

## Touch panel, 24 V DC, 7z, TFTcolor, ethernet, RS485, CAN, SWDT, PLC

Powering Business Worldwide\*

Part no. XV-102-E6-70TWRC-10 Article no. 153527

Catalog No. XV-102-E6-70TWRC-10



## **Delivery program**

Donvoiry program		
Product range		XV100 7"
Product range		XV-102
Subrange		SmartWire-DT touch display with integrated controller (HMI PLC)
Function		SmartWire-DT coordinator
Description		XV100 touch display with PLC function for flush mounting plates
Description		Coordinator for the SmartWire-DT communications system
Common features of the model series		Ethernet interface USB device USB Host Slot for SD card UL508, cUL approvals
Display - Type		Color display, TFT
Touch-technology		Resistive-Touch
Number of colours		64 k Colours
Resolution	Pixel	WVGA 800 x 480
Portrait format		yes
Screen diagonal	Inch	7
Model		Insulating enclosure and front plate
Operating system		Windows CE 5.0 (licence incl.)
PLC-licence		PLC licence inclusive
License certificates for onboard interfaces		Not required
built-in interfaces		1 x Ethernet 10/100 Mbps 1 x RS485 1 x USB host 2.0 1 x USB device 1 x CANopen®/easyNet 1 x SmartWire-DT
Front type		Standard front with standard membrane (fully enclosed)
Utilization		Flush mounting
Slots		for SD card: 1
Memory card automation		Optionally with SD card -> article no. 139807
Pluggable communication cards (optional)		no
Touch sensor		Glass with film
Heat dissipation	W	9.5
Connection to SmartWire-DT		yes

### **Technical data**

#### **Display**

Touch sensor

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Display - Type		Color display, TFT
Screen diagonal	Inch	7
Resolution	Pixel	WVGA 800 x 480
Visible screen area	mm	152 x 91
Number of colours		64 k Colours
Contrast ratio (Normally)		Normally 300:1
Brightness	cd/m <sup>2</sup>	Normally 250
Back-lighting		LED dimmable via software
Service life of back-lighting	h	Normally 40000
Resistive touch protective screen		Touch sensor (glass with foil)
Operation		
Technology		Resistive-Touch 4 wire

Glass with film

#### Cucto

System			
Processor			RISC CPU, 32 Bit, 400 MHz
Internal memory			DRAM (OS, Program and data memory): 64 MByte NAND-Flash (can be used for data backup): approx. 128 MByte available NVRAM (retained data): approx. 32 KByte available
External memory			SD Memory Card Slot: SDA Specification 1.00
Cooling			Fanless CPU and system cooling, natural convection-based passive cooling
Back-up of real-time clock			
Battery (service life)			Zero maintenance
Backup (time at zero voltage)			Normally 10 years
Operating system			Windows CE 5.0 (licence incl.)
Engineering			Threats 32 de (nociso mon)
Visualisation software			GALILEO EPAM XSOFT-CODESYS-2 XSOFT-CODESYS-3
PLC-Programming software			XSOFT-CODESYS-2 XSOFT-CODESYS-3
Target and web visualization			Yes
Interfaces, communication			
built-in interfaces			1 x Ethernet 10/100 Mbps 1 x RS485 1 x USB host 2.0 1 x USB device 1 x CANopen®/easyNet 1 x SmartWire-DT
PLC-licence			PLC licence inclusive
USB Host			USB 2.0 (1.5 - 12 Mbit/s), not galvanically isolated
USB device			USB 2.0, not galvanically isolated
RS-232			no
RS-485			Yes
CAN			Yes
Profibus			no
Slots			for SD card: 1
SmartWire-DT master			Yes
Ethernet			100Base-TX/10Base-T
easyNet			Yes
MPI			no
Power supply			
Nominal voltage			24 V DC SELV (safety extra low voltage)
permissible voltage			Effective: 19.2-30.0 V DC (rated operating voltage -20%/+25%) Absolute with ripple: 18,0-31,2 V DC Battery powered: 18,0-31,2 V DC (rated operating voltage -25%/+30%) 35 V DC for a duration of < 100 ms
Voltage dips		ms	≤ 10 ms from rated voltage (24 V DC) 5 ms from undervoltage (19.2 V DC)
Power consumption	P <sub>max</sub> .	W	10
Note on power consumption			Basic device USB Slave to USB Host: 2.5 Total: 9.5
Heat dissipation		W	9.5
Note on heat dissipation			Heat dissipation with power consumption for 24 V 7 W for basic device + 2.5 W for USB module
Siemens MPI, (optional)			yes
Type of fuse			Yes (fuse not accessible)
Potential isolation			no potential isolation
General			
Housing material			Plastic, gray
Front type			Standard front with standard membrane (fully enclosed)
Dimensions (W x H x D)		mm	210 x 135 x 38
flush mounted			Clearance: W x H x D $\geq$ 30 mm (1.18") Inclination from vertical: $\pm 45^{\circ}$ (if using natural convection)
Weight		kg	0.6
Degree of protection (IEC/EN 60529, EN50178, VBG 4)			IP65 (at front), IP20 (at rear)

