

# Operating and monitoring systems

KVM system SERIES 600

Device platform MANTA

PM ET-667-DVI3-MM



- 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 multi-mode fibre optic up to 550 m

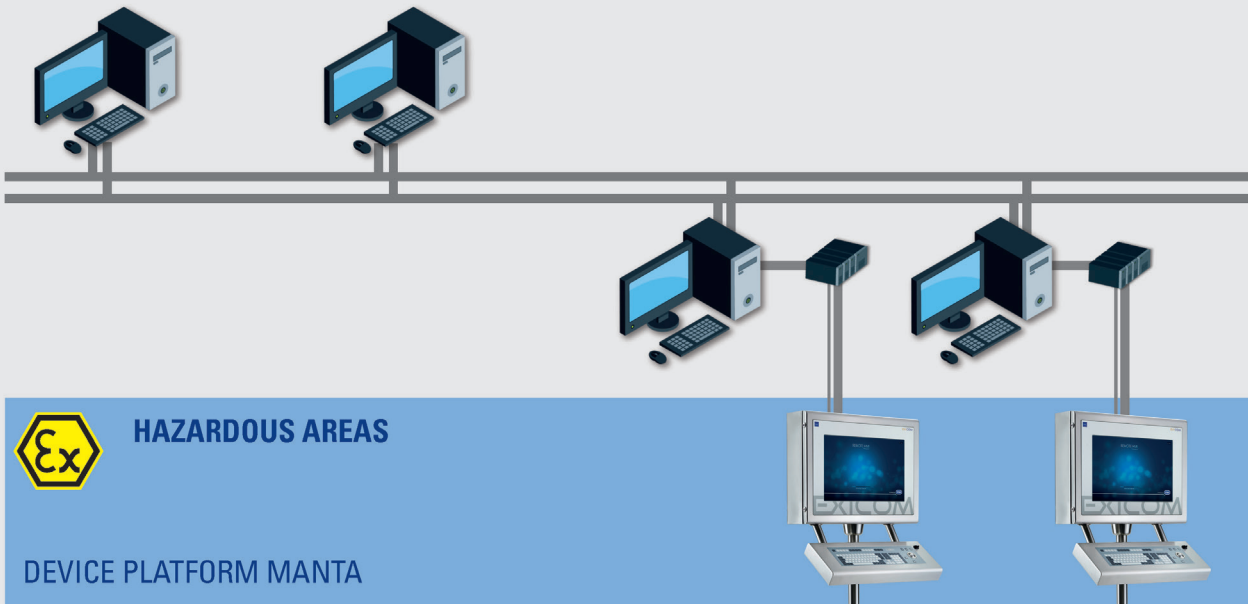
WebCode **ET667A**



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 multi-mode fibre optic up to 550 m.

## 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 2 21 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 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 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

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	FO multi-mode

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#### Electrical Data

Data cable	50/125 µm FO cable or 62.5/125 µm FO cable
Data cable length	max. 550 m, with 50 µm FO cable max. 300 m, with 62.5 µm FO cable
Interface medium	Multi-mode optical fibre cable
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
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) 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) 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. Glass touch: Quite good, but with high pressure force 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: small milky effect due to the foil Glass touch: very good
Touchscreen surface contaminants	unaffected

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#### Display

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
Backlight service life	50 000 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: 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 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	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

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## Mounting / Installation

Mounting option	Panel mount
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## Components

Keyboard	optional, 107 keys with trackball / joystick / mouse / touchpad (Ex ia)
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