Technical Data

MICRO PANEL

XP-702 BOX/8.4"/10.4"/12.1"/15"

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Innovation in Automation

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1. Technical datan

1.1 Dimensions and weights

1.1.1 BOX devices

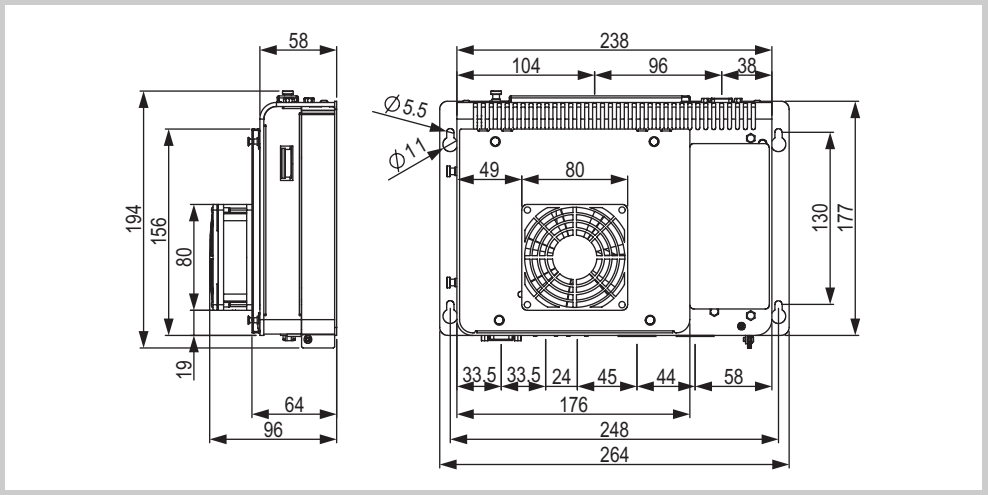

Fig. 1 Mechanical dimensions of the BOX devices

Property	XP-702 BOX
Height	194 mm
Width	264 mm
Depth	
Devices without active cooling	58 mm
Devices with active cooling	96 mm
Weight	
Devices without active cooling	Approx. 1.9 kg
Devices with active cooling	Approx. 2.3 kg

Tab. 1 Dimensions and weights of the BOX devices

1.1.2 8.4" devices

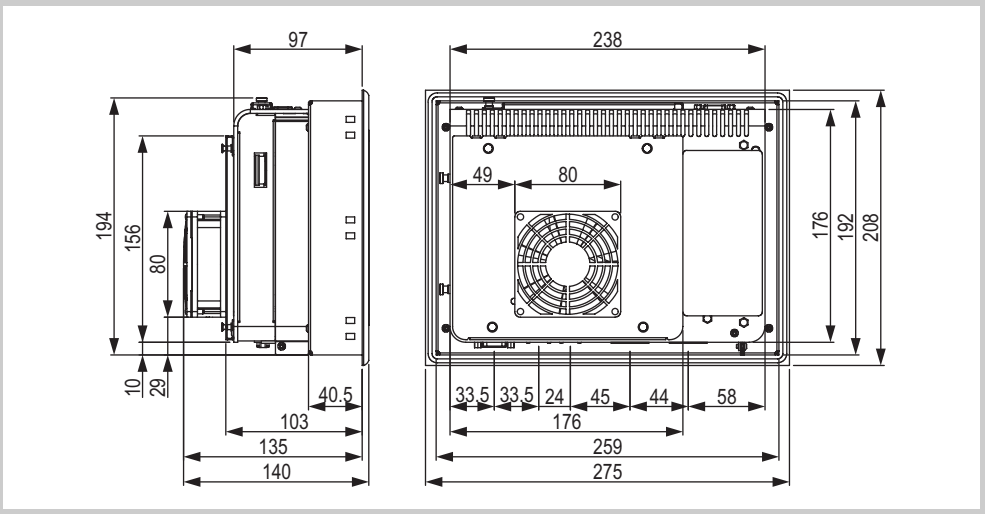

Fig. 2 Mechanical dimensions of the 8.4" devices

Property	XP-702 8.4"
Height	208 mm
Width	275 mm
Depth incl. front plate	
Devices without active cooling	102 mm
Devices with active cooling	140 mm
Thickness of front plate	5 mm
Mounting depth	
Devices without active cooling	97 mm
Devices with active cooling	135 mm
Mounting cutout	261 mm × 194 mm (±1 mm)
Weight	
Devices without active cooling	Approx. 3.2 kg
Devices with active cooling	Approx. 3.6 kg