Approach Entition protection journating to ATEX MANDED Entition protection in protection journating to ATEX MANDED Entitle protection protection journating to ATEX MANDED Entitle protection protection in protection in protection for ECC  Enginesion protection journating to ATEX MANDED Enginesion of Manded Material standard				
Publication protection incorating to ATEX 90/80/50   Public	Approvals			
Part	Approvals			cUL (UL508)
### Package	Explosion protection (according to ATEX 94/9/EC)			II 3D Ex II T70°C IP5x: Zone 22, Category 3D
Explacion protection fratework for Ci)  Product standards  Security  Se	Applied standards and directives			
Product standards				EN 61000-6-2 EN 61000-6-4 EN 61131-2 EN 60079-0 EN 61241-1
Marchanical shock resistance				
	Product standards			
	Security			
### Part	Mechanical shock resistance		g	according to IEC 60068-2-27
Internation	Vibration			according to IEC/EN 60068-2-6
Departury	RoHS			conform
Silonger   Transport     Silonger   Transpo	Environmental conditions			
Storage / Transport   1900	Temperature			
Operating ambient temperature max.         "C"	Operation	9	°C	0 - +50
Relative humidity Relative humidity Relative humidity  Relative humid	Storage / Transport	9	°C	-20 - +60
Relative humidity  Roberto hum	Operating ambient temperature min.		°C	0
### Relative humidity    Supply voltage U <sub>Aux</sub>   Variage			°C	+ 50
### Relative humidity    Supply voltage U <sub>Aux</sub>   Variage	Relative humidity			
Supply voltage U <sub>Aux</sub> V <sub>Aux</sub> V         24 V D C (-20/+25%)           Residual inple on the input voltage         V <sub>Aux</sub> V         24 V D C (-20/+25%)           Residual inple on the input voltage         S         S           Protection against polarity reversal         Vas         Yes           Moke current         If contactors with a total power consumption > 3 A are connected, a power feeder module EUSC SWID-PF172 has to be used.           Whore         V         No         vesternal fuse FAZ 23           Rated operating voltage of 24 V-DC slaves         V         V         V <sub>V</sub> U <sub>Aux</sub> - 0.2           Supply voltage U <sub>Pow</sub> V         V         V <sub>V</sub> U <sub>Aux</sub> - 0.2           Supply voltage Up <sub>ew</sub> V         V         V <sub>V</sub> U <sub>Aux</sub> - 0.2           Supply voltage Up <sub>ew</sub> V         V         V <sub>V</sub> U <sub>Aux</sub> - 0.2           Supply voltage Up <sub>ew</sub> V         V         V <sub>V</sub> U <sub>Aux</sub> - 0.2           Supply voltage (upple)         V         V         V <sub>V</sub> Power - 0.2         V <sub>V</sub> V <sub>V</sub> Power - 0.2         V <sub>V</sub> V <sub>V</sub> V <sub>V</sub> Power - 0.2         V <sub>V</sub> V <sub>V</sub> V <sub>V</sub> Power - 0.2         V <sub>V</sub> V <sub>V</sub> V <sub>V</sub> Power - 0.2         V <sub>V</sub> V <sub>V</sub> V <sub>V</sub> Power - 0.2         V <sub>V</sub>	Relative humidity			10 - 95%, non-condensing
Readed operational voltage Residual ripple on the input voltage ripple rippl				,
Residual ripple on the input voltage  Protection against polarity reversal  Max. current  Note  Note  Note  Short-circuit rating  Potential isolation  Rated operating voltage of 24-V-DC slaves  Supply voltage Upow  Supply voltage Upow  Siemens MPI, (optional)  Rated current  I Pow I A D A D A D A D A D A D A D A D A D A		$U_{\Delta_{IIX}}$	V	24 V DC (-20/+25%)
Max current Note Note Note Note Note Note Note Not	Residual ripple on the input voltage	7.07	%	
Max current Note Note Note Note Note Note Note Not	Protection against polarity reversal			Yes
Note Note		Imax	Α	
Short-circuit rating Potential isolation Rated operating voltage of 24-V-DC slaves Supply voltage Upow  Supply voltage Upow  Supply voltage Upow  Siemens MPI, (optionel) Rated current Overload proof  Heat dissipation at 24 V DC  Potential isolation between Upow and 15 V SmartWire-DT supply voltage  Rated operating voltage dips Rated doperating voltage dips Rated current  Meat dissipation at 24 V DC  Potential isolation between Upow and 15 V SmartWire-DT supply voltage  Rated operating voltage dips Rated operating voltage  Rated operating voltage dips Rated current Rated operating voltage  Rated current Rated operating voltage  Rated current Rated operating voltage  Rate operating voltage  Rat	Note	·IIIdX		If contactors with a total power consumption > 3 A are connected, a power feeder
