

# Operating and monitoring systems

Thin Client SERIES 500  
Device platform MANTA  
PM MT-567-SX

STAHL



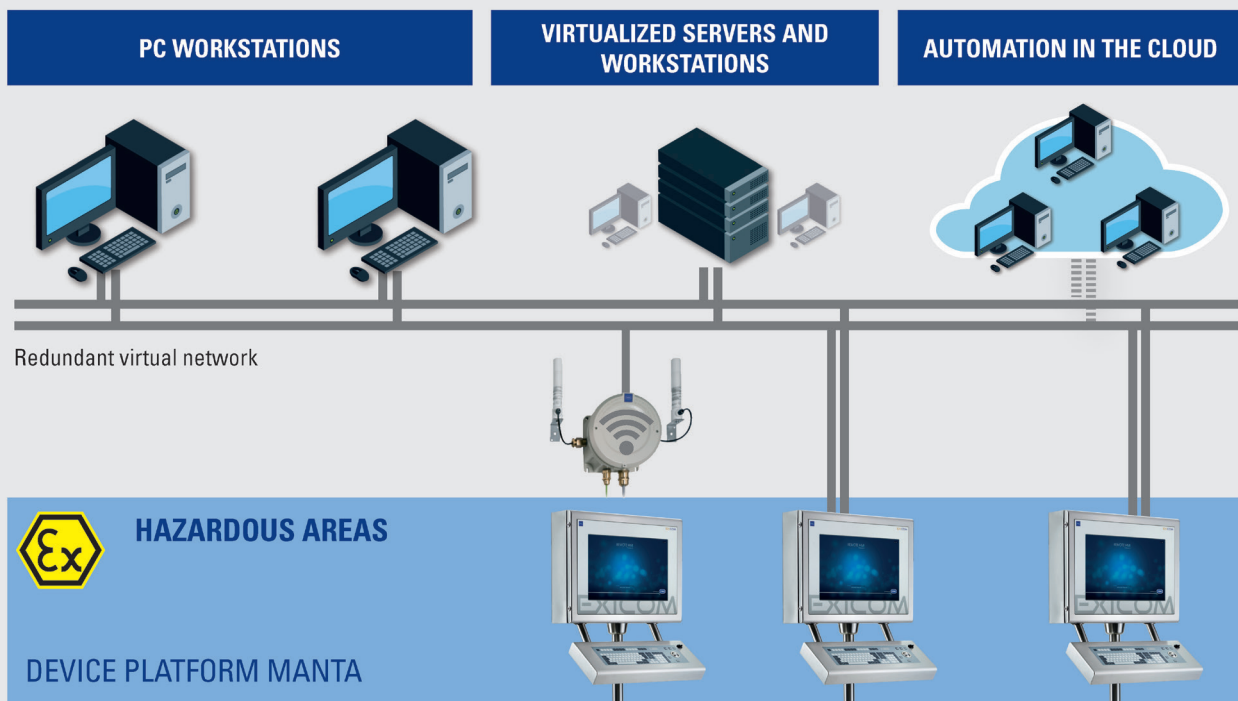
- Thin Client for panel mounting, 22" display, 1680 x 1050
- Zone 2, 22, can be installed in hazardous areas without additional enclosure
- Display of the 19" (1280 x 1024) resolution true to 5:4 format
- Optional resistive glass or foil touch screen
- Data transmission as 1000Base-SX via multi-mode fibre optic up to 550 m and as 10/100Base-TX via CAT7 up to 100 m

MY R. STAHL MT567A



The PM MT-567 HMI series includes Thin Clients for panel mounting in hazardous zones 2 and 22. 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 as 1000Base-SX via multi-mode fibre optic up to 550 m, as 10/100Base-TX via CAT7 up to 100 m or simultaneously via both interfaces.

## THIN CLIENT INTEGRATION



## Technical Data

### General

|        |                                             |
|--------|---------------------------------------------|
| Series | Panel mount device PM MT-567 (discontinued) |
|--------|---------------------------------------------|

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### General

|                     |                        |
|---------------------|------------------------|
| Product description | 22" Thin Client        |
| HMI type            | Panel mount device     |
| Technology          | Remote HMI Thin Client |
| WebCode             | MT567A                 |

### Explosion Protection

|                                 |                                                   |
|---------------------------------|---------------------------------------------------|
| Application range (zones)       | 2<br>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 [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

|                              |                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------|
| 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<br>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              | 1x 1000Base-SX (Ex op is)<br>1x 10/100Base-TX (Ex nA)                                |
| Data cable                   | SX: 50/125 µm FO cable<br>TX: CAT7 installation cable AWG23                          |
| Data cable length            | SX: max. 550 m, for 50 µm FO cable<br>TX: max. 100 m                                 |
| Interface medium             | SX: Multi-mode optical fibre cable<br>TX: CAT7 data transmission                     |
| Frequency range              | 50 – 60 Hz                                                                           |

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|                                   |                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------|
| Interface USB                     | 2 x USB (Ex ia)<br>1 x USB (Ex nA)<br>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)                                                                      |
| 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)<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 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                                 | 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                                                                                                        |

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### Display

|                        |                    |
|------------------------|--------------------|
| 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              | Operation at +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                                    |
| Material front                   | Aluminium                                                 |
| Material back                    | Steel                                                     |
| Ingress protection               | IP66                                                      |
| IP enclosure front               | IP66                                                      |
| IP enclosure back                | IP66                                                      |
| Weight                           | 16 kg                                                     |
| 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 |
|-----------------|-------------|

## Components

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

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