Tab. 2 Dimensions and weights of the 8.4" devices

1.1.3 10.4" devices

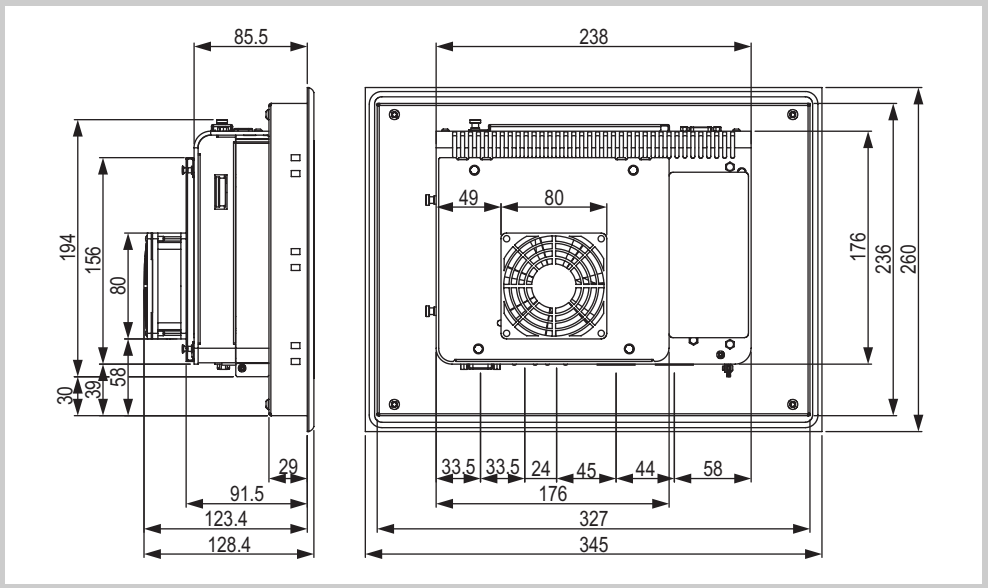

Fig. 3 Mechanical dimensions of the 10.4" devices

Property	XP-702 10.4"
Height	260 mm
Width	345 mm
Depth incl. front plate	
Devices without active cooling	90.5 mm
Devices with active cooling	128.5 mm
Thickness of front plate	5 mm
Mounting depth	
Devices without active cooling	85.5 mm
Devices with active cooling	123.5 mm
Mounting cutout	329 × 238 mm (±1 mm)
Weight	
Devices without active cooling	Approx. 4.1 kg
Devices with active cooling	Approx. 4.5 kg

