DATASHEET - XVM-450-65TVB-1-11

Mobile panel, 24 V DC, 6.5z, TFTcolor, ethernet, RS232, emergency-Stop, key, handwheel

Powering Business Worldwide

Part no. XVM-450-65TVB-1-11
Catalog No. 139998

Delivery program

Product range		XVM400 6.5"
Product range		XVM400
Function		HMI
Display - Type		Color display, TFT
Touch-technology		Membrane keyboard
Number of colours		64 k Colours
Resolution	Pixel	640 x 480
Portrait format		no
Screen diagonal	Inch	6.5
Model		Insulating enclosure and front plate
Operating system		Windows CE 5.0 (licence incl.)
PLC-licence		no PLC function possible
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 USB host 1 x RS232
Front type		Standard front, 31 membrane keys with tactile feedback, 4 status LEDs
Utilization		Mobile
Memory card automation		required, see Accessories -> Memory cards
Pluggable communication cards (optional)		no
Operating elements		2 acknowledgement keys (3-stage, 2#circuit) external wiring Emergency switching off pushbutton (2-circuit), externally wired Key switch (3-position) internally wired Electronic hand wheel, internally wired
Heat dissipation	W	9.6

Technical data

Display

Display - Type		Color display, TFT
Screen diagonal	Inch	6.5
Resolution	Pixel	640 x 480
Visible screen area	mm	132 x 99
Number of colours		64 k Colours
Back-lighting		2 x CCFL Cold cathode tubes
Service life of back-lighting	h	Normally 50000
Resistive touch protective screen		Touch sensor (glass with foil)

Operation

Technology		Resistive-Touch
Operating elements		2 acknowledgement keys (3-stage, 2#circuit) external wiring Emergency switching off pushbutton (2-circuit), externally wired Key switch (3-position) internally wired Electronic hand wheel, internally wired

System

Processor		RISC CPU, 32 Bit, 400 MHz
Internal memory		DRAM (OS, Program and data memory): min. 64 MByte Flash: min. 64 MByte
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 5.0 (licence incl.)

Engineering

Visualisation software			GALILEO

Interfaces, communication

built-in interfaces			1 x Ethernet 100base-TX/10base-T 1 x USB host 1 x RS232
PLC-licence			no PLC function possible
USB Host			USB 1.1 (12Mbit/s)
RS-232			RS232-C
Ethernet			100Base-TX/10Base-T

Power supply

Nominal voltage			24 V DC
permissible voltage			Effective: 19.2-30.0 V DC
Voltage dips		ms	≤ 10
Power consumption	$P_{max.}$	W	9.6
Heat dissipation		W	9.6
Note on heat dissipation			Heat dissipation with power consumption for 24 V, all ports and interfaces connected

General

Housing material			Insulated material black
Front type			Standard front, 31 membrane keys with tactile feedback, 4 status LEDs
Weight		kg	1.3
Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (at front), IP65 (at rear)
Approvals			
Approvals			cUL (UL508)
Applied standards and directives			
Product standards			EN 50178 EN 61131-2
Mechanical shock resistance		g	according to IEC 60068-2-27 25 Shock duration 11 ms
Vibration			10-57 Hz +- 0.15 mm 9-150 Hz ± 2 g

Environmental conditions

Temperature			
Operation	ϑ	°C	0 - +50
Storage / Transport	ϑ	°C	-20 - +70
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	+ 50
Relative humidity			
Relative humidity			5-95%, non condensing

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	9.6
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

