

# Operating and monitoring systems

KVM system SERIES 600

Device platform MANTA

PM ET-667-DVI3-SM



- KVM system for panel mounting, 22" display, 1680 x 1050
- Zone 1, 2, 21, 22 und Division 2, can be installed in hazardous areas without additional enclosure
- Display of the 19" (1280 x 1024) resolution true to 5:4 format
- Optional resistive glass or foil touch screen
- Data transmission via single mode fibre optic up to 10 km

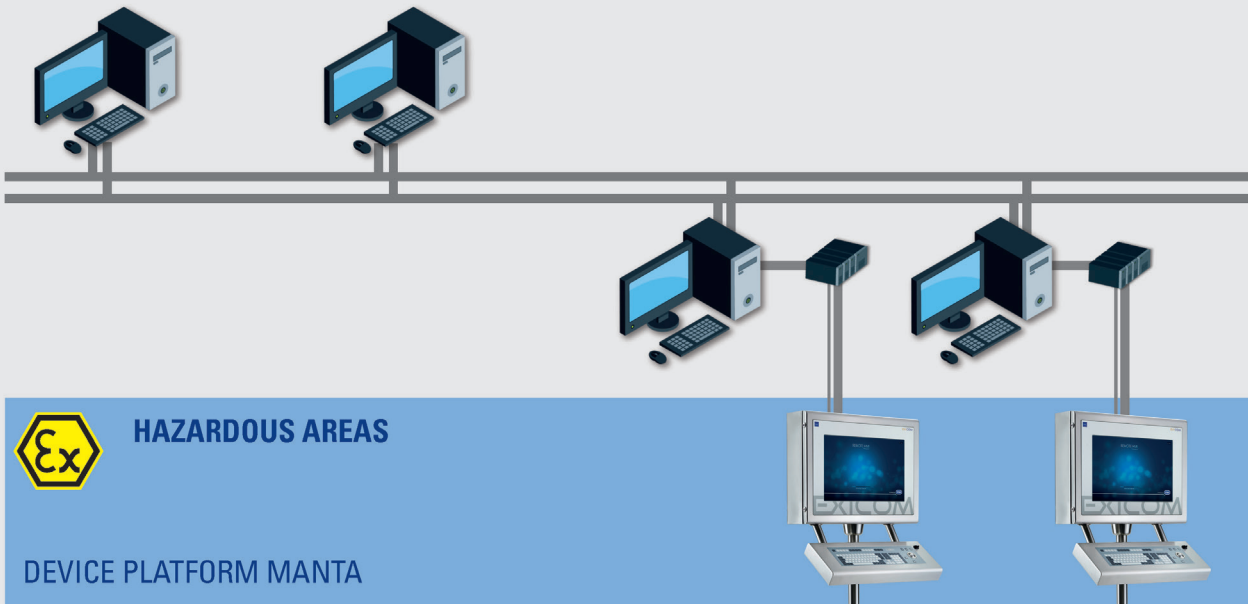
WebCode **ET667A**



The PM ET-667-DVI3 HMI series includes KVM systems for panel mounting in hazardous zones 1, 2, 21, 22 and Division 2. Their brilliant 22" widescreen displays with a resolution of 1680 x 1050 pixels (format 16:10) are available with or without touch screen. 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 INTEGRATION

### PC WORKSTATIONS



## Technical Data

### General

|        |                              |
|--------|------------------------------|
| Series | Panel mount device PM ET-667 |
|--------|------------------------------|

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#### General

|                     |                    |
|---------------------|--------------------|
| Product description | 22" KVM system     |
| Technology          | Remote HMI KVM     |
| HMI type            | Panel mount device |
| WebCode             | ET667A             |

#### Explosion Protection

|                                 |  |
|---------------------------------|--|
| Application range (zones)       | 1<br>2<br>21<br>22   |
| Application range (divisions)   | Class I, Division 2  |
| Certifications                  | ATEX, IECEx, NEC, CEC, EAC, KGS  |
| Certification IECEx             | IECEx BVS 11.0075X   |
| Certification ATEX              | BVS 11 ATEX E 102 X  |
| Certification EAC               | TC RU C-DE.ГБ04.В00478   |
| Certification NEC               | 70011698   |
| Certification CEC               | 70011698   |
| Certification KGS               | 12-GA4BO-0617X   |
| Certification KCC               | yes  |
| Certification DNV / GL          | TAA00000BK<br>ET-667-DVI3-yM-FO-TFT-TG-AC-O30-AL devices only!               |
| Gas explosion protection IECEx  | Ex eb q [ja op is Ga] IIC T4 Gb  |
| Dust explosion protection IECEx | Ex tb IIIC [ja op is Da] IP65 T110°C Db                                      |
| Gas explosion protection ATEX   | II 2(1) G Ex eb q [ja op is Ga] IIC T4 Gb                                    |
| Dust explosion protection ATEX  | II 2(1) D Ex tb IIIC [ja op is Da] IP65 T110°C Db                            |
| Gas explosion protection EAC    | 1Ex e q [ja op is Ga] IIC T4 Gb X  |
| Dust explosion protection EAC   | Ex tb IIIC [ja op is Da] IP65 T110°C Db                                      |
| Explosion protection NEC        | Class I, Zone 1 AEx e q [ja] IIC T4 Gb                                       |
| Explosion protection CEC        | Ex e q [ja] IIC T4 Gb<br>Class I, Division 2                                 |
| Explosion protection KGS        | Ex e q IIC T4<br>Ex tb IIIC IP64 T110°C<br>Ex ia IIC T4<br>Ex ia IIIB T110°C |

