Touch panel, 24 V DC, 5.7z, STNcolor, ethernet, RS232, CAN, (PLC)

Part no.   XV-432-57CQB-1-10
Article no.   139890

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Delivery program

Product range			XV400 5.7"
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, CSTN
Touch-technology			Resistive-Touch
Number of colours			256 colors
Resolution		Pixel	QVGA 320 x 240
Portrait format			yes
Screen diagonal		Inch	5.7
Model			Metal enclosure and front plate
Operating system			Windows CE (license required) CompactFlash card required
PLC-licence			Can be fitted by user with article no. 140389 LIC-PLC-MXP-SMALL
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 1 x USB host 1 x USB device
Front type			Standard front with standard membrane (fully laminated)
Utilization			Flush mounting
Slots			for Compact-Flash^{TM}-Cards: 1 for communication modules: 1
Memory card automation			required, see Accessories -> Memory cards
Pluggable communication cards (optional)			yes
Heat dissipation		W	24

Technical data
Display

Display - Type			Color display, CSTN
Screen diagonal		Inch	5.7
Resolution		Pixel	QVGA 320 x 240
Visible screen area		mm	115 x 86
Number of colours			256 colors
Contrast ratio (Normally)			Normally 35:1
Brightness		cd/m^2	Normally 150
Back-lighting			1 x CCFL dimmable via software
Service life of back-lighting		h	Normally 50000
Resistive touch protective screen			Touch sensor (glass with foil)

Operation

Technology			Resistive-Touch 4 wire

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: 1 x CompactFlash Card type I/II for operating system, programs and data
Back-up of real-time clock			
Battery (service life)			Zero maintenance
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 1 x USB host 1 x USB device
PLC-licence			Can be fitted by user with article no. 140389 LIC-PLC-MXP-SMALL
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: 1 for communication modules: 1
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	≤ 20 ms from rated voltage (24 V DC) 2 ms from undervoltage (20.4 V DC)
Power consumption	$P_{max.}$	W	24
Power consumption		W	Normally 13
Heat dissipation		W	24
Note on heat dissipation			Heat dissipation with power consumption for 24 V 17 W for basic device + 4 W for communication module + 3 W for USB module
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			Standard front with standard membrane (fully laminated)
Weight		kg	1.9
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	24
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 6.0

PLC's (EG000024) / Graphic panel (EC001412)		
Electric engineering, automation, process control engineering / Control / Operate and Observe (HMI) / Graphic panel (HMI) (ecl@ss8.1-27-24-23-02 [BAA722010])		
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 HW-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		1
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 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		STN
With colour display		Yes
Number of colours of the display		256
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	5.7
Number of pixels, horizontal		320
Number of pixels, vertical		240
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
With touch screen		Yes
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
Printer output available			Yes
Number of online languages			100
Additional software components, loadable			Yes
Degree of protection (IP), front side			IP65
Operation temperature		°C	0 - 50
Rail mounting possible			No
Wall mounting/direct mounting			No
Suitable for safety functions			No
Width of the front		mm	212
Height of the front		mm	156
Built-in depth		mm	55

Dimensions

Dimensions

Additional product information (links)

IL04802009Z Enclosed kit information	
IL04802009Z Enclosed kit information	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04802009Z2013_03.pdf
MN04802009Z Operator manual XV400 5.7"/8.4"	
MN04802009Z Operator manual XV400 5.7"/8.4" - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802009Z_DE.pdf
MN04802009Z Operator manual XV400 5.7"/8.4" - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802009Z_EN.pdf
MN04802093Z XSoft-CoDeSys-2, PLC programming XV400	
MN04802093Z XSoft-CoDeSys-2, PLC programming 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 Manual XSOFT-CODESYS-3, PLC programming - 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