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



**SAFE AREA** 



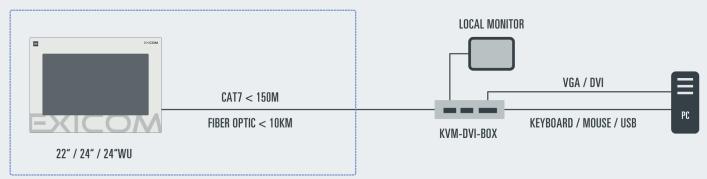
- KVM Operator Station, 24" display, full HD 1920 x 1080
- Zone 1, 2, 21, 22 and Division 2
- Optional resistive glass or foil touch screen
- Data transmission via CAT7 copper cable up to 150 m

WebCode ET677A

The OS ET-677-DVI3 HMI series includes KVM operator stations for zones 1, 2, 21, 22 and Division 2. 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 RFID readers and barcode scanners are useful accessories making work easier and extending functionality. Data is transmitted via CAT7 copper cable up to 150 m.

# **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 ET-677	
Product description	24" KVM system	
Technology	Remote HMI KVM	
HMI type	Operator station	
WebCode	ET677A	

# Explosion Protection Application range (zones) 1 2 21 22 Application range (divisions) Class I, Division 2 Certifications ATEX, IECEx, NEC, CEC, EAC, KGS Certification IECEx IECEx TUR 11.0075X Certification ATEX BVS 11 ATEX E 102 X Certification FAC TO DU O DE FEOM DOUTED

