



Touch panel, 24 V DC, 10.4z, TFTcolor, ethernet, RS232, RS485, CAN, (PLC)

**Part no.** **XV-152-D6-10TVR-10**  
**150609**  
**EL Number** **4521154**  
**(Norway)**

General specifications		
Product name		Eaton XV-152 Touch panel
Part no.		XV-152-D6-10TVR-10
EAN		7640130097193
Product Length/Depth		345 millimetre
Product height		54 millimetre
Product width		260 millimetre
Product weight		2.95 kilogram
Certifications		Certified by UL for use in Canada ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x) DNV GL CUL508 IEC/EN 60079-0 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)) UL Category Control No.: NRAQ UL CULus IEC/EN 61000-6-4 UL 508 IEC/EN 60950 CSA File No.: UL report applies to both US and Canada EN 60950 IEC/EN 61241-0 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)) UL File No.: E205091 Security: IEC/EN 61241-1 (ATEX 94/9/EG: Zone 22, Category 3D (II 3D Ex tc IIIC T70°C IP6x)) UL 60950 IEC/EN 61000-6-2 IEC/EN 61000-6-3 IEC/EN 61131-2, CE UL508 CSA Class No.: none EN 50178 IEC/EN 61131-2
Product Tradename		XV-152
Product Type		Touch panel
Product Sub Type		None
Catalog Notes		12 W for basic device + 2.5 W for USB module 4-wire Technology Can be fitted by user with article no. 142581 LIC-PLC-MXP-COMPACT Heat dissipation with power consumption for 24 V License certificates for onboard interfaces not required Optionally with SD card -> article no. 139807
Features & Functions		
Enclosure material		Metal, anodized
Features		Slot for SD card Overload proof Fanless CPU and system cooling, natural convection-based passive cooling UL508, cUL approvals Portrait format Ethernet interface USB device USB Host
Fitted with:		Alpha numeric keyboard 1 x USB device (built-in interface) 1 x CANopen®/easyNet (built-in interfaces) 1 x RS485 (built-in interface) Message indication 1 x RS232 (built-in interface) Numeric keyboard SW interfaces Message system (incl. buffer and confirmation) 1 x USB host 2.0 (built-in interface) Recipes Printer output Color display 1 x Ethernet 10/100 Mbps (built-in interfaces)
Functions		Additional software components, loadable Process default value (input) possible Process value representation (output) possible