Tab. 3 Dimensions and weights of the 10.4" devices

1.1.4 12.1" devices

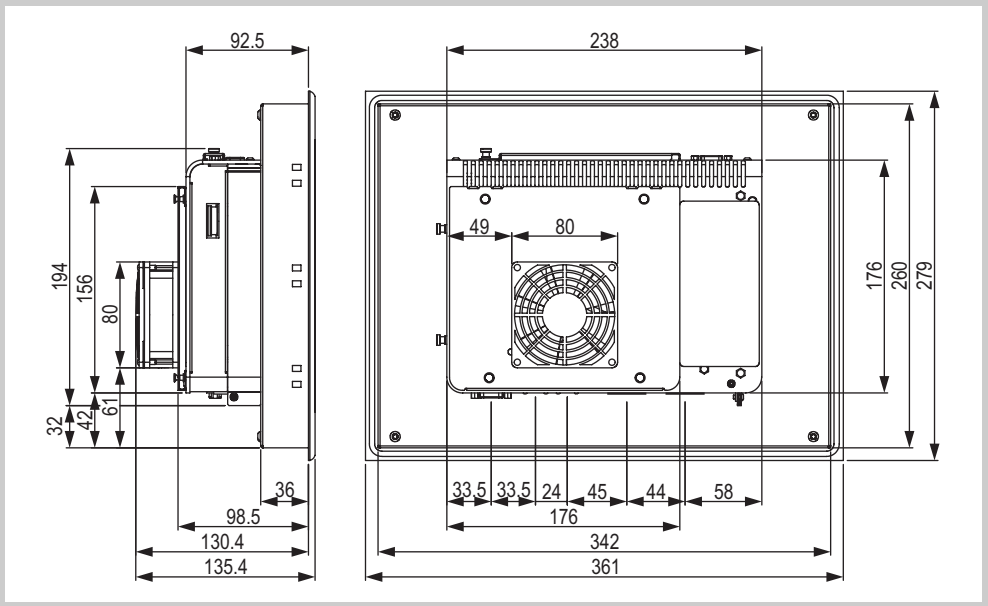

Fig. 4 Mechanical dimensions of the 12.1" devices

Property	XP-702 12.1"
Height	279 mm
Width	361 mm
Depth incl. front plate	
Devices without active cooling	97.5 mm
Devices with active cooling	135.5 mm
Thickness of front plate	5 mm
Mounting depth	
Devices without active cooling	92.5 mm
Devices with active cooling	130.5 mm
Mounting cutout	344 × 262 mm (±1 mm)
Weight	
Devices without active cooling	Approx. 4.7 kg
Devices with active cooling	Approx. 5.1 kg

Tab. 4 Dimensions and weights of the 12.1" devices

1.1.5 15" devices

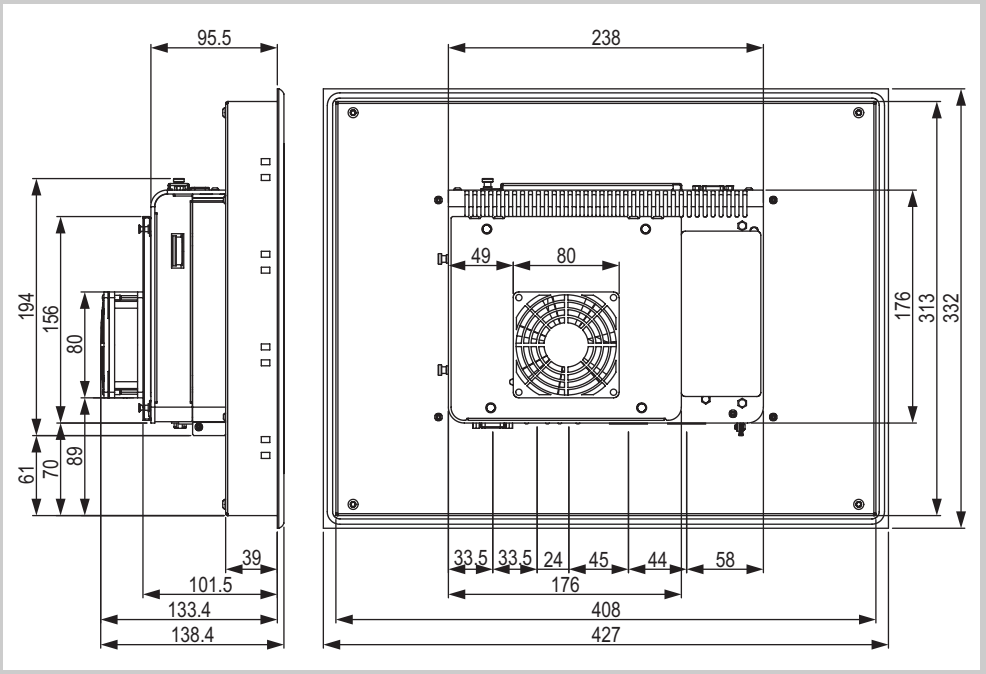

Fig. 5 Mechanical dimensions of the 15" devices

Property	XP-702 15"
Height	332 mm
Width	427 mm
Depth incl. front plate	
Devices without active cooling	100.5 mm
Devices with active cooling	138.5 mm
Thickness of front plate	5 mm
Mounting depth	
Devices without active cooling	95.5 mm
Devices with active cooling	133.5 mm
Mounting cutout	410 mm × 315 mm (±1 mm)
Weight	
Devices without active cooling	Approx. 6.3 kg
Devices with active cooling	Approx. 6.7 kg