(arribionio)	
Certifications	ATEX, IECEx, NEC, CEC, EAC, KGS
Certification IECEx	IECEx TUR 11.0075X
Certification ATEX	BVS 11 ATEX E 102 X
Certification EAC	ТС RU C-DE.ГБ04.В00478
Certification NEC	70011698
Certification CEC	70011698
Certification KGS	12-GA4BO-0617X
Certification KCC	Depending on built-in components
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 e q [ia op is Ga] IIC T4 Gb
Dust explosion protection IECEx	Ex tb IIIC [ia op is Da] IP65 T110°C Db
Gas explosion protection ATEX	II 2(1) G Ex e q [ia op is Ga] IIC T4 Gb
Dust explosion protection ATEX	II 2(1) D Ex tb IIIC [ia op is Da] IP65 T110°C Db
Gas explosion protection EAC	1Ex e q [ia op is Ga] IIC T4 Gb X
Dust explosion protection EAC	Ex tb IIIC [ia op is Da] IP65 T110°C Db
Explosion protection NEC	Class I, Zone 1 AEx e q [ia] IIC T4 Gb
Explosion protection CEC	Ex e q [ia] IIC T4 Gb Class I, Division 2
Explosion protection KGS	Ex e q IIC T4 Ex tb IIIC IP64 T110°C Ex ia IIC T4 Ex ia IIIB T110°C
Electrical Data	
Power consumption AC 1	1A
Power consumption DC	3A
Transfer technology	KVM-DVI3
Ethernet / Data	CAT7
Data cable	CAT7 installation cable AWG 23
Data cable length	max. 150 m
Interface medium	CAT7 Data transmission
Interface USB	2 x USB (Ex ia) 1 x USB (Ex e) 2 x USB (Ex ia) (keyboard, pointing device)
Interface serial	1 x RS-232 (Ex e)
Interface audio	1 x Audio Line in / out (Ex e)
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
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Protection fuse AC       5 AT         Protection fuse DC       5 AT         Connection compartment       Power supply direct in integrated Ex e connection box         Connections       via screw ferminals, green         Wring       flex/ble cable up to 2.5 mm² (AWG14)         fixed cable up to 4 mm² (AWG12)         Max. input voltage Um       250 VAC         Display       TFT Colour display         Display version       TFT Colour display         Display size inch       24         Display intensions       16.3         Display dimensions       16.3         Display dimensions       16.3         Display dimensions       16.3         Display infinites       300 cd/m²         Display brightness       300 cd/m²         Display infinites       1000:1         Touch screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight service life       50000 h at +20 °C         Front plate (display)       Aluminum <th>Rated operational power</th> <th>typically 50 W / 100 W at O30 / max. 150 W (typically 170 BTU / 341 BTU at O30 / max. 510 BTU)</th>	Rated operational power	typically 50 W / 100 W at O30 / max. 150 W (typically 170 BTU / 341 BTU at O30 / max. 510 BTU)
Connection compartment         Power supply direct in integrated Ex e connection box           Connections         via screw terminals, green           Wring         ffexible cable up to 2.5 mm² (AWC14) fixed cable up to 4 mm² (AWC12)           Max. input voltage Um         250 VAC           Display         250 VAC           Display version         TFT Colour display           Display version 2         16.7 million colours           Display size inch         24           Display size centimetres         61           Display centimetres         61           Display centimetres         300 cd/m²           Display contrast         1000:1           Touch screen         optional, resistive           Ouch screen technology         5-wire glass or membrane touch           Backlight         LED Technology           Backlight         LED Technology           Backlight service life         50000 h at +20 °C           Cort plate (display)         Aluminium           Ambient temperature operation         -20 °C +55 °C           Ambient temperature operation         -30 °C +55 °C           Cold start temperature operation         -30 °C +55 °C           Ambient temperature operation         -20 °C +55 °C for a maximum of 5 h, for constant operation (247) +	Protection fuse AC	
Connections         via sorew terminals, green           Wring         flexible cable up to 2.5 mm² (AWG14) fixed cable up to 2.5 mm² (AWG12)           Wax. input voltage Um         250 VAC           Display         TFT Colour display           Display version         TFT Colour display           Display version 2         16.7 million colours           Display size inch         24           Display size centimetres         61           Display size centimetres         61           Display dimensions         16:9           Display dimensions         16:9           Display torisoth         1000:1           Touch screen         optional, resistive           Four Screen technology         5-wire glass or membrane touch           Backlight         ED Technology           Backlight service life         60000 h at +20 °C           Front plate (display)         Aluminium           Ambient Conditions         -30 °C +55 °C           Ambient temperature operation         -20 °C +55 °C or a maximum of 5 h, for constant operation (24/7) +5           Cold start temperature         -30 °C + 55 °C with heater version O30           Storage temperature         -30 °C + 55 °C or a maximum of 5 h, for constant operation (24/7) +5           Cold start temperature operation	Protection fuse DC	5 AT
Connections         via sorew terminals, green           Wring         flexible cable up to 2.5 mm² (AWG14) fixed cable up to 2.5 mm² (AWG12)           Wax. input voltage Um         250 VAC           Display         TFT Colour display           Display version         TFT Colour display           Display version 2         16.7 million colours           Display size inch         24           Display size centimetres         61           Display size centimetres         61           Display dimensions         16:9           Display dimensions         16:9           Display torisoth         1000:1           Touch screen         optional, resistive           Four Screen technology         5-wire glass or membrane touch           Backlight         ED Technology           Backlight service life         60000 h at +20 °C           Front plate (display)         Aluminium           Ambient Conditions         -30 °C +55 °C           Ambient temperature operation         -20 °C +55 °C or a maximum of 5 h, for constant operation (24/7) +5           Cold start temperature         -30 °C + 55 °C with heater version O30           Storage temperature         -30 °C + 55 °C or a maximum of 5 h, for constant operation (24/7) +5           Cold start temperature operation	Connection compartment	
Wring         flexible cable up to 2.5 mm² (AWG14) fixed cable up to 4 mm² (AWG12)           dax. input voltage Um         250 VAC           Display         250 VAC           Display version         TFT Colour display           Display version 2         16.7 million colours           Display size centimetres         61           Display size centimetres         61           Display resolution         Full HD           Total pixels         1920 x 1080           Display contrast         1000:1           Display contrast         1000:1           Touch screen         optional, resistive           Touch screen         optional, resistive           Touch screen technology         5-wire glass or membrane touch           Backlight         LED Technology           Backlight         LED Technology           Backlight         LED Technology           Storage temperature         -20 °C +55 °C           Ambient Conditions         -20 °C +55 °C           Storage temperature         -30 °C +55 °C to a maximum of 5 h, for constant operation (247) +5           Cod start temperature         -10 °C           Temperature note 1         The O30 version is only available for the AC version devices !           Temperature note 2         <	· · ·	