<b>General information</b>	
Battery runtime	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
Current consumption	0.6 A, continuous current, Power Supply, 24 V DC
Degree of protection	IP20, rear NEMA 4X IP20
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	Metal enclosure and front plate
Mounting method	Flush mounting Flush mounting - Clearance: Width x Height x Depth $\geq$ 30 mm (1.18") Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection)
Product category	HMI-PLC (SPS function, retrofittable)
Repetition rate	1 s
Residual ripple	$\leq$ 5 % (input voltage)
RoHS conformity	Yes
Short-circuit protection	No, external fuse FAZ Z3, Supply voltage UAux Yes, Short-circuit rating, SmartWire-DT supply voltage
Software	EPAM, Visualization software, Engineering XSOFT-CODESYS-2, Visualization software, Engineering XSOFT-CODESYS-3, Visualization software, Engineering XSOFT-CODESYS-2, PLC-Programming software, Engineering XSOFT-CODESYS-3, PLC-Programming software, Engineering GALILEO, Visualization software, Engineering
Terminal capacity	0.25 - 1.5 mm <sup>2</sup> , flexible with ferrule 0.2 - 1.5 mm <sup>2</sup> , solid 24 - 16 AWG, solid or stranded
Voltage type	DC
<b>Ambient conditions, mechanical</b>	
Shock resistance	Mechanical, According to IEC/EN 60068-2-27
Vibration resistance	According to IEC/EN 60068-2-6
<b>Climatic environmental conditions</b>	
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	IEC/EN 50178 10 - 95 % (non-condensing)
<b>Electro magnetic compatibility</b>	
Voltage dips	$\leq$ 10 ms from rated voltage (24 V DC) $\leq$ 10 ms, Bridging voltage dips 5 ms from undervoltage (19.2 V DC)
<b>Electrical rating</b>	
Inrush current	12.5 A (for 6 ms)
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. 12 W 9.5 W total 2.5 W (USB Slave to USB Host) 12 W
Rated control supply voltage	24 V DC (UAUX, -20 %/+25 %) 24 V DC (UPOW, -20 %/+25 %)
Rated operational current (Ie)	0.7 A
Rated operational voltage	14.5 V ( $\pm$ 3 % - SmartWire-DT) 24 V DC (power-supply - safety extra low voltage)
Supply current	0.7 A, I <sub>max</sub> , SmartWire-DT supply 3 A, I <sub>max</sub> , Supply voltage UAux
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
<b>Communication</b>		
Addressing		Address set automatically
Connection		SmartWire-DT blade terminal SWD4-8MF2
Connection type		SWD: Plug, 8-pole Push in terminals, Supply voltage
Data transfer rate		125 kBit/s, SmartWire-DT 250 kBit/s, SmartWire-DT
Interfaces		USB 2.0 device (not galvanically isolated) Ethernet (100Base-TX/10Base-T)
LED indicator		Status indication of SmartWire-DT master: Green and red LEDs Status indication of SmartWire-DT network: Configurable green or red LED Status indication of Supply voltage: LED
Number of slots		1 (for SD-Card)
Number of SmartWire-DT slaves		58
Protocol		EtherNet/IP TCP/IP Other bus systems CAN MODBUS
Station		SmartWire-DT master, SmartWire-DT network
<b>Display</b>		
Display contrast ratio		300:1
Display lighting		LED Dimmable via software
Display size		211 x 158 mm
Display type		Standard front with standard membrane (fully enclosed) TFT Color display, TFT
Luminance intensity		250 cd/m <sup>2</sup>
Number of colors of the display		65536
Screen size (diagonal)		10.4 in
Touch technology		Glass with film touch sensor Touch sensor (glass with foil), Resistive touch protective screen Resistive touch
<b>Input/Output</b>		
Resolution		640 x 480 px VGA
<b>Safety</b>		
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		Between UPow and 15 V SmartWire-DT supply voltage: no UAUX: no Power supply: no
Protection against polarity reversal		Yes Yes, for supply voltage (Siemens MPI optional)
<b>System</b>		
Backup time		10 years, typ. (time at zero voltage)
Memory		NAND-Flash (can be used for data backup): approx. 64 MByte available NOR-Flash: 2 MByte 64 MByte internal DRAM (OS, Program and data memory) NVRAM (Retain data): 125 kByte SD Memory Card Slot: SDA Specification 1.00 (External)
Memory capacity		64,000 kByte
Operating system		Windows CE 5.0 (license included)
Processor		RISC CPU, 32 Bit, 400 MHz
<b>Design verification</b>		
Equipment heat dissipation, current-dependent Pvid		14.5 W
Heat dissipation capacity Pdis		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		14.5 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 9.0

Programmable logic controllers PLC (EG000024) / Graphic panel (EC001412)		
Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecl@ss13-27-33-02-01 [AFX016008])		
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 (supply voltage)		DC
Power consumption	W	12
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		1
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		2
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 EtherCAT		No
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 WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
Type of display		TFT
Colour display		Yes
Number of colours of the display		65536
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	10.4
Number of pixels, horizontal		640
Number of pixels, vertical		480
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
Certified for UL hazardous location class I		No
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		No
Certified for UL hazardous location group A (acetylene)		No
Certified for UL hazardous location group B (hydrogen)		No
Certified for UL hazardous location group C (ethylene)		No
Certified for UL hazardous location group D (propane)		No
Certified for UL hazardous location group E (metal dusts)		No
Certified for UL hazardous location group F (carbonaceous dusts)		No
Certified for UL hazardous location group G (non-conductive dusts)		No
Operating temperature	°C	0 - 50
Rail mounting possible		No

Wall mounting/direct mounting			No
Suitable for safety functions			No
Width of the front		mm	345
Height of the front		mm	260
Built-in depth		mm	49