

Operating and Monitoring Systems

Thin Client SERIES 500

Device platform EAGLE

PM MT-516-TX



- Thin Client for panel mounting, 10" display, 800 x 600 pixels
- Zone 2, 22 and Division 2, can be installed in hazardous areas without additional enclosure
- All-round degree of protection IP66, resistive foil touch screen as standard
- Data is transmitted via Ethernet as 10/100Base-TX via CAT5 cable up to 100 m.
- Comfortable, central configuration with Remote Device Manager

MY R. STAHL EAGLEMAN-TAPMA



R. STAHL's PM MT-516 HMI systems are Thin Clients for panel mounting in hazardous zones 2 and 22 as well as Division 2. Their brilliant 10.4" displays with analogue-resistive touch screen have a resolution of 800 x 600 pixels (format 4:3). 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 10/100Base-TX via CAT5 cable up to 100 m.

Technical Data

General

| | |
|---------------------|--|
| Series | EAGLE and MANTA Panel PCs / Thin Clients panel-mount devices |
| Product description | 10.4" Thin Client |
| Technology | Remote HMI Thin Client |
| HMI type | Panel-mount device |

Explosion Protection

| | |
|-------------------------------|---|
| Application range (zones) | 2 22 |
| Application range (divisions) | Class I, Division 2 Class II, Division 2 Class III |
| Scope | EU (CE / ATEX) International (IECEX) USA (NEC) Canada (CEC) China (CCC EX) Brazil (INMETRO) Australia (RCM) Marine / ship certification ABS Marine / ship certification DNV Marine / ship certification LR |
| IECEX certification | IECEX TUR 11.0015X |
| ATEX certification | TÜV 11 ATEX 7103 X |
| NEC certification | 20130611-E202379 |
| CEC certification | 2512677 |
| INMETRO certification | UL-BR 12.0398X |
| CCC certification | 2020312309000283 |
| CNEX certification | CNEX19.0701X |
| DNV certification | TAA00000WA |

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| | |
|-----------------------------------|--|
| LR certification | LR21402888TA |
| ABS certification | 19-HG1895092-PDA |
| IECEx gas explosion protection | Ex db eb ia ib mb nA [ib Gb] [ic] IIC T4 Gc |
| IECEx dust explosion protection | Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66 |
| ATEX gas explosion protection | II 3 (2/3) G Ex db eb ia ib mb nA [ib Gb] [ic] IIC T4 Gc |
| ATEX dust explosion protection | II 3 (2/3) D Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66 |
| NEC gas explosion protection | Class I, Division 2, Groups A, B, C, D |
| NEC dust explosion protection | Class II, Division 2, Groups F, G Class III Hazardous Locations Class I, Zone 2, Group IIC |
| CEC gas explosion protection | Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc, Type 4X, IP66 |
| CEC dust explosion protection | Ex ia tc [ib ic] IIIC T80°C Dc, IP66 Class II, Division 2, Groups E, F, G, T80°C |
| INMETRO gas explosion protection | Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc |
| INMETRO dust explosion protection | Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66 |
| CNEX gas explosion protection | Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc |
| CNEX dust explosion protection | Ex ia td A22 [ibD] [ic] IP66 T80°C |

Electrical Data

| | |
|------------------------------|--|
| Power supply | 24 VDC |
| Rated operational voltage DC | 24 V |
| Voltage range DC | 20.4 ... 28.8 V |
| Power consumption DC | 1.2 A |
| Rated operational power | 36 W |
| Processor type | ATOM E3845 |
| Processor details | Intel Bay Trail (BT), 1.91 GHz, quad core |
| RAM | 4 GB |
| Data memory | 64 GB MLC 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 | User menu: English |
| Image | Remote Firmware |
| