Operating and Monitoring Systems
KVM system SERIES 600
Device platform MANTA
PM MT-677-DVI3-SM

- KVM system for panel mounting, 24" display, full HD 1920 x 1080
- Zone 2, 22, can be installed in hazardous areas without additional enclosure
- Optional resistive glass or foil touch screen
- Data transmission via single mode fibre optic up to 10 km.

MY R. STAHL **MANTAKVMP-MA**

The PM MT-677-SM operating devices are explosion-protected KVM systems for panel mounting in hazardous zones 2, 22. Their brilliant 24" widescreen displays with a resolution of 1920 x 1080 pixels (format 16:9), are available with or without touch screen. Data is transmitted via single mode fibre optic up to 10 km.

Technical Data

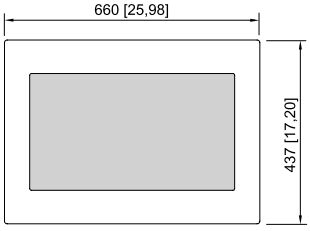
General	
Series	MANTA KVM Panel mount devices
Product description	24" KVM system
Technology	Remote HMI KVM
HMI type	Panel-mount device
Explosion Protection	
Application range (zones)	2 22
Scope	EU (CE / ATEX) International (IECEx) China (CCC / CNEx) Australia (RCM)
IECEx certification	IECEx BVS 14.0034X
ATEX certification	BVS 12 ATEX E 033 X
CCC certification	2020312309000270
CNEX certification	CNEx14.2205X
DNV certification	TAA00000BK only devices with glass touchscreen, AC and O30
IECEx gas explosion protection	Ex nA nR [ia op is Ga] IIC T4 Gc
IECEx dust explosion protection	Ex tc IIIC [ia op is Da] IP66 T110°C Dc
ATEX gas explosion protection	II 3(1) G Ex nA nR [ia op is Ga] IIC T4 Gc
ATEX dust explosion protection	II 3(1) D Ex tc IIIC [ia op is Da] IP66 T110°C Dc
CNEX gas explosion protection	Ex nA nR [ia op is Ga] IIC T4 Gc
CNEX dust explosion protection	Ex tc IIIC [ia op is Da] IP66 T110°C Dc
Electrical Data	
Power supply	24 VDC or 230 VAC
Rated operational voltage DC	24 V
Voltage range DC	20 – 30 V
Rated operational voltage AC	230 V

Electrical Data	
Voltage range AC	100 – 240 V
Frequency range	50 – 60 Hz
Power consumption DC	3 A
Power consumption AC 1	1 A
Protection fuse DC	5 AT
Protection fuse AC	5 AT
Rated operational power	typ. 50 W / 100 W at O30 / max. 150 W (typ. 170 BTU / 341 BTU at O30 / max. 510 BTU)
Transfer technology	KVM-DVI3
Operating system	independent
Language support	User menu: English
Ethernet / Data	FO single mode
Data cable	9/125 µm FO cable
Data cable length	max. 10 km
Interface medium	Single mode optical 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 reader note	RFID reader, support of the following standards: MIFARE Classic, DESFire, DESFire EV1, LEGIC prime and advant, NFC, INSIDE Secure, Sony FeliCa, ISO 14443A & 15693 1D/2D Barcode scanner: support of all common 1D/2D codes, wired or Bluetooth
Interface audio	1 x Audio Line in / out (Ex nA)
WLAN	optional via USB
Connection compartment	Power supply direct in integrated terminal box
Connections	via spring clamp terminals, green
Voltage output	12 VDC, max. 500 mA
Wiring	flexible cable up to 2.5 mm² (AWG14) fixed cable up to 4 mm² (AWG12)
Plug version FO	LC duplex socket
Max. input voltage U_m	250 VAC
Display	
Display version	TFT Color display
Display version 2	16.7 million colours
Display size inch	24
Display size centimetres	61
Display resolution	1920 x 1080, 1680 x 1080, 1280 x 1024
Total pixels	1920 x 1080
Display dimensions	16:9
Display brightness	300 cd/m²
Display contrast	1000:1
Display viewing angle horizontal	178°
Display viewing angle vertical	170°
Touchscreen	optional, resistive glass or foil touchscreen
Touchscreen technology	5-wire glass or foil touch

