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Eaton 166700

Eaton XV-152 Touch panel, 24 V DC, 5.7z, TFTcolor, ethernet, RS485, CAN, SWDT, PLC

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PRODUCT NAME	Eaton XV-152 Touch panel
CATALOG NUMBER	166700
PRODUCT LENGTH/DEPTH	212 mm
PRODUCT HEIGHT	52.5 mm
PRODUCT WIDTH	156 mm
PRODUCT WEIGHT	1.3 kg

CERTIFICATIONS

ATEX 94/9/EG: Zone 22,
Category 3D (II 3D Ex tc
IIIC T70°C IP6x)
cULus
IEC/EN 61241-1 (ATEX
94/9/EG: Zone 22,
Category 3D (II 3D Ex tc
IIIC T70°C IP6x)
UL 508
CSA Class No.: none
UL508
CUL508
DNV GL
IEC/EN 60079-0 (ATEX
94/9/EG: Zone 22,
Category 3D (II 3D Ex tc
IIIC T70°C IP6x)
IEC/EN 61000-6-4
UL File No.: E205091
EN 60950
IEC/EN 61000-6-3
CSA File No.: UL report
applies to both US and
Canada
IEC/EN 60950
IEC/EN 61000-6-2
Security:
UL 60950
EN 50178
IEC/EN 61131-2, CE
UL Category Control No.:
NRAQ
IEC/EN 61241-0 (ATEX
94/9/EG: Zone 22,
Category 3D (II 3D Ex tc
IIIC T70°C IP6x)



Powering Business Worldwide

UL
Certified by UL for use in
Canada
IEC/EN 61131-2

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

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[eaton-general-xv-touch-panel-symbol.eps](#)

[eaton-operator-panels-xv-touch-panel-3d-drawing-004.eps](#)

	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) 1 x USB device (built-in interface) 1 x Ethernet 10/100 Mbps (built-in interfaces) Color display Numeric keyboard Alpha numeric keyboard Printer output 1 x CANopen®/easyNet (built-in interfaces) 1 x USB host 2.0 (built-in interface) 1 x RS485 (built-in interface) Message indication 1 x SmartWire-DT (built-in interface) SW interfaces Recipes
FUSE TYPE	Built-in fuse (not accessible)
ADDRESSING	Address set automatically
CONNECTION TO SMARTWIRE-DT	Yes
ENCLOSURE MATERIAL	Metal, anodized

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	212 mm
PRODUCT CATEGORY	SmartWire-DT coordinators
RESOLUTION	• 640 x 480 px • VGA
AIR PRESSURE	795 - 1080 hPa (operation)
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
DISPLAY SIZE	115 x 86 mm
BACKUP TIME	10 years, typ. (time at zero voltage)
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	47 mm
EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	9.5 W
FRONT HEIGHT	156 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)	2
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	SmartWire-DT master
SOFTWARE	EPAM, Visualization software, Engineering GALILEO, Visualization software, Engineering XSOF-CODESYS-3, Visualization software, Engineering XSOF-CODESYS-3, PLC-Programming software, Engineering XSOF-CODESYS-2, Visualization software, Engineering XSOF-CODESYS-2, PLC-Programming software, Engineering
MOUNTING METHOD	Flush mounting - Clearance: Width x Height x Depth ≥ 30 mm (1.18") Flush mounting - Inclination from vertical: ±45° (if using natural convection) Flush mounting
DISPLAY CONTRAST RATIO	300:1
NUMBER OF SLOTS	1 (for SD-Card)
DISPLAY LIGHTING	Dimmable via software LED
DISPLAY TYPE	Color display, TFT TFT Standard front with standard membrane (fully enclosed)

PROTECTION AGAINST POLARITY REVERSAL	Yes Yes, for supply voltage (Siemens MPI optional)
RELATIVE HUMIDITY	10 - 95 % (non-condensing) IEC/EN 50178
LIFESPAN	40,000 h (Service life of back-lighting)
RESIDUAL RIPPLE	≤ 5 % (input voltage)
CONNECTION TYPE	SWD: Plug, 8-pole Push in terminals, Supply voltage
RATED CONTROL SUPPLY VOLTAGE	24 V DC (UPOW, -20 %/+25 %) 24 V DC (UAUX, -20 %/+25 %)
INRUSH CURRENT	12.5 A (for 6 ms)
CURRENT CONSUMPTION	0.4 A, continuous current, Power Supply, 24 V DC
DATA TRANSFER RATE	125 kBit/s, SmartWire-DT 250 kBit/s, SmartWire-DT
DEGREE OF PROTECTION	NEMA 4X IP20, rear IP20
LUMINANCE INTENSITY	250 cd/m ²
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 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 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

MEMORY	NOR-Flash: 2 MByte NAND-Flash (can be used for data backup): approx. 64 MByte available NVRAM (Retain data): 125 kByte 64 MByte internal DRAM (OS, Program and data memory) SD Memory Card Slot: SDA Specification 1.00 (External)
FUNCTIONS	Process value representation (output) possible SmartWire-DT coordination Process default value (input) possible Additional software components, loadable
TOUCH TECHNOLOGY	Glass with film touch sensor Touch sensor (glass with foil), Resistive touch protective screen Resistive touch
MODEL	Metal enclosure and front plate
INTERFACES	CAN easyNet Ethernet (100Base-TX/10Base-T) USB 2.0 device (not galvanically isolated) RS485
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
VOLTAGE DIPS	≤ 10 ms, Bridging voltage dips 5 ms from undervoltage (19.2 V DC) ≤ 10 ms from rated voltage (24 V DC)
NUMBER OF HW-INTERFACES (PARALLEL)	0
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF HW-	0

INTERFACES (RS-422)	
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)	640
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)	5.7 in
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	9.5 W
PERMISSIBLE VOLTAGE	19.2 - 30 V DC, effective (rated operating voltage - 20 %/+25 %) 18.0 - 31.2 V DC, absolute with ripple 18 - 31.2 V DC, battery powered (rated operating voltage -25 %/+30 %) 35 V DC (for a duration of < 100 ms)
POTENTIAL ISOLATION	Between UPow and 15 V SmartWire-DT supply voltage: no Power supply: no UAUX: no

POWER CONSUMPTION	Max. 7 W 2.5 W (USB Slave to USB Host) 9.5 W total 7 W
PROTOCOL	EtherNet/IP Other bus systems CAN TCP/IP MODBUS
RATED OPERATIONAL CURRENT (IE)	0.7 A
RATED OPERATIONAL VOLTAGE	14.5 V (± 3 % - SmartWire-DT) 24 V DC (power-supply - safety extra low voltage) Typically UAUX -0.2 V (for 24 V DC slaves)
SHORT-CIRCUIT PROTECTION	No, external fuse FAZ Z3, Supply voltage UAux Yes, Short-circuit rating, SmartWire-DT supply voltage
SHOCK RESISTANCE	Mechanical, According to IEC/EN 60068-2-27
TERMINAL CAPACITY	0.2 - 1.5 mm², solid 24 - 16 AWG, solid or stranded 0.25 - 1.5 mm², 24 - 16 AWG

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