DATASHEET - XV-102-H4-70TWRL-10

Control tableau, 24 VDC, human-machine interface, 7 inch, Ethernet, USB, RS485, CE50C

Part no. **XV-102-H4-70TWRL-10**
171163

Product name		Eaton XV-102 Touch panel
Part no.		XV-102-H4-70TWRL-10
EAN		7640130098008
Product Length/Depth		210 millimetre
Product height		38 millimetre
Product width		135 millimetre
Product weight		0.62 kilogram
Certifications		EN 50178 IEC/EN 61131-2 Certified by UL for use in Canada CUL508 CE IEC/EN 61000-6-4 CSA-C22.2 No. 60950-1 UL report applies to both US and Canada IEC/EN 61000-6-2 UL File No.: E208621 UL 60950-01 CSA Class No.: NWGQ8 UL 60950 UL Recognized UL Category Control No.: NWGQ2 EN 60950 EAC
Product Tradename		XV-102
Product Type		Touch panel
Product Sub Type		None
Catalog Notes		4-wire Technology 7 W for basic device + 2.5 W for USB module Can be expanded as required, see Accessories Heat dissipation with power consumption for 24 V no PLC function possible Optionally with SD card -> article no. 139807
Enclosure material		Plastic
Features		USB device UL508, cUL approvals Portrait format Slot for SD card Ethernet interface
Fitted with:		Message system (incl. buffer and confirmation) Alpha numeric keyboard Recipes Numeric keyboard Color display Message indication 1 x RS485 (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x USB host 2.0 (built-in interface) Printer output SW interfaces 1 x USB device (built-in interface)
Functions		Process default value (input) possible Process value representation (output) possible Additional software components, loadable HMI
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 UL/CSA 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
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 Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting - Inclination from vertical: ±45° (if using natural convection)
Product category		XV-100
Software		GALILEO, 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
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		19.2 - 30 V DC, effective (rated operating voltage -20 %/+25 %) 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 35 V DC (for a duration of < 100 ms) 18.0 - 31.2 V DC, absolute with ripple
Power consumption		Max. 10 W
Rated control supply voltage		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		Ethernet (100Base-TX/10Base-T) RS485 (not galvanically isolated, 9-pin SUB-D plug, UNC) USB 2.0 device (not galvanically isolated) USB 2.0 host (1.5 - 12 Mbit/s, not galvanically isolated)
Number of slots		1 (for SD-Card)
Protocol		EtherNet/IP Other bus systems MODBUS
Display contrast ratio		300:1
Display lighting		Dimmable via software LED
Display size		152 x 91 mm
Display type		Standard front with standard membrane (fully enclosed) TFT Color display, TFT
Luminance intensity		250 cd/m²
Number of colors of the display		65536
Screen size (diagonal)		7 in
Touch technology		Touch sensor (glass with foil), Resistive touch protective screen Resistive touch
Resolution		800 x 480 px

			WVGA
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
Explosion safety category for gas			Explosion protection according to EN 13463_x Explosion protection according to EN 60079-0 Explosion protection according to EN 61241-1
Potential isolation			Power supply: 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) 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			9.5 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			9.5 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			0
With SW interfaces			Yes
Supporting protocol for TCP/IP			No
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			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	7
Number of pixels, horizontal			800
Number of pixels, vertical			480
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	210
Height of the front		mm	135
Built-in depth		mm	33