

Specifications

Eaton 153528

Eaton XV-102 Touch panel, 24 V DC, 7z, TFTcolor, ethernet, RS485, profibus, SWDT, PLC



Photo is representative



General specifications

PRODUCT NAME	Eaton XV-102 Touch panel
CATALOG NUMBER	153528
MODEL CODE	XV-102-E8-70TWRC-10
EAN	7640130097636
PRODUCT LENGTH/DEPTH	210 mm
PRODUCT HEIGHT	38 mm
PRODUCT WIDTH	135 mm
PRODUCT WEIGHT	0.66 kg

CERTIFICATIONS

CSA File No.: UL report applies to both US and Canada
CUL508
UL508
Certified by UL for use in Canada
EN 50178
IEC/EN 61131-2
CSA Class No.: none
IEC/EN 61000-6-4
IEC/EN 61131-2, CE
UL
UL Category Control No.: NRAQ
UL File No.: E205091
cULus
EN 60950
UL 60950
DNV GL
IEC/EN 61000-6-2
EAC

Product specifications

TYPE	Coordinator for the SmartWire-DT communications system
FEATURES	Overload proof UL508, cUL approvals USB device Target and web visualization Portrait format Slot for SD card USB Host Fanless CPU and system cooling, natural convection-based passive cooling Ethernet interface
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.
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

Resources

APPLICATION NOTES	eaton-smartwire-integration-linux-devices-ap050032en-us.pdf
DRAWINGS	eaton-electronics-dimensions-xv-touch-panel-dimensions.eps eaton-operator-panels-xv-touch-panel-dimensions-003.eps eaton-electronics-dimensions-xv-touch-panel-dimensions-002.eps eaton-general-xv-touch-panel-symbol.eps eaton-operator-panels-xv-touch-panel-3d-drawing-004.eps
ECAD MODEL	DA-CE-ETN.XV-102-E8-70TWRC-10
INSTALLATION INSTRUCTIONS	IL048007ZU
MANUALS AND USER GUIDES	eaton-systemdescription-with-embedded-linux-mn050017en-us.pdf MN04802004Z_EN MN048008ZU_EN MN04802013Z_EN MN04802091Z_EN
MATERIAL SAFETY DATA SHEET (MSDS)	MSDS Panasonic Manganese Dioxide Lithium Battery (Series CR).pdf
MCAD MODEL	eaton-xv-102-70-6-3d-model.stp eaton-programmable-displays-mcad-drawings-xv-102-70-6.dwg
SALES NOTES	eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf
TEST REPORT	UN38.3_Panasonic_CR2032.pdf

	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.
FITTED WITH:	Message system (incl. buffer and confirmation) Alpha numeric keyboard Message indication Printer output Color display Recipes SW interfaces 1 x RS485 (built-in interface) Numeric keyboard 1 x USB device (built-in interface) 1 x PROFIBUS/MPI (built-in interface) 1 x USB host 2.0 (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) 1 x SmartWire-DT (built-in interface) MPI interface
FUSE TYPE	Built-in fuse (not accessible)
ADDRESSING	Address set automatically
CONNECTION TO SMARTWIRE-DT	Yes

ENCLOSURE MATERIAL	Plastic
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
SUPPLY VOLTAGE AT DC - MIN	20.4 VDC
WIDTH OF THE FRONT	210 mm
PRODUCT CATEGORY	SmartWire-DT coordinators

RESOLUTION	• 800 x 480 px • WVGA
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AIR PRESSURE	795 - 1080 hPa (operation)
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
DISPLAY SIZE	152 x 91 mm
BACKUP TIME	10 years, typ. (time at zero voltage)
EXPLOSION SAFETY CATEGORY FOR GAS	Explosion protection according to EN 61241-1 Explosion protection according to EN 60079-0 Explosion protection according to EN 13463_x
MEMORY CAPACITY	64,000 kByte
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE - MIN	0 °C
AMBIENT STORAGE TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MIN	-20 °C
BUILT-IN DEPTH	33 mm
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	9.5 W
FRONT HEIGHT	135 mm
HEAT DISSIPATION CAPACITY PDISS	0 W

HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
NUMBER OF BUTTONS (PROGRAMMABLE FUNCTION)	0
NUMBER OF BUTTONS WITH LED	0
NUMBER OF GREY-SCALES/BLUE-SCALES OF DISPLAY	0
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	1
NUMBER OF HW-INTERFACES (OTHER)	1
BATTERY RUNTIME	Back-up of real-time clock: CR 2032 (190 mA/h), zero maintenance (soldered)
VOLTAGE TYPE	DC
CONNECTION	SmartWire-DT blade terminal SWD4-8MF2
OPERATING SYSTEM	Windows CE 5.0 (license included)
COMMUNICATION INTERFACE	PROFIBUS SmartWire-DT master
SOFTWARE	GALILEO, Visualization software, Engineering EPAM, Visualization software, Engineering XSOF-CODESYS-2, Visualization software, Engineering XSOF-CODESYS-2, PLC-Programming software, Engineering XSOF-CODESYS-3, Visualization software, Engineering XSOF-CODESYS-3, PLC-Programming software, Engineering
MOUNTING METHOD	Flush mounting - Inclination from vertical: $\pm 45^\circ$ (if using natural convection) Flush mounting Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18")
DISPLAY CONTRAST RATIO	300:1
NUMBER OF SLOTS	1 (for SD-Card)
DISPLAY LIGHTING	LED

