DATASHEET - XV-460-15TXB-1-50

Touch panel, ir, 24 V DC, 15z, TFTcolor, ethernet, RS232, CAN, (PLC), stainless steel

Part no.	**XV-460-15TXB-1-50**
Catalog No.	**139918**
EL-Nummer (Norway)	**4560823**

Delivery program

Product range		XV400 15"
Product range		XV400
Function		HMI-PLC (PLC retrofitted by user)
Common features of the model series		Ethernet interface USB device RS232 CAN/easyNet UL508, cUL approvals PLC function can be fitted by user Communications scope can be fitted by user with licenses
Display - Type		Color display, TFT
Touch-technology		Infra-red touch
Number of colours		Adjustable: 65536 or 256 colours
Resolution	Pixel	XVGA 1024 x 768
Portrait format		no
Screen diagonal	Inch	15
Model		Metal enclosure with stainless steel front
Operating system		Windows CE (license required) CompactFlash card required
PLC-licence		Can be fitted by user with article no. 140390 LIC-PLC-MXP-MEDIUM
License certificates for onboard interfaces		Can be expanded as required, see Accessories -> License product certificates
built-in interfaces		1 x Ethernet 100base-TX/10base-T 1 x RS232 1 x CAN 2 x USB host 1 x USB device
Front type		Satin-finish brushed stainless steel Laminated safety glass, non-reflective
Utilization		Flush mounting
Slots		for Compact-Flash^{TM}-Cards: 2 for communication modules: 2
Memory card automation		required, see Accessories -> Memory cards
Pluggable communication cards (optional)		yes
Heat dissipation	W	44

Technical data
Display

Display - Type		Color display, TFT
Screen diagonal	Inch	15
Resolution	Pixel	XVGA 1024 x 768
Visible screen area	mm	304 x 228
Number of colours		Adjustable: 65536 or 256 colours
Contrast ratio (Normally)		Normally 350:1
Brightness	cd/m^2	Normally 400
Back-lighting		4 x CCFL dimmable via software
Service life of back-lighting	h	Normally 50000
Infra-red touch protective screen		Laminated safety glass, non-reflective

Operation

Technology		Infra-red touch

			107 x 83 logic channels

System

Processor			RISC CPU, 32 Bit, 400 MHz
Internal memory			DRAM (OS, Program and data memory): 64 MByte Flash (can be used for data backup): approx. 1.5 MByte available NVRAM (retained data): approx. 32 KByte available
External memory			CF-Slot: 2 x CompactFlash Card type I/II for operating system, programs and data
Back-up of real-time clock			
Battery (service life)			non-replaceable, CR2032 soldered in
Backup (time at zero voltage)			Normally 10 years
Operating system			Windows CE (license required) CompactFlash card required

Engineering

Visualisation software			GALILEO EPAM XSOFT-CODESYS-2 XSOFT-CODESYS-3
PLC-Programming software			XSOFT-CODESYS-2 XSOFT-CODESYS-3

Interfaces, communication

built-in interfaces			1 x Ethernet 100base-TX/10base-T 1 x RS232 1 x CAN 2 x USB host 1 x USB device
PLC-licence			Can be fitted by user with article no. 140390 LIC-PLC-MXP-MEDIUM
USB Host			USB 2.0 (1.5 - 12 Mbit/s), not galvanically isolated
USB device			USB 1.1, not galvanically isolated
RS-232			RS-232, not galvanically isolated (SUB-D plug 9 pole, UNC)
CAN			CAN, galvanically isolated (SUB-D plug 9 pole, UNC)
Slots			for Compact-Flash^{TM}-Cards: 2 for communication modules: 2
Ethernet			100Base-TX/10Base-T

Power supply

Nominal voltage				24 V DC SELV (safety extra low voltage)
permissible voltage				Effective: 20.4-28.8 V DC (rated operating voltage -15%/+20%) Absolute with ripple: 19.2-30.0 V DC 35 V DC for a duration of < 100 ms
Voltage dips			ms	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (20.4 V DC)
Power consumption	$P_{max.}$		W	44
Power consumption			W	Normally 28
Heat dissipation			W	44
Note on heat dissipation				Heat dissipation with power consumption for 24 V 30 W for basic device+ two times 4 W for communication modules + two times 3 W for USB modules
Siemens MPI, (optional)				yes
Type of fuse				Yes (fuse not accessible)
Potential isolation				no potential isolation (0 V-connection to housing potential)