Protential isolation Rated operating voltage of 24-V-DC slaves  Supply voltage Upow  Supply voltage Upow  Supply voltage ripple  Siemens MPI, (optional)  Rated current  I A D.7  Doverload proof  Noverload proof	Short-circuit rating			no, external fuse FAZ Z3
Rated operating voltage of 24-V-DC slaves  Supply voltage Upow  Supply voltage (Upow V 24 DC -20 % + 25 %  Input voltage ripple	· ·			
Supply voltage Upow  Supply voltage input voltage ripple  Siemans MPI, (optional)  Rated current  Diverload proof  Intuit voltage ripple  Intuit voltage voltage  Intuit voltage voltage ripple  Intuit voltage voltage ripple  Intuit voltage voltage ripple  Intuit voltage voltage  Intuit voltage  Intuit voltage voltage  Intuit voltage voltage  Intuit voltage			V	
Supply voltage         UPow         V         24 DC-20 % + 25 %           Injut voltage ripple         %         ≦           Siemens MPI, (optional)         yes           Rated current         I         A         0.0           Doverload proof         yes           Inrush current and duration         I         A         1.2 A/6 ms           Heat dissipation at 24 V DC         V         1.0           Pertential isolation between UPow and 15 V SmartWire-DT supply voltage         I         No           Repetition rate         I         I         I           Status indication         I         I         I           Repetition rate         I         I         I           Status indication         I         I         I           Status indication         I         I         I           Status indication         I         I         I           Rated operating voltage         U         V         I         I,5 ± 3 %           Max. current         I         I         I         I,5 ± 3 %           Note         I         I         I         I         I         I         I         I         I         I         I			•	typ. OAUX 0.2
Siemens MPI, (optional)  Siemens MPI, (optional)  Rated current  D'overload proof  Inrush current and duration  Heat dissipation at 24 V DC  Portential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage  Bridging voltage dips  Repetition rate  Status indication  It SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EUSC-SWD-PF2 has to be used.  Yes  Connection supply voltages  Connection type  Solid  Solid  Push in terminals  O2 - 1.5		11-	V	24 DC 20 V + 25 V
Siemens MPI, (optional)  Rated current  I A O.7  Overload proof  Inrush current and duration  Heat dissipation at 24 V DC  Potential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage  Bridging voltage dips  Repetition rate  Status indication  Status indication  SmartWire-DT supply voltage  Rated operating voltage  Max. current  I Max  A 0.7  If SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EUSC-SWO-PF2 has to be used.  Sconnection type  Connection type  Solid  I Max  Max  Max  Max  Max  Max  Max  Max		OP <sub>OW</sub>		
Rated current Diverload proof Intrush current and duration Heat dissipation at 24 V DC Heat dissipation at 24 V DC Protential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage Bridging voltage dips Repetition rate Status indication Status indication Status indication Status indication Status indication Status indication SmartWire-DT supply voltage Rated operating voltage  W V V V V V V V V V V V V V V V V V V			%	≥ <sub>5</sub>
Deverload proof Inrush current and duration Heat dissipation at 24 V DC Potential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage Bridging voltage dips Repetition rate Status indication Repetition rate Status indication Status indication Status indication Status indication Status indication Status indication SmartWire-DT supply voltage Rated operating voltage  We V 14,5 ± 3 %  Note  Note  Note  Note  Imax A 0.7  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.  Short-circuit rating Connection supply voltages  Connection supply voltages  Connection type  Push in terminals Solid	Siemens MPI, (optional)			yes