Tab. 5 Dimensions and weights of the 15" devices

1.2 Display

Property	XP-702 8.4"/10.4"/12.1"/15"
Type	TFT-LCD (color)
Resolution (W × H)	
SVGA devices: ■ XP-702-..-84TSI ■ XP-702-..-10TSI	SVGA (800 × 600 pixels)
XGA devices: ■ XP-702-..-12TXI ■ XP-702-..-15TXI	XGA (1024 × 768 pixels)
Visible display area	
8.4" devices	170 mm × 128 mm (8.4" screen diagonal)
10.4" devices	211 mm × 158 mm (10.4" screen diagonal)
12.1" devices	246 mm × 185 mm (12.1" screen diagonal)
15" devices	304 mm × 228 mm (15" screen diagonal)
Color resolution	Adjustable: 16.7 m, 64 k or 256 colors
Contrast ratio	Normally 400:1
Brightness	Normally 400 cd/m^2
Backlight	
Technology	
8.4", 10.4" and 12.1" devices	2× CCFL
15" devices	4× CCFL
Lifespan	Normally 50 000 h
Infra-red touch protective panel	Non-reflective safety glass

Tab. 6 Display

1.3 Touch sensor

Property	XP-702 8.4"/10.4"/12.1"/15"
Type	Infra-red touch
Resolution	
8.4" devices	63 × 47 logic channels
10.4" devices	79 × 59 logic channels
12.1" devices	95 × 71 logic channels
15" devices	107 × 83 logic channels

Tab. 7 Touch sensor of the devices with infra-red touch

1.4 System

Property	XP-702
Processor, depending on the device version:	
Devices with 600 MHz (XP-702-B#)	X86 Celeron M, 600 MHz
Devices with 1 GHz (XP-702-C#)	X86 Celeron M, 1 GHz
Devices with 1.8 GHz (XP-702-D#)	X86 Pentium M, 1.8 GHz
Internal memory	
DRAM	
Devices with 600 MHz (XP-702-B#)	512 MByte
Devices with 1 GHz (XP-702-C#)	1024 MByte
Devices with 1.8 GHz (XP-702-D#)	2048 MByte
NVRAM	128 kByte
External memory	
CF slot	2× CompactFlash Card Type I/II for operating system, programs and data
Hard disc (optional)	1× 2.5" hard disc for operating system, programs and data
Real-time clock (battery backup)	
Battery type	CR2477 (950 mA/h), maintenance-free
Backup time in de-energized state	Normally 10 years

Tab. 8 System

1.5 Interfaces

Property	XP-702
Ethernet	■ 1 × 100Base-TX / 10Base-T ■ 1 × 1000Base-T / 100Base-TX / 10Base-T
COM	2 × RS232, not electrically isolated
USB Host	4 × USB 2.0 (1.5 / 12 / 480 Mbit/s), not electrically isolated
PCI	PCI 32 bit 2.1: Slot for PCI expansion card, (e.g.: communication module)
VGA	VGA
DVI (only BOX devices)	DVI-D (Single-Link)
Power supply	→ Chapter 1.5.1, 11
DIAG	Only for service tasks

Tab. 9 Interfaces

1.5.1 Power supply

Devices with 600 MHz (XP-702-B#) and 1 GHz (XP-702-C#)

Property	XP-702-B# and XP-702-C#
Rated voltage	24 VDC SELV (safety extra low voltage)
Permissible voltage	■ RMS value: 20.4…28.8 VDC (rated voltage +20 % / -15 %) ■ Absolute with ripple: 19.2…30.0 VDC ■ 35 VDC for a period < 100 ms
Voltage dips	■ 1 ms from rated voltage (24 VDC) ■ 1 ms from undervoltage (20.4 VDC)
Power consumption	
BOX devices	
Basic device	Max. 20 W (normally 16 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 36.6 W
8.4" devices	
Basic device	Max. 27 W (normally 23 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 43.6 W
10.4" devices	
Basic device	Max. 29 W (normally 24 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 45.6 W
12.1" devices	
Basic device	Max. 29 W (normally 24 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 45.6 W

Property	XP-702-B# and XP-702-C#
15" devices	
Basic device	Max. 47 W (normally 40 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 63.6 W
Current consumption	
Continuous current	
BOX devices	Max. 1.5 A (24 VDC)
8.4" devices	Max. 1.8 A (24 VDC)
10.4" devices	Max. 1.9 A (24 VDC)
12.1" devices	Max. 1.9 A (24 VDC)
15" devices	Max. 2.7 A (24 VDC)
Starting current inrush	2 A^2s
Protection against reverse polarity	Yes
Fuse protection	Yes (replacement is only allowed by the manufacturer or from a repair center authorized by the manufacturer)
Potential isolation	No