#### Electrical Data

|                              |  |
|------------------------------|--|
| 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      | typically 50 W / 100 W at O30 / max. 150 W (typically 170 BTU / 341 BTU at O30 / max. 510 BTU) |
| Transfer technology          | KVM-DVI3   |
| Ethernet / Data              | Optical fibre single mode  |

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#### Electrical Data

|                                   |   |
|-----------------------------------|---|
| 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)<br>1 x USB (Ex e)<br>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  |
| Connection compartment            | Power supply direct in integrated Ex e connection box   |
| Connections                       | via screw terminals, green  |
| Wiring                            | flexible cable up to 2.5 mm <sup>2</sup> (AWG14)<br>fixed cable up to 4 mm <sup>2</sup> (AWG12) |
| Plug version FO                   | LC duplex connector   |
| Max. input voltage U <sub>m</sub> | 250 VAC   |
| Audio sound                       | optional: Audio amplifier (mono amplifier) 3.5 W, for 2x loudspeaker connection (Ex e)          |
| Voltage output                    | 12 V DC, max. 500 mA  |

#### Display

|   |   |
|---|---|
| Display version                                   | TFT Colour display  |
| Display version 2                                 | 16.7 million colours  |
| Display size inch                                 | 22  |
| Display size centimetres                          | 56  |
| Display resolution                                | WSXGA+  |
| Total pixels                                      | 1680 x 1050   |
| Display dimensions                                | 16:10   |
| Display brightness                                | 250 cd/m <sup>2</sup>   |
| Display contrast                                  | 1000:1  |
| Display viewing angle horizontal                  | 178° at CR ≥5   |
| Display viewing angle vertical                    | 170° at CR ≥5   |
| Display   | Glass   |
| Touchscreen                                       | Optional resistive  |
| Touchscreen technology                            | 5-wire glass or membrane touch  |
| Touchscreen activation                            | Foil touch: low activation pressure (0.1 up to max. 1 N)<br>Glass touch: medium activation pressure (1.8 up 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 force the spacer dots could be damaged.<br>Glass touch: Quite good, but with high pressure force the spacer dots could be damaged. |
| Touch screen scratch hardness MoHS                | Foil touch: -<br>Glass touch: >5  |
| Touchscreen scratch hardness pencil test ISO15184 | Foil touch: 3H<br>Glass touch: 9H   |
| Touchscreen transmissivity / optic                | Foil touch: small milky effect due to the foil<br>Glass touch: very good  |
| Touchscreen surface contaminants                  | unaffected  |
| Touchscreen abrasive resistance                   | 36 million times with a silicone rubber of R8 finger, hitting rate 250 g at 2 times per second  |
| Backlight   | LED Technology  |

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#### Display

|                        |                   |
|------------------------|-------------------|
| Backlight service life | 50000 h at +20 °C |
| Front plate (display)  | Aluminium         |

#### 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:<br>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. |
| Heat dissipation                | about 40 % via the front plate and 60 % via the enclosure  |
| Relative humidity               | 10 to 90 % at +40 °C, non-condensing   |
| Damp heat cyclic                | +55 °C (±2 °C) ≥95 % (only device with glass touch (TG))   |
| Dry heat                        | +65 °C   |
| Vibration sinus                 | 5 to 13.2 Hz: ±1 mm<br>13.2 to 100 Hz: ±0.7 g<br>Change cycle 1 oct/min<br>Axis X, Y, Z  |
| Vibration sinus 1               | 71.7 to 79.2 Hz: ±0.7 g<br>120 min.<br>Change cycle 1 oct/min<br>Axis X  |
| Vibration sinus 2               | 30 Hz: ±0.7 g<br>90 min.<br>Change cycle 1 oct/min<br>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 | M16 = 4 ... 8 mm / M20 = 6 ... 12 mm / M25 = 14 ... 18 mm |
| Cable gland wrench size          | M16 = SW 19 / M20 = SW 22 / M25 = SW 30                   |

#### Mounting / Installation

|                 |             |
|-----------------|-------------|
| Mounting option | Panel mount |
|-----------------|-------------|

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## Components

|          |   |
|----------|---|
| Keyboard | 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.