Heat dissipation at 24 V DC Potential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage  Bridging voltage dips Repetition rate Status indication SmartWire-DT supply voltage Reated operating voltage  Max. current Note Note Short-circuit rating Connection supply voltages  Connection type Solid  A 12.5 A/6 ms  W 1.0  No  1.0  1.0  No  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.	Rated current	I	Α	0.7
Heat dissipation at 24 V DC Potential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage Bridging voltage dips Repetition rate Status indication SmartWire-DT supply voltage Reated operating voltage Max. current Note Short-circuit rating Short-circuit rating Connection supply voltages Connection type Solid  W 1.0  No	Overload proof			yes
Potential isolation between U <sub>Pow</sub> and 15 V SmartWire-DT supply voltage  Bridging voltage dips  Repetition rate  Status indication SmartWire-DT supply voltage  Rated operating voltage  We Wo Max. current  Voltage  Ves  Connection supply voltages  Connection type  Solid  Voltage  Voltage  Voltage  Voltage  Voltage  Voltage  Ves  Vas  Vas  Vas  Vas  Vas  Vas  Va	Inrush current and duration		Α	12.5 A/6 ms
Bridging voltage dips Repetition rate Repetition rate Status indication Status indication SmartWire-DT supply voltage Reted operating voltage Ue V 14,5 ± 3 % max. current Note Note Short-circuit rating Short-circuit rating Connection supply voltages Connection type Solid Soli	Heat dissipation at 24 V DC		W	1.0
Repetition rate Status indication LED yes  SmartWire-DT supply voltage Rated operating voltage  Where the proper supply voltage  Max. current Note Short-circuit rating Connection supply voltages Connection type Solid  Status indication LED yes  14,5 ± 3 %  0.7  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.  Yes  Push in terminals  O.2 - 1.5	Potential isolation between $\rm U_{Pow}$ and 15 V SmartWire-DT supply voltage			No
Repetition rate Status indication LED yes  SmartWire-DT supply voltage Rated operating voltage  Where the proper supply voltage  Max. current Note Short-circuit rating Connection supply voltages Connection type Solid  Status indication LED yes  14,5 ± 3 %  0.7  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.  Yes  Push in terminals  O.2 - 1.5	Bridging voltage dips		ms	10
Status indication  SmartWire-DT supply voltage  Rated operating voltage  Max. current  Ve V 14,5 ± 3 %  Mox. current  Volte V 14,5 ± 3 %  Note V 15 SmartWire-DT modules with a total power consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used.  Yes  Connection supply voltages  Connection type Solid  Push in terminals  mm² 0.2 - 1.5	Repetition rate		s	1
SmartWire-DT supply voltage Rated operating voltage  Ue V 14,5 ± 3 %  Max. current  Imax A 0.7  Note  Short-circuit rating  Connection supply voltages  Connection type Solid  Push in terminals  mm² 0.2 - 1.5	Status indication		LED	yes
Rated operating voltage  Ue V 14,5 ± 3 %  0.7  Note Note Short-circuit rating Connection supply voltages Connection type Solid  Ve V 14,5 ± 3 %  0.7  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.  Yes  Push in terminals  0.2 - 1.5	SmartWire-DT supply voltage			
Imax. current  Imax  A  0.7  Note  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.  Yes  Connection supply voltages  Connection type  Solid  Push in terminals  O.2 - 1.5	Rated operating voltage	U <sub>e</sub>	V	14,5 ± 3 %
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.  Short-circuit rating  Yes  Connection supply voltages  Connection type  Push in terminals  Solid  mm²  0.2 - 1.5	max. current	I <sub>max</sub>	Α	0.7
Connection supply voltages Connection type Push in terminals Solid nm <sup>2</sup> 0.2 - 1.5	Note			
Connection supply voltages Connection type Push in terminals Solid nm <sup>2</sup> 0.2 - 1.5	Short-circuit rating			Yes
Connection type Push in terminals Solid Push in terminals 0.2 - 1.5	Connection supply voltages			
	Connection type			Push in terminals
	Solid		mm <sup>2</sup>	0.2 - 1.5
mm <sup>-</sup> v.es 1.3	Flexible with ferrule			0.25 - 1.5
			mm-	

