## **Operating and monitoring systems** KVM system SERIES 600 Device platform MANTA OS MT-677-DVI3-SM



**SAFE AREA** 



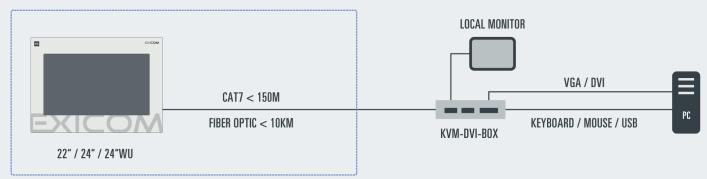
WebCode MT677A

- KVM Operator Station, 24" display, full HD 1920 x 1080
- Zone 2, 22 unit
- · Optional resistive glass or foil touch screen
- Data transmission via single mode fibre optic up to 10 km.

The OS MT-677-DVI3 HMI series includes KVM operator stations for hazardous zones 2 and 22. Their brilliant 24" widescreen displays with a resolution of 1920 x 1080 pixels (format 16:9), and are available with or without touch screen. The stainless steel enclosures (SS304 or SS316L) are available with a front opening or in cleanroom-compliant design and with different mounting options. Country-specific keyboards, pointer instruments and RFID and barcode scanners are useful accessories making work easier and extending functionality. Data is transmitted via single mode fibre optic up to 10 km.

## **KVM-SYSTEMS MANTA (SERIES 6X7)**

## Zone 1 / 2 / 21 / 22 – Class I, Zone 1 / Class I, Div 2 / Safe areas



## **Technical Data**

General		
Series	Product Series OS MT-677	
Product description	24" KVM system	
Technology	Remote HMI KVM	
HMI type	Operator station	
WebCode	MT677A	
Explosion Protection		
Application range (zones)	2	
	22	

**Explosion Protection** 

Certifications

Ochtinodions	THEX, HOEX, ENO, ONEX
Certification IECEx	IECEx BVS 14.0034X
Certification ATEX	BVS 12 ATEX E 033 X
Certification EAC	ТС RU C-DE.ГБ04.В00478
Certification CNEX	CNEx14.2205X
Certification note	The certificates and explosion protection markings apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.
Gas explosion protection IECEx	Ex nA nR [ia op is Ga] IIC T4 Gc
Dust explosion protection IECEx	Ex tc IIIC [ia op is Da] IP66 T110°C Dc
Gas explosion protection ATEX	II 3(1) G Ex nA nR [ia op is Ga] IIC T4 Gc
Dust explosion protection ATEX	II 3(1) D Ex tc IIIC [ia op is Da] IP66 T110°C Dc
Gas explosion protection EAC	2Ex nA nR ia [ia op is Ga] IIC T4 Gc X
Dust explosion protection EAC	Ex tc ia IIIC [ia op is Da] IP66 T110°C Dc
Gas explosion protection CNEX	Ex nA nR [ia op is Ga] IIC T4 Gc
Dust explosion protection CNEX	Ex tc IIIC [ia op is Da] IP66 T110°C Dc
Electrical Data	
Power consumption AC 1	1A
Power consumption DC	3A
Transfer technology	KVM-DVI3
Ethernet / Data	Optical fibre single mode
Data cable	9/125 µm FO cable
Data cable length	max. 10 km
Interface medium	Single-mode optical fibre cable
Interface USB	2 x USB (Ex ia) 1 x USB (Ex nA) 2 x USB (Ex ia) (keyboard, pointing device)
Interface serial	1 x RS-232 (Ex nA)
Interface audio	1 x Audio Line in / out (Ex nA)
WLAN	optional via USB
Rated operational voltage AC	230 V
Voltage range AC	100 – 240 V
Rated operational voltage DC	24 V
Voltage range DC	20 – 30 V
Frequency range	50 – 60 Hz
Rated operational power	typ. 50 W / 100 W with O30 / max. 150 W (typ. 170 BTU / 341 BTU with O30 / max. 510 BTU)
Protection fuse AC	5 AT
Protection fuse DC	5 AT
Connection compartment	Power supply direct in integrated connection box
Connections	via spring clamp terminals, green
Wiring	flexible cable up to 2.5 mm <sup>2</sup> (AWG14) fixed cable up to 4 mm <sup>2</sup> (AWG12)
Max. input voltage Um	250 VAC
Plug version FO	LC duplex connector

