

# Operating and monitoring systems

Thin Client SERIES 500  
Device platform MANTA  
PM MT-587-2TX



- Thin Client for panel mounting, 24"WU display, 1920 x 1200
- Zone 2, 22, can be installed in hazardous areas without additional enclosure
- Optional resistive glass or foil touch screen
- Data is transmitted via Ethernet as 2x 10/100Base-TX via CAT5 up to 100 m

WebCode **MT587A**



The PM MT-587 HMI series includes Thin Clients for panel mounting in hazardous zones 2 and 22. Their brilliant 24"WU widescreen displays with a resolution of 1920 x 1200 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 Ethernet as 2x 10/100Base-TX via CAT5 up to 100 m.

## THIN CLIENT INTEGRATION

### PC WORKSTATIONS



### VIRTUALIZED SERVERS AND WORKSTATIONS



### AUTOMATION IN THE CLOUD



Redundant virtual network



HAZARDOUS AREAS

DEVICE PLATFORM MANTA



## Technical Data

### General

Series	Panel mount device PM MT-587 (discontinued)
Product description	24" Thin Client

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## General

Technology	Remote HMI Thin Client
HMI type	Panel mount device
WebCode	MT587A

## Explosion Protection

Application range (zones)	2 22
Certifications	ATEX, IECEx, EAC, CNEX
IECEx certification	IECEx BVS 14.0034X
ATEX certification	BVS 12 ATEX E 033 X
CNEX certification	CNEX14.2205X
IECEx gas explosion protection	Ex nA nR [ja op is Ga] IIC T4 Gc
IECEx dust explosion protection	Ex tc IIIC [ja op is Da] IP66 T110°C Dc
ATEX gas explosion protection	II 3(1) G Ex nA nR [ja op is Ga] IIC T4 Gc
ATEX dust explosion protection	II 3(1) D Ex tc IIIC [ja op is Da] IP66 T110°C Dc
CNEX gas explosion protection	Ex nA nR [ja op is Ga] IIC T4 Gc
CNEX dust explosion protection	Ex tc IIIC [ja op is Da] IP66 T110°C Dc

## 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
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)
Processor type	ATOM E3845
Processor details	Intel Bay Trail (BT); 1.91 GHz; quad core
RAM	4 GB
Data memory	64 GB SLC 128 GB MLC
Graphics controller	integrated Intel Gen. 7 HD Graphics
Memory technology	SSD solid state flash drive M.2
Operating system	Windows 10 IoT Enterprise
Language support	via operating system
Image	Remote Firmware
Ethernet / Data	2x 10/100Base-TX (Ex nA)
Data cable	CAT5 installation cable AWG22
Data cable length	2x max. 100 m
Interface medium	CAT5 data transmission
Frequency range	50 – 60 Hz
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 audio	1 x Audio line out (Ex nA)

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## Electrical Data

WLAN	optional via USB
Connection compartment	Power supply direct in integrated connection box
Connections	via spring clamp terminals, green
Voltage output	12 V DC, max. 500 mA
Wiring	flexible cable up to 2.5 mm <sup>2</sup> (AWG14) fixed cable up to 4 mm <sup>2</sup> (AWG12)
Max. input voltage U <sub>m</sub>	250 VAC
Audio sound	optional: Audio amplifier (mono amplifier) 3.5 W, for 2x loudspeaker connection (Ex nA)
Real-time clock	Yes
Real-time clock data buffer	Lithium battery and capacitor buffered, maintenance-free
Battery buffered	> 5 years
Capacitor buffered	at least 4 days

## Display

Display version	TFT Colour display
Display version 2	16.7 million colours
Display size inch	24
Display size centimetres	61
Display resolution	WUXGA
Total pixels	1920 x 1200
Display dimensions	16:10
Display brightness	300 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
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	50000 h at +20 °C
Front plate (display)	Aluminium

## Ambient Conditions

Ambient temperature operation	-20 °C ... +60 °C
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## Ambient Conditions

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	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	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)
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