UL/CSA solid or stranded	AWG	24 - 16
SmartWire-DT network		
Station type		SmartWire-DT master
Number of SmartWire-DT slaves		99
Baud Rates	kBd	125 250
Address allocation		automatic
Status indication	LED	SmartWire-DT master LED: ret/green Configurations LED: red/green
Connections		Plug, 8-pole
Plug connectors		Blade terminal SWD4-8MF2

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	0
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	9.5
Heat dissipation capacity	P <sub>diss</sub>	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 IIM interferen DDOCINICT		0
Number of HW-interfaces PROFINET		0
Number of HW-interfaces RS-232		0
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 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		No
Supporting protocol for CAN		Yes
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
10 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	7
Number of pixels, horizontal		800
Number of pixels, vertical		480
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	210
Height of the front	mm	135
Built-in depth	mm	33

## **Approvals**

Product Standards	UL508, cULus; IEC/EN 61131-2, CE
UL File No.	E205091
UL Category Control No.	NRAQ
CSA File No.	UL report applies to US and Canada
CSA Class No.	-
North America Certification	UL listed, certified by UL for use in Canada
Current Limiting Circuit-Breaker	No
Degree of Protection	IEC:IP20, UL/CSA Tape: open type

## **Dimensions**



## **Additional product information (links)**

Instruction leaflet IL048007ZU XV-102		
Instruction leaflet IL048007ZU XV-102	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL048007ZU.pdf	
MN04802004Z Operator manual XV-102		
MN04802004Z Betriebsanleitung XV-102 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802004Z_DE.pdf	
MN04802004Z Operator manual XV-102 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802004Z_EN.pdf	
MN04802013Z guick-start instructions XV100		

MN04802013Z Schnellstartanleitung XV100 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802013Z_DE.pdf				
MN04802013Z quick-start instructions XV100 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802013Z_EN.pdf				
MN04802091Z User manual XSoft-CoDeSys-2, F	PLC programming XV100				
MN04802091Z Benutzerhandbuch XSoft- CoDeSys-2, SPS-Programmierung XV100 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802091Z-DE.pdf				
MN04802091Z User manual XSoft-CoDeSys-2, PLC programming XV100 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04802091Z-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				