5
Note on heat dissipation			Heat dissipation with power consumption for 24 V, all ports and interfaces connected
Protection against polarity reversal			yes
Type of fuse			Yes (fuse not accessible)
Potential isolation			no potential isolation

General

Housing material			Plastic, gray
Front type			Standard front with standard membrane (fully enclosed)
Weight		kg	0.3
Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (at front), IP20 (at rear)
Approvals			
Approvals			cUL (UL508) EAC
Explosion protection (according to ATEX 94/9/EC)			II 3D Ex II T70°C IP5x: Zone 22, Category 3D
Applied standards and directives			
EMC			(in relation to CE) EN 61000-6-2 EN 61000-6-4 EN 61131-2
Explosion protection (relevant for CE)			EN 60079-0 EN 61241-1 EN 13463_x
Product standards			EN 50178 EN 61131-2
Security			EN 60950 UL 60950
Mechanical shock resistance		g	according to IEC 60068-2-27
Vibration			according to IEC/EN 60068-2-6

Environmental conditions

Climatic environmental conditions			
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			
Relative humidity			10 - 95%, non-condensing

Supply voltage U_{Aux}

Rated operational voltage	U_{Aux}	V	24 V DC (-20/+25%)

Protection against polarity reversal			Yes
Potential isolation			No

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	5
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	50
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	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			0
Number of HW-interfaces serial TTY			0
Number of HW-interfaces USB			1
Number of HW-interfaces parallel			0
Number of HW-interfaces Wireless			0

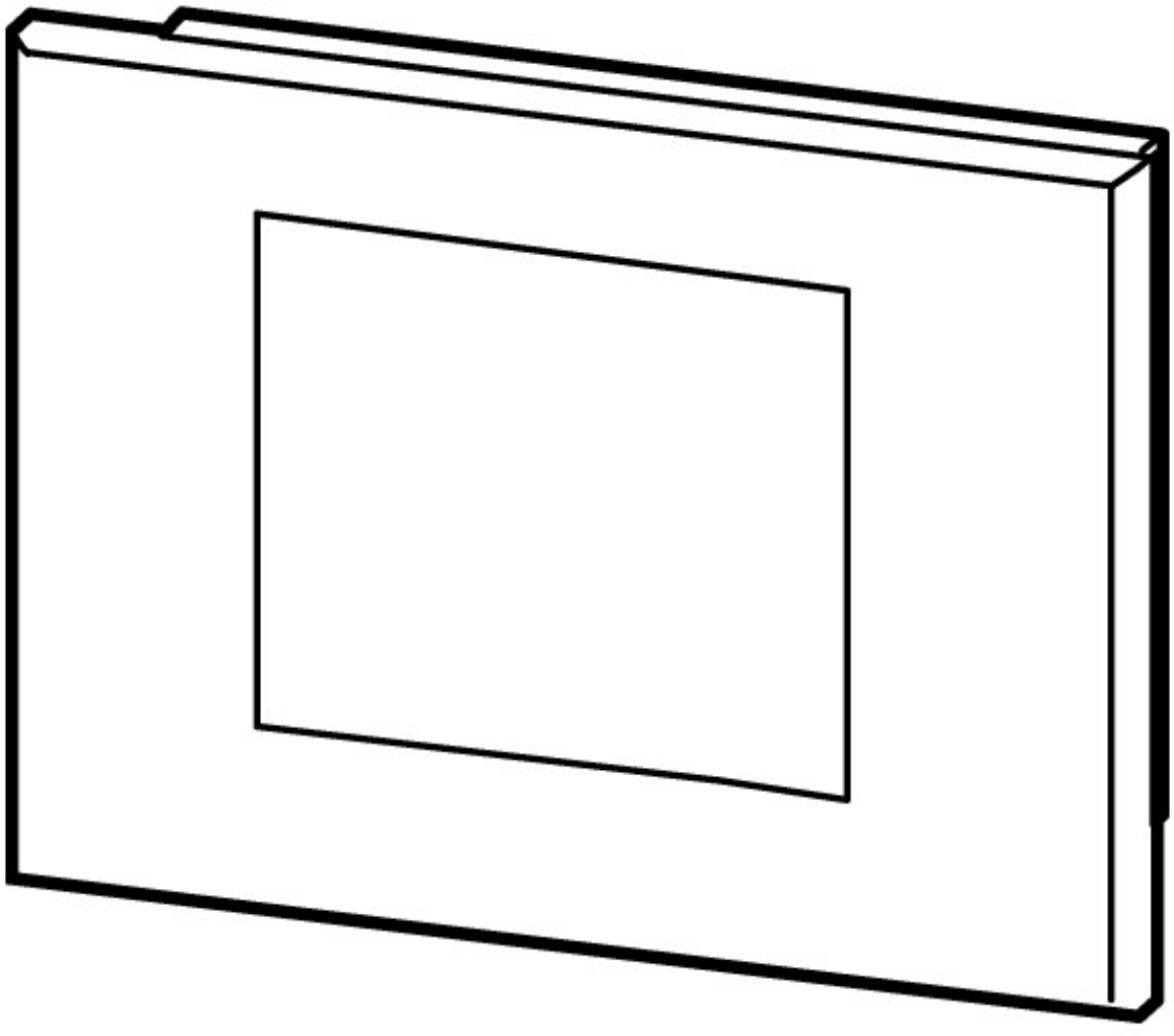
Number of HW-interfaces other		0
With SW interfaces		Yes
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for MODBUS		Yes
Supporting 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		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		No
Number of colours of the display		32
Number of grey-scales/blue-scales of display		32
Screen diagonal	inch	3.5
Number of pixels, horizontal		320
Number of pixels, vertical		240
Useful project memory/user memory	kByte	64000
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