Tab. 10 Power supply devices with 600 MHz (XP-702-B#) and 1 GHz (XP-702-C#)

Devices with 1.8 GHz (XP-702-D#)

Property	XP-702-D#
Rated voltage	24 VDC SELV (safety extra low voltage)
Permissible voltage	■ RMS value: 20.4…28.8 VDC (rated voltage +20 % / -15 %) ■ Absolute with ripple: 19.2…30.0 VDC ■ 35 VDC for a period < 100 ms
Voltage dips	■ 1 ms from rated voltage (24 VDC) ■ 1 ms from undervoltage (20.4 VDC)
Power consumption	
BOX devices	
Basic device	Max. 33 W (normally 17 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 49.6 W
8.4" devices	
Basic device	Max. 40 W (normally 23 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 56.6 W
10.4" devices	
Basic device	Max. 42 W (normally 25 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 58.6 W
12.1" devices	
Basic device	Max. 42 W (normally 25 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 58.6 W

Property	XP-702-D#
15" devices	
Basic device	Max. 61 W (normally 41 W)
PCI expansion card	1 × max. 6.6 W
USB stations on USB host	4 × max. 2.5 W
Total	Max. 77.6 W
Current consumption	
Continuous current	
BOX devices	Max. 2.0 A (24 VDC)
8.4" devices	Max. 2.4 A (24 VDC)
10.4" devices	Max. 2.5 A (24 VDC)
12.1" devices	Max. 2.5 A (24 VDC)
15" devices	Max. 3.2 A (24 VDC)
Starting current inrush	2 A^2s
Protection against reverse polarity	Yes
Fuse protection	Yes (replacement is only allowed by the manufacturer or from a repair center authorized by the manufacturer)
Potential isolation	No

Tab. 11 Power supply devices with 1.8 GHz (XP-702-D#)

1.6 IP protection classes

Property	XP-702
Front, depending on the device version:	
Devices without display (BOX devices)	IP20
Devices with display	IP65: Required accessories for mounting: ■ Additional set of retaining brackets (optional)
Rear	IP20

Tab. 12 Protection classes

1.7 Approvals and declarations

Property	XP-702
EMC	2004/108/EC
Explosion protection, depending on the device version:	
Devices without display (BOX devices)	II 3D Ex II T70°C IP5x (ATEX 94/9/EC): ■ Zone 22, category 3D
Devices with display	II 3D Ex II T70°C IP5x (ATEX 94/9/EC): ■ Zone 22, category 3D: Required accessories for mounting: - Additional set of retaining brackets (optional)

Tab. 13 Approvals and declarations

1.8 Applicable standards and regulations

Property	XP-702
EMC (in relation to CE)	
EN 61000-6-2	Immunity for industrial areas
EN 61000-6-4	Emission for industrial environments
EN 61131-2	Programmable logic controllers, equipment requirements and tests
Explosion protection (in relation to CE)	
ATEX 94/9/EC: Zone 22, Category 3D (II 3D Ex II T70°C IP5x):	
EN 60079-0 (old: EN 50014)	Electrical apparatus for explosive gas atmospheres
EN 61241-1 (old: EN 50281-1-1)	Electrical apparatus for use in the presence of combustible dust
EN 13463	Non-electrical equipment for use in explosion hazardous areas
Safety	
EN 60950 UL 60950	Safety of information technology equipment
Product standards	
EN 50178	Electronic equipment for use in power installations
EN 61131-2	Programmable logic controllers, equipment requirements and tests

Tab. 14 Applicable standards and regulations

1.9 Ambient conditions

Property	XP-702
Temperature:	
Operation	
Devices without hard disc	0…50°C
Devices with consumer hard disc (optional, unsuitable for continuous operation)	0…45°C
Devices with industrial hard disc (optional, suitable for continuous operation)	0…50°C
Storage / Transport	-20…60°C
Relative air humidity	10…95%, non-condensing
Vibration	According to IEC68-2-6
Shock	According to IEC68-2-27
Fall test	According to IEC68-2-32

Tab. 15 Ambient conditions