	Dimmable via software
DISPLAY TYPE	Color display, TFT Standard front with standard membrane (fully enclosed) TFT
PROTECTION AGAINST POLARITY REVERSAL	Yes Yes, for supply voltage (Siemens MPI optional)
RELATIVE HUMIDITY	10 - 95 % (non- condensing)
LIFESPAN	40,000 h (Service life of back-lighting)
RESIDUAL RIPPLE	≤ 5 % (input voltage)
CONNECTION TYPE	Push in terminals, Supply voltage SWD: Plug, 8-pole
RATED CONTROL SUPPLY VOLTAGE	24 V DC (UPOW, -20 %/+25 %) 24 V DC (UAUX, -20 %/+25 %)
INRUSH CURRENT	12.5 A (for 6 ms)
DATA TRANSFER RATE	250 kBit/s, SmartWire-DT 125 kBit/s, SmartWire-DT
DEGREE OF PROTECTION	IP20 IP20, rear
LUMINANCE INTENSITY	250 cd/m²
DEGREE OF PROTECTION (FRONT SIDE)	IP65 NEMA 4X
NUMBER OF COLORS OF THE DISPLAY	65536
STATION	SmartWire-DT master, SmartWire-DT network
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6
PROCESSOR	RISC CPU, 32 Bit, 400 MHz
ROHS CONFORMITY	Yes
SUPPLY CURRENT	3 A, I _{max} , Supply voltage UAux If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used; SmartWire-DT supply 0.7 A, I _{max} , SmartWire-DT supply If contactors with a total power consumption > 3 A are connected, a power feeder module EU5C-SWD-

	PF1/2 has to be used, Supply voltage UAux
MEMORY	32 kByte internal NVRAM (retained data) SD Memory Card Slot: SDA Specification 1.00 (External) 64 MByte internal DRAM (OS, Program and data memory) 128 MByte internal NAND- Flash (can be used for data backup)
FUNCTIONS	Additional software components, loadable Process value representation (output) possible Process default value (input) possible SmartWire-DT coordination
TOUCH TECHNOLOGY	Resistive touch Touch sensor (glass with foil), Resistive touch protective screen Glass with film touch sensor
MODEL	Insulating enclosure and front plate
INTERFACES	USB 2.0 host (1.5 - 12 Mbit/s, not galvanically isolated) Ethernet (100Base- TX/10Base-T) USB 2.0 device (not galvanically isolated) RS485
LED INDICATOR	Status indication of Supply voltage: LED Status indication of SmartWire-DT master: Green and red LEDs Status indication of SmartWire-DT network: Configurable green or red LED
VOLTAGE DIPS	≤ 10 ms from rated voltage (24 V DC) ≤ 10 ms, Bridging voltage dips 5 ms from undervoltage (19.2 V DC)
NUMBER OF HW- INTERFACES (PARALLEL)	0
NUMBER OF HW-	0

INTERFACES (RS-232)	
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 (WIRELESS)	0
NUMBER OF INTERFACES (PROFINET)	0
NUMBER OF ONLINE/RUNTIME LANGUAGES	100
NUMBER OF PASSWORD LEVELS	200
NUMBER OF PIXELS (HORIZONTAL)	800
NUMBER OF PIXELS (VERTICAL)	480
NUMBER OF SMARTWIRE-DT SLAVES	99
NUMBER OF SYSTEM BUTTONS	1
OPERATING TEMPERATURE - MAX	50 °C
OPERATING TEMPERATURE - MIN	0 °C
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
REPETITION RATE	1 s
SCREEN SIZE (DIAGONAL)	7 in
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	9.5 W
PERMISSIBLE VOLTAGE	35 V DC (for a duration of < 100 ms) 18.0 - 31.2 V DC, absolute with ripple 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 19.2 - 30 V DC, effective (rated operating voltage - 20 %/+25 %)
POTENTIAL ISOLATION	Between UPow and 15 V SmartWire-DT supply

	voltage: no Supply voltage UAUX: no Power supply: no
POWER CONSUMPTION	Max. 10 W 9.5 W total 2.5 W (USB Slave to USB Host) 7 W
PROTOCOL	PROFIBUS MODBUS Other bus systems TCP/IP EtherNet/IP
RATED OPERATIONAL CURRENT (IE)	0.7 A
RATED OPERATIONAL VOLTAGE	24 V DC (power-supply - safety extra low voltage) Typically UAUX -0.2 V (for 24 V DC slaves) 14.5 V ($\pm 3\%$ - SmartWire-DT)
SHORT-CIRCUIT PROTECTION	Yes, Short-circuit rating, SmartWire-DT supply voltage No, external fuse FAZ Z3, Supply voltage UAux
SHOCK RESISTANCE	Mechanical, According to IEC/EN 60068-2-27
TERMINAL CAPACITY	24 - 16 AWG, solid or stranded 0.25 - 1.5 mm ² , flexible with ferrule 0.2 - 1.5 mm ² , solid

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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