Operation temperature	°C	0 - 50
Rail mounting possible		No
Wall mounting/direct mounting		No
Suitable for safety functions		No
Width of the front	mm	136
Height of the front	mm	100
Built-in depth	mm	25

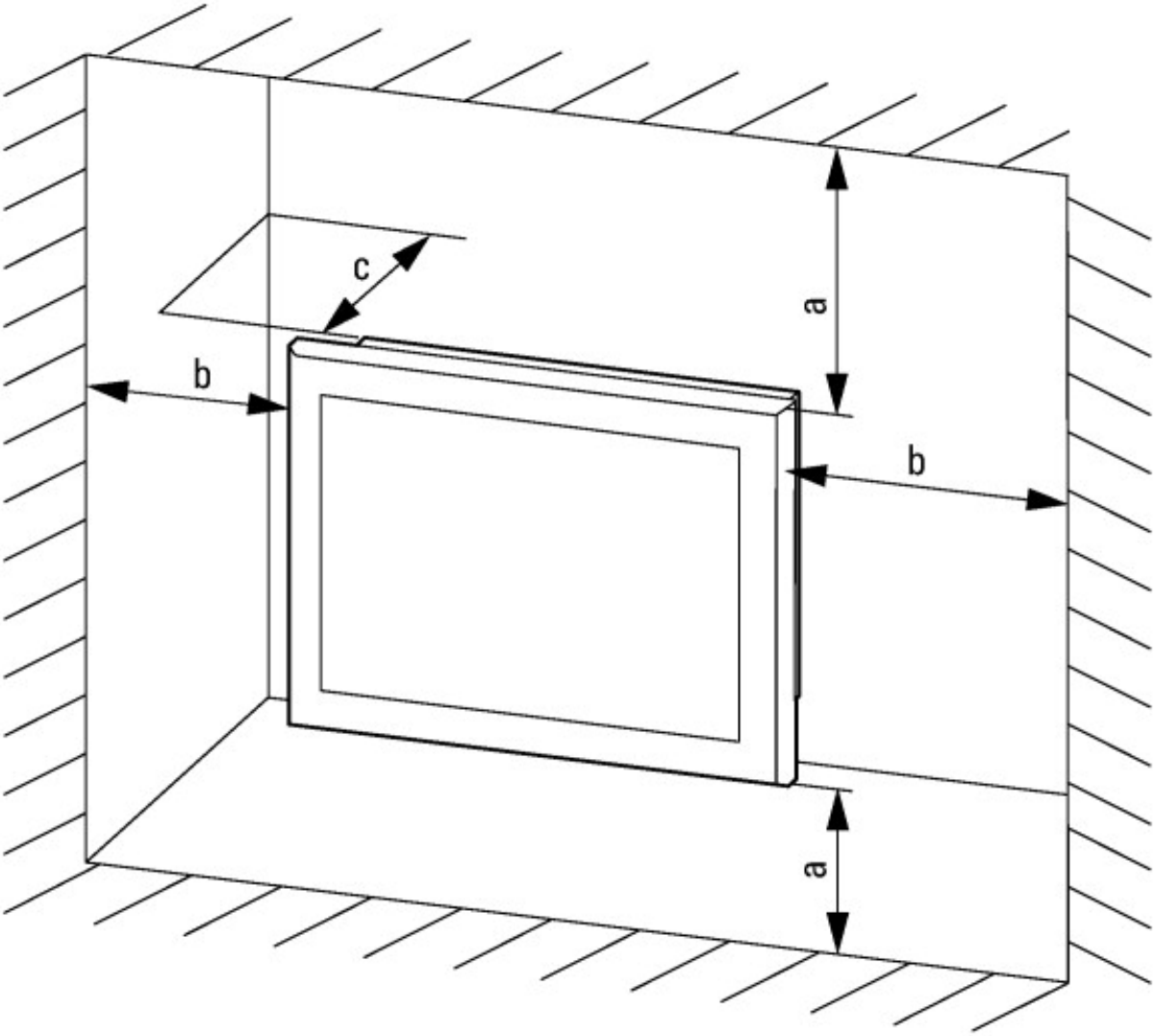
Approvals

Product Standards		UL 60950-01; CSA-C22.2 No. 60950-1; IEC/EN 61131-2; CE marking
UL File No.		E208621
UL Category Control No.		NWGQ2
CSA File No.		UL report applies to both US and Canada
CSA Class No.		NWGQ8
North America Certification		UL recognized, certified by UL for use in Canada
Conditions of Acceptability		The investigated Pollution Degree is: 2 The following end-product enclosures are required: Fire The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks.
