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

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

Part no.	**XV-102-B5-35TQR-10-PLC**
	140021
EL Number (Norway)	**4560836**

Product name	Eaton XV-102 Touch panel
Part no.	XV-102-B5-35TQR-10-PLC
EAN	7640130095700
Product Length/Depth	136 millimetre
Product height	30 millimetre
Product width	100 millimetre
Product weight	0.275 kilogram
Certifications	EN 60950 CUL508 UL report applies to both US and Canada UL 60950 Certified by UL for use in Canada CSA Class No.: NWGQ8 IEC/EN 61131-2 IEC/EN 61000-6-4 DNV GL UL 60950-01 CE UL File No.: E208621 IEC/EN 61000-6-2 UL Recognized EN 50178 CSA-C22.2 No. 60950-1 UL Category Control No.: NWGQ2 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	USB device Fanless CPU and system cooling, natural convection-based passive cooling UL508, cUL approvals Slot for SD card Portrait format Ethernet interface
Fitted with:	Numeric keyboard Printer output Color display Alpha numeric keyboard Message system (incl. buffer and confirmation) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x CANopen®/easyNet (built-in interfaces) Recipes 1 x USB device (built-in interface) 1 x RS232 (built-in interface) SW interfaces Message indication
Functions	Process value representation (output) possible Additional software components, loadable Process default value (input) possible
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Conditions of acceptability	The provided Ethernet Connection is only allowed to connect to inhouse networks. The investigated Pollution Degree is: 2 The following end-product enclosures are required: Fire The unit must be supplied via a SELV source. UL/CSA
Degree of protection	IP20, rear IP65

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 Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")
Product category	HMI-PLC (integrated SPS function)
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Software	XSOFT-CODESYS-2, Visualisation software, Engineering GALILEO, Visualisation software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering XSOFT-CODESYS-3, Visualisation software, Engineering XSOFT-CODESYS-2, PLC-Programming 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
Ambient storage temperature - min	-20 °C
Ambient storage temperature - max	60 °C
Operating temperature - min	0 °C
Operating temperature - max	50 °C
Relative humidity	10 - 95 % (non-condensing)
Voltage dips	5 ms from undervoltage (19.2 V DC) ≤ 10 ms from rated voltage (24 V DC)
Permissible voltage	35 V DC (for a duration of < 100 ms) 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
Power consumption	Max. 5 W
Rated control supply voltage	24 V DC (UAUX, -20 %/+25 %) 24 V DC (UPOW, -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
Communication interface	PROFIBUS galvanically isolated, max. 1.5 MBit/s (SUB-D socket 9 pole, UNC)
Interfaces	Ethernet (100Base-TX/10Base-T) USB 2.0 device (not galvanically isolated) CAN, not galvanically isolated (SUB-D plug 9 pole, UNC) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC)
Number of slots	1 (for SD-Card)
Protocol	EtherNet/IP Other bus systems TCP/IP MODBUS CAN
Display contrast ratio	300:1
Display lighting	Dimmable via software LED
Display size	70 x 53 mm
Display type	TFT Standard front with standard membrane (fully enclosed)

			Color display, TFT
Luminance intensity			250 cd/m²
Number of colors of the display			65536
Screen size (diagonal)			3.5 in
Touch technology			Glass with film touch sensor Touch sensor (glass with foil), Resistive touch protective screen Resistive touch
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			Power supply: no Supply voltage UAUX: no
Protection against polarity reversal			Yes, for supply voltage (Siemens MPI optional) Yes
Backup time			10 years, typ. (time at zero voltage)
Memory			64 MByte internal DRAM (OS, Program and data memory) 32 kByte internal NVRAM (retained data) 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		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		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		65,536
Number of grey-scales/blue-scales of display		0
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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