

Operating and Monitoring Systems

Thin Client SERIES 500

Device platform MANTA

PM_MT-577-SX



- Thin Client for panel mounting, 24" display, Full HD 1920 x 1080
- Zone 2, 22, can be installed in hazardous areas without additional enclosure
- 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
- Comfortable, central configuration with Remote Device Manager

MY R. STAHL EAGLEMAN-TAPMA



The PM MT-577-SX operating devices are explosion-protected Thin Clients for panel mounting in Zones 2, 22. Their brilliant 24" widescreen displays have a resolution of 1920 x 1080 pixels (format 16:9). Configuration options include touchscreen, memory sizes and SSDs. Data is transmitted via Ethernet as 1000Base-SX via multi-mode fibre optic up to 550 m and as 10/100Base-TX via CAT7 up to 100 m.

Technical Data

General

| | |
|---------------------|--|
| Series | EAGLE and MANTA Panel PCs / Thin Clients panel-mount devices |
| Product description | 24" Thin Client |
| Technology | Remote HMI Thin Client |
| HMI type | Panel-mount device |

Explosion Protection

| | |
|---------------------------------|--|
| Application range (zones) | 2 22 |
| Scope | EU (CE / ATEX) International (IECEX) China (CCC / CNEX) Australia (RCM) |
| IECEX certification | IECEX BVS 14.0034X |
| ATEX certification | BVS 12 ATEX E 033 X |
| CCC certification | 2020312309000270 |
| 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

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

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Electrical Data

| | |
|-----------------------------------|--|
| 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 / max. 150 W (typically 170 BTU / max. 510 BTU) |
| Processor type | AMD GX-222GC |
| Processor details | 2.2 GHz, Dual Core, 10W TDP |
| RAM | 4 GB |
| Data memory | 64 GB MLC 128 GB MLC |
| Graphics controller | integrated AMD Radeon R5E graphics |
| Memory technology | SSD solid state flash drive |
| Operating system | Windows 10 IoT Enterprise |
| Language support | User menu: English |
| Image | Remote Firmware |
| Ethernet / Data | 1x 1000Base-SX (Ex op is) 1x 10/100Base-TX (Ex nA) |
| Data cable | SX: 50/125 µm or 62,5/125 µm FO cable TX: CAT7 installation cable AWG23 |
| Data cable length | SX: Max. 550 m for 50 µm or max. 275 m for 62,5 µm FO cable TX: Max. 100 m |
| Data cable notice | Minimum requirement CAT5e, recommended CAT7 |
| Interface medium | SX: multi-mode optical cable TX: CAT7 data transmission |
| 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 reader | via USB or RS-232 |
| 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 out (Ex nA) |
| WLAN | optional via USB |
| Connection compartment | Power supply direct in integrated terminal box |
| Connections | via spring clamp terminals, green |
| Voltage output | 12 V DC, max. 500 mA |
| Wiring | flexible cable up to 2.5 mm ² (AWG14) fixed cable up to 4 mm ² (AWG12) |
| Plug version FO | LC duplex socket |
| Max. input voltage U _m | 250 VAC |
| 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 |

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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 |
| Storage temperature | -30 °C ... +70 °C |
| Cold start temperature | -10 °C |
| 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 [+104 °F], non-condensing |
| Damp heat cyclic | +55 °C (±2 °C) ≥95 % (only devices with glass touch (TG)) |
| Dry heat | +65 °C |

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Ambient Conditions

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

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.