Specially designed for North America		No
Current Limiting Circuit-Breaker		No
Degree of Protection		IEC: IP65, UL/CSA Type: -

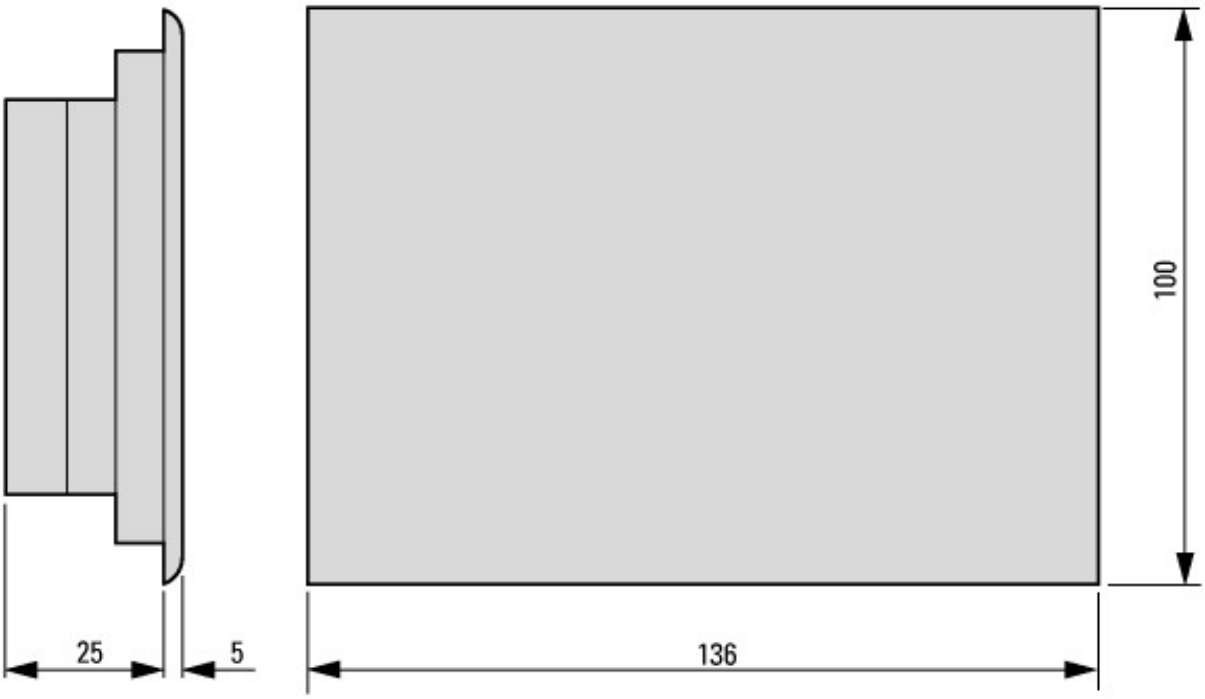
Dimensions



a1 = 5.35" (136 mm); a2 = 4.73" (121 mm); b1 = 3.94" (100 mm); b2 = 3.35" (85 mm); c1 = 1.18" (30 mm); c2 = 0.98" (25 mm)
SmartWire-DT HMI-PLC



a, b, c ≧ 30 mm, ϑ 0 ≦ T ≦ 50 °C



Dimensions

Additional product information (links)

Instruction leaflet IL048007ZU XV-102	
Instruction leaflet IL048007ZU XV-102	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL048007ZU2018_02.pdf
f1=1454&f2=1242&f3=1773;Download Software GALILEO	http://applications.eaton.eu/sdlc?LX=11&amp

Produktübersicht (WEB)	http://www.eaton.eu/xv