Display       TFT Colour display         Display version 2       16.7 million colours         Display size inch       24         Display size inch       24         Display size inch       61         Display size inch       190         Display size inch       190         Display contrast       1920 x 1080         Display dimensions       16.9         Display dimensions       16.9         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)       Aluminium         Ambient temperature operation       -20 °C +55 °C         Ambient temperature operation       -30 °C +55 °C C         The mograture note       -90 reparting temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5         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) +5         Temperature note 3       Cold start temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5	Viring	flexible cable up to 2.5 mm <sup>2</sup> (AWG14)
Display version       TFT Colour display         Display version 2       16.7 million colours         Display size inch       24         Display size centimetres       61         Display size centimetres       61         Display size centimetres       1920 x 1080         Display dimensions       16:9         Display dimensions       16:9         Display brightness       300 cd/m³         Display brightness       300 cd/m³         Display torget       1000:1         Fourtast       1000:1         Fourtast       000:1         Storget territe       50000 h at +20 °C         Front plate (display)       Aluminium         Ambient temperature operation       -20 °C +55 °C         Ambient temperature operation       -30 °C +70 °C         Cold start temperature operation       -30 °C +70 °C         Cold start temperature       -10 °C         Femperature note 1       The O30 version is only available for the AC version devices !         Femperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5         Femperature note 3       Cold start temperature below -10 °C the display will need a crian amount of time to warm up until everything is clearly visible. Depending on ho low the temperature is witched o	Max. input voltage Um	250 VAC
Display version       TFT Colour display         Display version 2       16.7 million colours         Display size inch       24         Display size inch       24         Display size centimetres       61         Display size centimetres       61         Display resolution       Full HD         Fordal pixels       1920 x 1080         Display dimensions       16.9         Display brightness       300 cd/m <sup>a</sup> Display brightness       300 cd/m <sup>a</sup> Display brightness       300 cd/m <sup>a</sup> Display brightness       400:1         Fourth Screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight       LED Technology         Adurinium       Aluminium         Ambient temperature operation       -20 °C +55 °C         Front plate (display)       Aluminium         Ambient temperature operation       -30 °C +55 °C Ambient temperature         Ambient temperature operation       -30 °C +55 °C Ambient temperature         Fermerature note 1       The O30 version is only available for the AC version devices !         Fermerature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operating on ho low the temperature is witched o	Display	
Display version 2       16.7 million colours         Display size entimetres       61         Display size centimetres       61         Display resolution       Full HD         Oldal pixels       1920 x 1080         Display dimensions       16:9         Display dimensions       1000.1         Display contrast       1000.1         Touch screen       optional, resistive         Touch screen       optional, resistive         Touch screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight service life       50000 h at +20 °C         Ambient Conditions		TFT Colour display
Display size inch       24         Display size centimetres       61         Display resolution       Full HD         Total pixels       1920 x 1080         Display dimensions       16:9         Display dimensions       16:9         Display contrast       1000:1         Four Screen       optional, resistive         Four Screen technology       5-wire glass or membrane touch         Backlight       LED Technology         Backlight       LED Technology         Backlight service life       5000 h at +20 °C         Front plate (display)       Aluminium         Ambient Conditions       -20 °C +55 °C         Storage temperature operation       -20 °C +55 °C with heater version O30         Storage temperature operation       -30 °C +70 °C         Cold start temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Femperature note 1       The O30 version is only available for the AC version devices !         Fermperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5         Fermperature note 3       Cold start temperature 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 holow the temperature is swit		
Full HD           Total pixels         1920 x 1080           Display dimensions         16:9           Display dimensions         16:9           Display contrast         1000:1           Douch 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         -20 °C +55 °C           Armbient temperature operation         -20 °C +55 °C           Armbient temperature operation         -30 °C +70 °C           Cold start temperature         -30 °C +70 °C           Cold start temperature         -10 °C           Temperature note 1         The O30 version is only available for the AC version devices !           Femperature 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 ho low the temperature is switched on at a temperature is clearly visible. Depending on ho low the temperature is this process may last up to 3 hours.           Femperature note general         The temperature details apply to a standard device combination with display, keyboat and enclosure. Any additional b		24
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         optional, resistive           Souch screen         optional, resistive           Sacklight         LED Technology           Sacklight service life         50000 h at +20 °C           Front plate (display)         Aluminium           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 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 ho low the temperature is, this process may last up to 3 hours.           Temperature note 2         Operating temperature approxemay last up to 3 hours.           Tempera	Display size centimetres	61
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 service life       50000 h at +20 °C         Front plate (display)       Aluminium         Ambient Conditions       -20 °C +55 °C         Ambient temperature operation       -20 °C +55 °C with heater version O30         Storage temperature       -30 °C +55 °C with heater version O30         Storage temperature       -30 °C +70 °C         Cold start temperature operation 1       -30 °C +70 °C         Cold start 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 ho low the temperature is subscribed on at a temperature below -10 °C the display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Wechanical Data       The trans X22 mm x 400 mm         Wieght       64.5 kg         Waterial front       Aluminium / stainless steel		Full HD