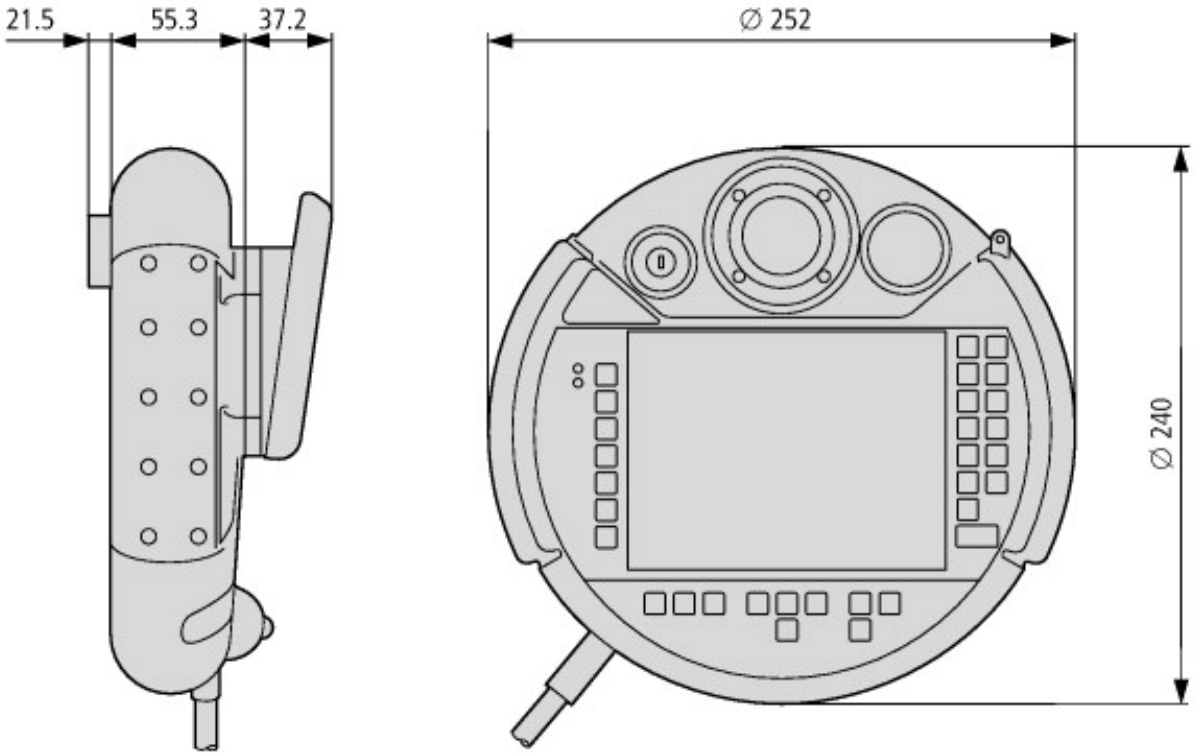
PLC's (EG000024) / Mobile panel (EC001427)		
Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Mobile Panel (HMI) (ecl@ss10.0.1-27-33-02-02 [AFX017003])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	0 - 0
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		1
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces other		0
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
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
With colour display		Yes
Number of colours of the display		65536
Number of grey-scales/blue-scales of display		0
Screen diagonal	inch	6.5
Number of pixels, horizontal		640
Number of pixels, vertical		480
Useful project memory/user memory	kByte	64000
With alpha numeric keyboard		No
Number of function buttons, programmable		31
Number of buttons with LED		4
Number of system buttons		31
With enabling button/emergency-stop switch		Yes
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
With printer output		Yes
Number of online languages		100
Degree of protection (IP)		IP65
Degree of protection (NEMA)		
Operation temperature	°C	0 - 50
Suitable for emergency stop		Yes
Connection, pluggable		Yes
Max. height of fall (in accordance with IEC 60068-2-32)	m	1
Suitable for safety functions		No
Width	mm	252
Height	mm	240
Depth	mm	92
Weight	kg	1.3

Approvals

Product Standards		UL 508; CSA-C22.2 No. 142; IEC/EN 6113-2; CE marking
UL File No.		E176666
UL Category Control No.		NRAQ, NRAQ7
CSA File No.		UL report applies to both US and Canada
CSA Class No.		2252-81, 2252-01
North America Certification		UL recognized, certified by UL for use in Canada
Specially designed for North America		No
Current Limiting Circuit-Breaker		No
Degree of Protection		IEC: IP65, UL/CSA Type: -

Dimensions



Additional product information (links)

IL04802025Z Enclosed kit information	
IL04802025Z Enclosed kit information	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04802025Z2018_02.pdf
MN04802027Z User manual GALILEO, Engineering for XVM400	
MN04802027Z Benutzerhandbuch GALILEO, konstruiert für XVM400 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802027Z_DE.pdf
MN04802027Z User manual GALILEO, Engineering for XVM400 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802027Z_EN.pdf