ATEX, IECEx, EAC, CNEX



STA	
JIA	

Display version 2       TFT Colour display         Display version 2       16,7 million colours         Display size inch       24         Display size inch       190         Display version 5       191         Display size centimetres       61         Display resolution       Full HD         Total pixels       1920 x 1080         Display dimensions       16:9         Display brightness       300 cd/m²         Display contrast       1000:1         Touch screen       Optional resistive         Touch screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight envice life       50000 h at +20 °C         Front plate (display)       Aluminium         Ambient temperature operation       -20 °C +55 °C with heater version 030         Storage temperature       -30 °C +70 °C         Cold start temperature       -30 °C +70 °C         Cold start temperature:       If the HMI device is switched on at a temperature below -10 °C the display.         Temperature note 2       Operating temperature:         Temperature note 3       Cold start temperature:         Temperature note 3       Cold start temperature:         Temperature note 3	Display	
Display size centimetres         61           Display size centimetres         61           Display size centimetres         61           Display resolution         Full HD           Total pixels         1920 x 1080           Display dimensions         19:9           Display brightness         300 cd/m²           Display brightness         300 cd/m²           Display torightness         0ptional resistive           Touch screen technology         5-wire glass or membrane touch           Backlight service life         50000 h at +20 °C           Front plate (display)         Aluminium           Ambient temperature operation         -20 °C +55 °C           Armbient temperature operation         -30 °C +55 °C Vith heater version 030           Storage temperature         -30 °C +55 °C Vith heater version 030           Storage temperature         -30 °C +55 °C Vith heater version 0400 eversion devices 1           Temperature note 1         The 030 version is only available for the AC version devices 1           Temperature note 2         Operating temperature +56 °C to ra maximum of 5 h, for constant operation (247) +50           Temperature note 2         Operating temperature version 20 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low for the temperature is, this proceas may lastu	Display version	TFT Colour display
Display size certimetres         61           Display resolution         Full HD           Total pixels         1920 x 1080           Display dimensions         16:9           Display dimensions         100:1           Touch screen         Optional resistive           Ambient temperature operation         -30 °C           -30 °C         -+50 °C           Cold start temperature ote1         The C30 version is only available for the AC version devices 1 <td>Display version 2</td> <td>16.7 million colours</td>	Display version 2	16.7 million colours
Display resolution         Full HD           Total pixels         1920 x 1080           Display dimensions         16:9           Display dimensions         16:9           Display dimensions         10:0:1           Touch screen         Optional resistive           Touch screen technology         5-wire glass or membrane touch           Backlight         LED Technology           Backlight         LED Technology           Advertice         50:000 h at +20 °C           Front plate (display)         Aluminium           Ambient Conditions         -           Ambient Conditions         -           Ambient Conditions         -           Cold start temperature operation         -20 °C +55 °C           Ambient temperature operation         -20 °C +55 °C           Ambient temperature         -10 °C           Temperature note 1         The 0:30 version is only available for the AC version devices !           Temperature note 2         Operating temperature:           Operating temperature:         in the Water of Cold start temperature:           If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.	Display size inch	24
Total pixels     1920 x 1080       Display dimensions     16:9       Display dimensions     300 cd/m²       Display contrast     1000:1       Touch screen     Optional resistive       Touch screen technology     5-wire glass or membrane touch       Backlight     LED Technology       Backlight     LED Technology       Auminium     Auminium       Ambient temperature operation     -20 °C +55 °C       Annbient temperature operation     -30 °C +55 °C       Ambient temperature operation     -30 °C +55 °C       Cold start temperature     -30 °C +70 °C       Cold start temperature     -10 °C       Temperature note 1     The 030 version is only available for the AC version devices 1       Temperature note 2     Operating temperature:       Operating temperature:     10 °C or a maximum of 5 h, for constant operation (24/7) +50       Temperature note 3     If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is his process may last up to 3 hours.       Temperature note general     The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.       Material front     Aluminium / stainless steel       Material front	Display size centimetres	61
