DATASHEET - XV-102-B6-35TQR-10-PLC

Touch panel, 24 V DC, 3.5z, TFTcolor, ethernet, RS485, CAN, PLC

Part no.	**XV-102-B6-35TQR-10-PLC**
	140022
EL Number (Norway)	**4521108**

Product name	Eaton XV-102 Touch panel
Part no.	XV-102-B6-35TQR-10-PLC
EAN	7640130095687
Product Length/Depth	136 millimetre
Product height	30 millimetre
Product width	100 millimetre
Product weight	0.275 kilogram
Certifications	UL report applies to both US and Canada EN 60950 UL 60950-01 CUL508 DNV GL EN 50178 CSA Class No.: NWGQ8 CSA-C22.2 No. 60950-1 IEC/EN 61131-2 IEC/EN 61000-6-2 IEC/EN 61000-6-4 UL 60950 UL Category Control No.: NWGQ2 Certified by UL for use in Canada CE UL File No.: E208621 UL Recognized 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	Ethernet interface Portrait format UL508, cUL approvals Slot for SD card Fanless CPU and system cooling, natural convection-based passive cooling USB device
Fitted with:	Numeric keyboard Message indication Printer output 1 x Ethernet 10/100 Mbps (built-in interfaces) Message system (incl. buffer and confirmation) SW interfaces Color display 1 x CANopen®/easyNet (built-in interfaces) 1 x USB device (built-in interface) 1 x RS485 (built-in interface) Alpha numeric keyboard Recipes
Functions	Process default value (input) possible Additional software components, loadable Process value representation (output) possible
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Conditions of acceptability	The investigated Pollution Degree is: 2 The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks. The following end-product enclosures are required: Fire UL/CSA
Degree of protection	IP20, rear IP65

Degree of protection (front side)	NEMA 4X IP65
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 - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting Flush mounting - Inclination from vertical: ±45° (if using natural convection)
Product category	HMI-PLC (integrated SPS function)
Residual ripple	≤ 5 % (input voltage)
RoHs conformity	Yes
Software	GALILEO, Visualisation software, Engineering EPAM, Visualisation software, Engineering XSOFT-CODESYS-2, Visualisation software, Engineering XSOFT-CODESYS-3, Visualisation software, Engineering XSOFT-CODESYS-3, PLC-Programming 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	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Permissible voltage	18.0 - 31.2 V DC, absolute with ripple 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 %)
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	USB 2.0 device (not galvanically isolated) CAN, not galvanically isolated (SUB-D plug 9 pole, UNC) RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) Ethernet (100Base-TX/10Base-T) RS232 (not galvanically isolated, 9-pin SUB-D plug, UNC)
Number of slots	1 (for SD-Card)
Protocol	Other bus systems CAN TCP/IP MODBUS EtherNet/IP
Display contrast ratio	300:1
Display lighting	LED Dimmable via software
Display size	70 x 53 mm
Display type	Color display, TFT

	TFT Standard front with standard membrane (fully enclosed)
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, in relation to CE ATEX dust-ex-protection, II 3D Ex II T70°C IP5x: Zone 22, Category 3D
Potential isolation	Power supply: no Supply voltage UAUX: no
Protection against polarity reversal	Yes Yes, for supply voltage (Siemens MPI optional)
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		0
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		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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