DATASHEET - XV-102-B5-35MQR-10-PLC

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

Part no.	**XV-102-B5-35MQR-10-PLC**
	140015
EL Number (Norway)	**4560833**

Product name	Eaton XV-102 Touch panel
Part no.	XV-102-B5-35MQR-10-PLC
EAN	7640130095717
Product Length/Depth	136 millimetre
Product height	30 millimetre
Product width	100 millimetre
Product weight	0.275 kilogram
Certifications	Certified by UL for use in Canada UL Category Control No.: NWGQ2 UL 60950-01 EN 60950 CUL508 UL Recognized CE UL 60950 IEC/EN 61131-2 DNV GL UL File No.: E208621 IEC/EN 61000-6-4 IEC/EN 61000-6-2 CSA-C22.2 No. 60950-1 EN 50178 UL report applies to both US and Canada CSA Class No.: NWGQ8 EAC
Product Tradename	XV-102
Product Type	Touch panel
Product Sub Type	None
Catalog Notes	4-wire Technology Can be expanded as required, see Accessories Heat dissipation with power consumption for 24 V, all ports and interfaces connected Optionally with SD card -> article no. 139807 PLC license inclusive
Enclosure material	Plastic
Features	Fanless CPU and system cooling, natural convection-based passive cooling Slot for SD card Ethernet interface USB device UL508, cUL approvals Portrait format
Fitted with:	1 x USB device (built-in interface) 1 x RS232 (built-in interface) SW interfaces Message system (incl. buffer and confirmation) Recipes Printer output 1 x CANopen®/easyNet (built-in interfaces) 1 x Ethernet 10/100 Mbps (built-in interfaces) Alpha numeric keyboard Numeric keyboard Message indication
Functions	Process value representation (output) possible Process default value (input) possible Additional software components, loadable
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Conditions of acceptability	The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks. The investigated Pollution Degree is: 2 UL/CSA The following end-product enclosures are required: Fire
Degree of protection	IP65 IP20, rear

Degree of protection (front side)	IP65 NEMA 4X
Fuse type	Built-in fuse (not accessible)
Lifespan	40,000 h (Service life of back-lighting)
Model	Insulating enclosure and front plate
Mounting method	Flush mounting - Inclination from vertical: ±45° (if using natural convection) Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting
Product category	HMI-PLC (integrated SPS function)
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Software	XSOFT-CODESYS-2, Visualisation software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering GALILEO, Visualisation software, Engineering XSOFT-CODESYS-3, Visualisation software, Engineering
Voltage type	DC
Shock resistance	Mechanical, According to IEC/EN 60068-2-27
Vibration resistance	According to IEC/EN 60068-2-6
Air pressure	795 - 1080 hPa (operation)
Ambient operating temperature - min	0 °C
Ambient operating temperature - max	50 °C
Operating temperature - min	0 °C
Operating temperature - max	50 °C
Relative humidity	10 - 95 % (non-condensing)
Voltage dips	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Permissible voltage	19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 18.0 - 31.2 V DC, absolute with ripple 35 V DC (for a duration of < 100 ms)
Power consumption	Max. 5 W
Rated control supply voltage	24 V DC (UPOW, -20 %/+25 %) 24 V DC (UAUX, -20 %/+25 %)
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	20.4 V DC
Supply voltage at DC - max	28.8 V DC
Interfaces	USB 2.0 device (not galvanically isolated) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC) Ethernet (100Base-TX/10Base-T) CAN, not galvanically isolated (SUB-D plug 9 pole, UNC)
Number of slots	1 (for SD-Card)
Protocol	TCP/IP Other bus systems CAN EtherNet/IP MODBUS
Display contrast ratio	300:1
Display lighting	LED Dimmable via software
Display size	70 x 53 mm
Display type	TFT B/W display, TFT Standard front with standard membrane (fully enclosed)
Luminance intensity	250 cd/m²
Number of colors of the display	32

Screen size (diagonal)		3.5 in
Touch technology		Resistive touch Touch sensor (glass with foil), Resistive touch protective screen Glass with film touch sensor
Resolution		320 x 240 px QVGA
Explosion safety category for dust		ATEX dust-ex-protection, II 3D Ex II T70°C IP5x: Zone 22, Category 3D ATEX dust-ex-protection, in relation to CE
Potential isolation		Supply voltage UAUX: no Power supply: no
Protection against polarity reversal		Yes Yes, for supply voltage (Siemens MPI optional)
Backup time		10 years, typ. (time at zero voltage)
Memory		32 kByte internal NVRAM (retained data) 64 MByte internal DRAM (OS, Program and data memory) SD Memory Card Slot: SDA Specification 1.00 (External) 128 MByte internal NAND-Flash (can be used for data backup)
Memory capacity		64,000 kByte
Operating system		Windows CE 5.0 (license included)
Processor		RISC CPU, 32 Bit, 400 MHz
Equipment heat dissipation, current-dependent Pvid		5 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		5 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	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		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		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	64,000
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
Operating 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

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