General

Housing material			Metal, anodized
Front type			Satin-finish brushed stainless steel Laminated safety glass, non-reflective
Weight		kg	7.5
Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (at front), IP20 (at rear)
Approvals			
Approvals			cUL (UL508)
Explosion protection (according to ATEX 94/9/EC)			II 3D Ex II T70°C IP5x: Zone 22, Category 3D (in relation to CE) EN60079-0, EN61241-1, EN13463
Applied standards and directives			
EMC			(in relation to CE) EN 61000-6-2 EN 61000-6-3 EN 61000-6-4 EN 61131-2

Product standards			EN 50178 EN 61131-2
Security			EN 60950 UL 60950
Mechanical shock resistance	g		according to IEC 60068-2-27
Vibration			To IEC 68-2-6

Environmental conditions

Temperature			
Operation	ϑ	°C	0 - +50
Storage / Transport	ϑ	°C	-20 - +60
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	+ 50
Relative humidity			
Relative humidity			10 - 95%, non-condensing

Supply voltage U_{Aux}

Rated operational voltage	U_{Aux}	V	24 V DC (-15/+20%)
Protection against polarity reversal			Yes
Potential isolation			No

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	44
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	50
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties			
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 7.0

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
Voltage type of supply voltage		DC
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		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		3
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		Yes
Supporting protocol for PROFIBUS		Yes
Supporting protocol for CAN		Yes
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		Yes
Supporting protocol for MODBUS		Yes
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		Yes
Supporting protocol for SUCONET		Yes
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
With colour display		Yes
Number of colours of the display		65536
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	15
Number of pixels, horizontal		1024
Number of pixels, vertical		768
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			Infrared 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			
Operation temperature		°C	0 - 50
Rail mounting possible			No
Wall mounting/direct mounting			No
Suitable for safety functions			No
Width of the front		mm	427
Height of the front		mm	332
Built-in depth		mm	94

Approvals

Product Standards		UL 60950-01; CSA-C22.2 No. 60950-1; IEC/EN 61131-2; CE marking
UL File No.		E208621
UL Category Control No.		NWGQ2, NWGQ8
CSA File No.		UL report applies to both US and Canada
CSA Class No.		–
North America Certification		UL recognized, certified by UL for use in Canada
Conditions of Acceptability		The investigated Pollution Degree is: 2 Proper bonding to the end-product main protective earthing termination is: Required The following end-product enclosures are required: Fire, Electrical The unit must be supplied via a SELV source. The provided Ethernet Connection is only allowed to connect to inhouse networks.
Specially designed for North America		No
Current Limiting Circuit-Breaker		No
Degree of Protection		IEC: IP65, UL/CSA Type: -

Dimensions

Dimensions

Assets (links)

Declaration of CE Conformity
00002508

Instruction Leaflets
IL04802009Z2018_02

Manuals
MN04802010Z_DE (German)
MN04802010Z_EN (English)

Additional product information (links)

IL04802009Z Enclosed kit information

IL04802009Z Enclosed kit information	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04802009Z2018_02.pdf

MN04802010Z Operator manual XV400 10.4"/12.1"/15"

MN04802010Z Bedienerhandbuch XV400 10,4"/12,1"/15" - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802010Z_DE.pdf

MN04802010Z Operator manual XV400 10.4"/12.1"/15" - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802010Z_EN.pdf

MN04802093Z XSoft-CoDeSys-2, PLC programming XV400

MN04802093Z XSoft-CoDeSys-2, SPS-Programmierung XV400 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802093Z-DE.pdf
MN04802093Z XSoft-CoDeSys-2, PLC programming XV400 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802093Z-EN.pdf

MN048008ZU Manual XSOFT-CODESYS-3, PLC programming

MN048008ZU Handbuch XSOFT-CODESYS-3, SPS-Programmierung - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN048008ZU_DE.pdf
MN048008ZU Manual XSOFT-CODESYS-3, PLC programming - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN048008ZU_EN.pdf