

Operating and Monitoring Systems

KVM system SERIES 600

Device platform MANTA

PM ET-677-DVI3-CAT



- KVM system for panel mounting, 24" display, Full HD 1920 x 1080
- Zone 1, 2, 21, 22 und Division 2, can be installed in hazardous areas without additional enclosure
- Optional resistive glass or foil touch screen
- Data transmission via CAT7 copper cable up to 150 m

MY R. STAHL MANTAKVMP-MA



The PM ET-677-CAT operating devices are explosion-protected KVM systems for panel mounting in hazardous zones 1, 2, 21, 22 and Division 2. 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 CAT7 copper cable up to 150 m

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) | 1 2 21 22 |
| Application range (divisions) | Class I, Division 2 |
| Scope | EU (CE / ATEX) International (IECEX) USA (NEC) Canada (CEC) China (CCC / CNEx) Korea (KCS) India (PESO) Australia (RCM) |
| IECEX certification | IECEX BVS 11.0075X |
| ATEX certification | BVS 11 ATEX E 102 X |
| NEC certification | 70011698 |
| CEC certification | 70011698 |
| PESO certification | A/P/HQ/TN/104/5768 (P438244) |
| KCC certification | only devices with foil touchscreen |
| KCS certification | 12-GA4BO-0617X |
| CNEX certification | CNEx21.1938X |
| IECEX gas explosion protection | Ex eb q [ja op is Ga] IIC T4 Gb |
| IECEX dust explosion protection | Ex tb IIIC [ja op is Da] IP65 T110°C Db |
| ATEX gas explosion protection | II 2(1) G Ex eb q [ja op is Ga] IIC T4 Gb |

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Explosion Protection

| | |
|--------------------------------|--|
| ATEX dust explosion protection | II 2(1) D Ex tb IIIC [ia op is Da] IP65 T110°C Db |
| NEC explosion protection | Class I, Zone 1 AEx e q [ia] IIC T4 Gb Class I, Division 2, Groups A, B, C, D |
| CEC gas explosion protection | Ex e q [ia] IIC T4 Gb Class I, Division 2, Groups A, B, C, D |
| PESO explosion protection | Ex eb q [ia op is Ga] IIC T4 Gb |
| KCS explosion protection | Ex e q IIC T4 Ex tb IIIC IP64 T110°C Ex ia IIC T4 Ex ia IIIB T110°C |
| CNEX gas explosion protection | Ex e q [ia op is Ga] IIC T4 Gb |
| CNEX dust explosion protection | Ex tD [iaD op is] A21 IP65 T110°C |

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 |
| 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 | CAT7 |
| Data cable | CAT7 installation cable AWG 23 |
| Data cable length | Max. 150 m |
| Data cable notice | Minimum requirement CAT5e, recommended CAT7 |
| 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 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 e) |
| WLAN | optional via USB |
| Connection compartment | Power supply direct in integrated Ex e terminal box |
| Connections | via screw terminals, green |
| Voltage output | 12 VDC, max. 500 mA |
| Wiring | flexible cable up to 2.5 mm ² (AWG14) fixed cable up to 4 mm ² (AWG12) |

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Electrical Data

| | |
|--------------------------|---------|
| 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/m ² |
| 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 |
| 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. |

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Ambient Conditions

| | |
|-------------------|---|
| 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 |

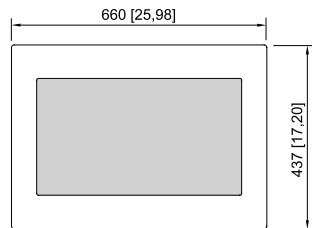
Mechanical Data

| | |
|----------------------------------|---|
| Dimensions (WxHxD) | 660 mm x 475 mm x 110 mm |
| Cut-out (WxH) | 615 mm x 435 mm (+/- 0.5 mm) |
| Wall thickness | ≤ 5 mm |
| Depth of cut-out | 110 mm |
| Mounting position | vertical or horizontal |
| Weight | 32 kg |
| Material front | Aluminium |
| Material back | Steel |
| Ingress protection | IP66 |
| IP enclosure front | IP66 |
| IP enclosure back | IP65 |
| 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 | - |

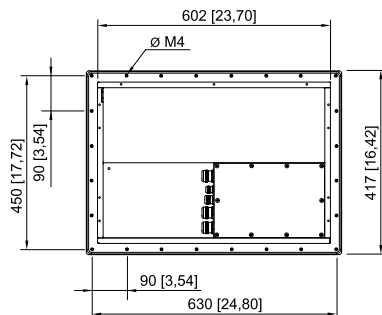
Mounting / Installation

| | |
|-----------------|--------------------|
| Mounting option | Front installation |
|-----------------|--------------------|

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



Panel mount front view



Panel mount back view

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.