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 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         Cold start temperature operation       -30 °C +70 °C         Cold start temperature operation       -30 °C +70 °C         Cold start 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 ho low the temperature to warm up until everything is clearly visible. Depending on ho low the temperature details apply to a standard device combination with display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Tue trans x400 mm         Wieight       64.5 kg         Material front       Aluminium / stainless ste	Total pixels	1920 x 1080
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)       Aluminium         Ambient Conditions		16:9
Display contrast       1000:1         Fouch screen       optional, resistive         Fouch 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>
Four end explore         5-wire glass or membrane touch           Backlight         LED Technology           Backlight service life         50000 h at +20 °C           Front plate (display)         Aluminium           Ambient Conditions		1000:1
Backlight       LED Technology         Backlight service life       50 000 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         Cold start temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Femperature note 1       The O30 version is only available for the AC version devices !         Femperature note 2       Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5         Femperature 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 ho low the temperature is, this process may last up to 3 hours.         Femperature note general       The temperature details apply to a standard device combination with display, keyboar 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         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather <td< td=""><td>Fouch screen</td><td>optional, resistive</td></td<>	Fouch screen	optional, resistive
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 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) +5         Temperature note 3       Cold start temperature 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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       Other x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	Fouch screen technology	
Front plate (display)       Aluminium         Ambient Conditions       -20 °C +55 °C         Ambient temperature operation       -20 °C +55 °C with heater version O30         Storage temperature       -30 °C +70 °C         Cold start temperature       -10 °C         Femperature note 1       The O30 version is only available for the AC version devices !         Femperature 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 ho low the temperature est, shis process may last up to 3 hours.         Femperature note general       The temperature details apply to a standard device combination with display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	Backlight	LED Technology
Ambient Conditions         Ambient temperature operation       -20 °C +55 °C         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) +5         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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	Backlight service life	50 000 h at +20 °C
Ambient temperature operation       -20 °C +55 °C         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) +5         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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Vlaterial front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	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) +5         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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	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) +5         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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	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) +5         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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Weight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	Ambient temperature operation 1	-30 °C +55 °C with heater version O30
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 (24/7) +5         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 ho low the temperature is, this process may last up to 3 hours.         The temperature details apply to a standard device combination with display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Neight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	Storage temperature	-30 °C +70 °C
Temperature note 2Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +5Temperature note 3Cold 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 ho low the temperature is, this process may last up to 3 hours.Temperature note generalThe temperature details apply to a standard device combination with display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.Mechanical Data740 mm x 872 mm x 400 mmDimensions (WxHxD)740 mm x 872 mm x 400 mmMeterial frontAluminium / stainless steelMaterial backStainless steelIngress protectionIP66Breatheroptional	Cold start temperature	-10 °C
Femperature 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 ho 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, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.         Mechanical Data       740 mm x 872 mm x 400 mm         Dimensions (WxHxD)       740 mm x 872 mm x 400 mm         Veight       64.5 kg         Material front       Aluminium / stainless steel         Material back       Stainless steel         ngress protection       IP66         Breather       optional	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 ho low the temperature is, this process may last up to 3 hours.Temperature note generalThe temperature details apply to a standard device combination with display, keyboar and enclosure. Any additional built-in or added components may have an impact on / change these.Mechanical Data740 mm x 872 mm x 400 mmDimensions (WxHxD)740 mm x 872 mm x 400 mmNeight64.5 kgMaterial frontAluminium / stainless steelMaterial backStainless steelIP66IP66Breatheroptional	Femperature 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 DataDimensions (WxHxD)740 mm x 872 mm x 400 mmWeight64.5 kgMaterial frontAluminium / stainless steelMaterial backStainless steelIngress protectionIP66Breatheroptional	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 mmWeight64.5 kgMaterial frontAluminium / stainless steelMaterial backStainless steelIngress protectionIP66Breatheroptional	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.
Weight     64.5 kg       Material front     Aluminium / stainless steel       Material back     Stainless steel       ngress protection     IP66       Breather     optional	Mechanical Data	
Material front     Aluminium / stainless steel       Material back     Stainless steel       ngress protection     IP66       Breather     optional	Dimensions (WxHxD)	740 mm x 872 mm x 400 mm
Material back     Stainless steel       ngress protection     IP66       Breather     optional	Veight	64.5 kg
ngress protection IP66 Breather optional	Material front	Aluminium / stainless steel
Breather optional	Material back	Stainless steel
Breather optional	ngress protection	IP66
Keyboard note With a keyboard with trackball, the operator station's ingress protection is reduced to	Breather	optional
when the trackball is moved.	Keyboard note	With a keyboard with trackball, the operator station's ingress protection is reduced to IP54 when the trackball is moved.



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.
Stainless steel enclosure (FR) optional clean room (CFR)
Wall, elbow, stand
optional, 107 keys with trackball / joystick / mouse / touchpad (Ex ia)

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.