Display dimensions     16:9       Display dimensions     16:9       Display contrast     1000:1       Touch screen     Optional resistive       Touch screen     Dotonal resistive       Touch screen     Dotonal resistive       Touch screen     Dotonal resistive       Stakight     LED Technology       Backlight     Soloo h at +20 °C       Front plate (display)     Aluminium       Ambient Conditions     -20 °C +55 °C       Ambient temperature operation     -30 °C +55 °C       Ambient temperature operation     -30 °C +55 °C       Cold start temperature     -30 °C +55 °C       Temperature note 1     The O30 version is only available for the AC version devices !       Temperature note 1     The O30 version is only available for the AC version devices !       Temperature note 1     The O30 version is only available for the AC version devices !       Temperature note 2     Operating temperature +55 °C for a maximum of 5 h, for constant operation (2477) +50       Temperature note 3     Cold start temperature is, this process may last up to 3 hours.       Temperature note general     The temperature dealis apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.       Mechanical Data     Imensions (WxHxD)       Material front     Aluminium /	Display resolution	Full HD
Display brightness     300 cd/m²       Display contrast     1000:1       Touch screen     Optional resistive       Touch screen technology     5-wire glass or membrane touch       Backlight     LED Technology       Backlight service life     50000 h at +20 °C       Front plate (display)     A luminium       Ambient Conditions     -20 °C +55 °C       Ambient temperature operation     -20 °C +75 °C       Ambient temperature operation     -30 °C +75 °C       Ambient temperature operation     -30 °C +70 °C       Cold start temperature note 1     The 030 version is only available for the AC version devices I       Temperature note 1     The 030 version is only available for the AC version devices I       Temperature note 2     Operating temperature:       If the HMI device is switched on at a temperature slow -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.       Temperature note 3     The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.       Mechanical Data     Dimensions (WxHxD)       Dimensions (WxHxD)     740 mm x 872 mm x 400 mm       Weight     58.5 kg       Material front     Aluminium / stainless steel       Ingress pro	Total pixels	1920 x 1080
Display contrast     1000:1       Touch screen     Optional resistive       Touch screen     Optional resistive       Backlight     LED Technology       Backlight service life     50000 h at +20 °C       Front plate (display)     Aluminium       Ambient Conditions     -20 °C +55 °C       Ambient temperature operation     -20 °C +55 °C       Ambient temperature operation     -30 °C +55 °C       Ambient temperature operation     -30 °C +70 °C       Cold start temperature     -30 °C +70 °C       Cold start temperature     -10 °C       Temperature note 1     The 030 version is only available for the AC version devices !       Temperature note 2     Operating temperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 3     Cold start temperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 3     Cold start temperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 3     Cold start temperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 3     Cold start temperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 4     etenperature +5°C for a maximum of 5 h, for constant operation (24/7) +50       Temperature note 5     The temperature +5°C for a maximum of 5 h, for constant operatin extreme in the temperature	Display dimensions	16:9
Touch screen         Optional resistive           Touch screen technology         5-wire glass or membrane touch           Backlight         LED Technology           Backlight service life         50000 h at +20 °C           Front plate (display)         Aluminium           Ambient Conditions	Display brightness	300 cd/m <sup>2</sup>
Touch screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight service life       50000 h at +20 °C         Front plate (display)       Aluminium         Ambient Conditions       -20 °C +55 °C         Ambient temperature operation       -20 °C +55 °C         Ambient temperature operation       -30 °C +75 °C         Cold start temperature operation       -30 °C +77 °C         Cold start temperature note 1       The O30 version is only available for the AC version devices 1         Temperature note 2       Operating temperature: if the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WXHxD)         Dimensions (WXHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material back       Stainless steel         Ingress protection       IP66         Breather       Optional         Keyboard note       With a keyboard with trackball, is moved.	Display contrast	1000:1
Backlight         LED Technology           Backlight service life         50000 h at +20 °C           Front plate (display)         Aluminum           Ambient Conditions	Touch screen	Optional resistive
Backlight service life       50 000 h at +20 °C         Front plate (display)       Aluminium         Ambient Conditions       -         Ambient temperature operation       -20 °C +55 °C         Ambient temperature operation 1       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The 030 version is only available for the AC version devices !         Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature:         If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is. this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Vieta       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material font       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to I when the trackbal	Touch screen technology	5-wire glass or membrane touch
Front plate (display)       Aluminium         Ambient Conditions       -20 °C +55 °C         Ambient temperature operation       -30 °C +55 °C         Ambient temperature operation 1       -30 °C +55 °C         Storage temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The O30 version is only available for the AC version devices !         Temperature note 2       Operating temperature: +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is m	Backlight	LED Technology