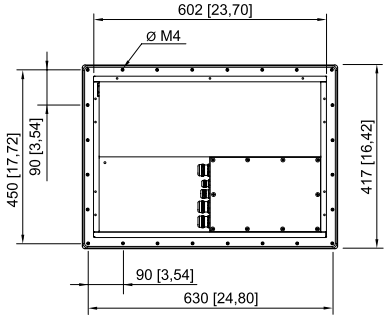
Display	
Touchscreen activation	Foil touch: low activation pressure (0.1 to max. 1 N) Glass touch: medium activation pressure (1.8 to max. 2.5 N)
Touchscreen input method	Finger, gloved finger or stylus
Touchscreen durability	Foil touch: polyester foil is easily scratched, with high pressure the spacer dots could be damaged Glass touch: Satisfactory, but glass is not hardened, with high pressure the spacer dots could be damaged
Touch screen scratch hardness MoHS	Foil touch: - Glass touch: >5
Touchscreen scratch hardness pencil test ISO15184	Foil touch: 3H Glass touch: 9H
Touchscreen transmissivity / optic	Foil touch: slightly milky effect due to foil Glass touch: very good
Touchscreen surface contaminants	unaffected
Touchscreen abrasive resistance	36 million activations with a silicone rubber finger R8, 250 g for 2 activations per second
Backlight	LED Technology
Backlight service life	50000 h at +20 °C
Front plate (display)	Aluminium and no touchscreen: glass foil touchscreen: polyester glass touchscreen: thin glass
Ambient Conditions	
Ambient temperature operation	-20 °C … +60 °C
Ambient temperature operation 1	-30 °C … +60 °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 +60 °C for a maximum of 5 h, for constant operation (24/7) +50 °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.
Relative humidity	10 to 90 % at +40 °C, non-condensing
Damp heat cyclic	+55 °C (±2 °C) ≥95 % (only device with glass touch (TG))
Vibration sinus	5 to 13.2 Hz: ±1 mm 13.2 to 100 Hz: ±0.7 g Change cycle 1 oct/min Axis X, Y, Z
Vibration sinus 1	71.7 to 79.2 Hz: ±0.7 g 120 min. Change cycle 1 oct/min Axis X
Vibration sinus 2	30 Hz: ±0.7 g 90 min. Change cycle 1 oct/min Axis Y, Z
Mechanical Data	
Dimensions (WxHxD)	660 mm x 475 mm x 110 mm
Cut-out (WxH)	615 mm x 435 mm (+/- 0.5 mm)

Mechanical Data	
Wall thickness	≤ 5 mm
Depth of cut-out	110 mm
Mounting position	vertical or horizontal
Weight	16 kg
Material front	Aluminium
Material back	Steel
Ingress protection	IP66
IP enclosure front	IP66
IP enclosure back	IP66
Cable gland type	HSK-M-Ex
Cable gland number	2 x M16, 1 x M20, 3 x M25
Cable gland thread size	M16 x 1.5 / M20 x 1.5 / M25 x 1.5
Cable gland cable diameter range	1x M16 = 4 … 8 mm / 1x M16 = 5 ... 10 mm / M20 = 7 … 13 mm / M25 = 14 … 18 mm
Cable gland wrench size	M16 = SW 20 / M20 = SW 24 / M25 = SW 30
Breather	yes, part of the enclosure and device approval
Cable gland note	Similar certified cable glands may be used.
Cable gland note 1	Not used cable glands must be closed by certified screw plugs or stopping plugs !
Weight	-
Mounting / Installation	
Mounting option	Front installation

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Panel mount front view



Panel mount back view

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