Ambient Conditions       -20 °C +55 °C         Ambient temperature operation 1       -30 °C +55 °C         Ambient temperature operation 1       -30 °C +55 °C         Storage temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The 030 version is only available for the AC version devices !         Temperature note 2       Operating temperature:         If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WXHXD)         Dimensions (WXHXD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclos ure types as well as any additional bui	Backlight service life	50 000 h at +20 °C
Ambient temperature operation       -20 °C +55 °C         Ambient temperature operation 1       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The O30 version is only available for the AC version devices 1         Temperature note 2       Operating temperature:         If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       T40 mm x 872 mm x 400 mm         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure / change these.         Mounting / Installation       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure / change these. <td>Front plate (display)</td> <td>Aluminium</td>	Front plate (display)	Aluminium
Ambient temperature operation 1       -30 °C +55 °C with heater version O30         Storage temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The O30 version is only available for the AC version devices !         Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an imp	Ambient Conditions	
Storage temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Temperature note 1       The O30 version is only available for the AC version devices !         Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may hav	Ambient temperature operation	-20 °C +55 °C
Cold start temperature       -10 °C         Temperature note 1       The O30 version is only available for the AC version devices !         Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow	· · · · · · · · · · · · · · · · · · ·	-30 °C +55 °C with heater version O30
Temperature note 1       The O30 version is only available for the AC version devices !         Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow	Storage temperature	-30 °C +70 °C
Temperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50         Temperature note 3       Cold start temperature: If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure type as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Enclosure type       Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand <td>Cold start temperature</td> <td>-10 °C</td>	Cold start temperature	-10 °C
Temperature note 3       Cold start temperature:         If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Dimensions (WxHxD)         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure (FR)         Enclosure type       Stainless steel enclosure (FR)         optional clean room (CFR)       Wall, elbow, stand	Temperature note 1	The O30 version is only available for the AC version devices !
If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how low the temperature is, this process may last up to 3 hours.         Temperature note general       The temperature details apply to a standard device combination with display, keyboard and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data	Temperature note 2	Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50 °C.
and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Temperature note 3	If the HMI device is switched on at a temperature below -10 °C the display will need a certain amount of time to warm up until everything is clearly visible. Depending on how
Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Temperature note general	
Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to If when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Mechanical Data	
Weight       58.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to If when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Dimensions (WxHxD)	740 mm x 872 mm x 400 mm
Material back       Stainless steel         Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand		58.5 kg
Ingress protection       IP66         Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to If when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Material front	Aluminium / stainless steel
Breather       optional         Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclo sure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Material back	Stainless steel
Keyboard note       With a keyboard with trackball, the operator station's ingress protection is reduced to II when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Ingress protection	IP66
when the trackball is moved.         Mechanical data note       The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact / change these.         Mounting / Installation       Enclosure type         Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand	Breather	optional
sure types as well as any additional built-in or added components may have an impact         / change these.         Mounting / Installation         Enclosure type       Stainless steel enclosure (FR) optional clean room (CFR)         Mounting option       Wall, elbow, stand         Components       Image these	Keyboard note	With a keyboard with trackball, the operator station's ingress protection is reduced to IP54, when the trackball is moved.
Enclosure type     Stainless steel enclosure (FR) optional clean room (CFR)       Mounting option     Wall, elbow, stand       Components     Image: Component state	Mechanical data note	The mechanical data apply to an FR enclosure with display and keyboard. Other enclo- sure types as well as any additional built-in or added components may have an impact on / change these.
optional clean room (CFR)       Mounting option     Wall, elbow, stand       Components	Mounting / Installation	
Components	Enclosure type	
Components	Mounting option	Wall, elbow, stand
Keyboard   optional, 107 keys with trackball / joystick / mouse / touchbad (Ex ia)	Keyboard	optional, 107 keys with trackball / joystick / mouse / touchpad (Ex ia)

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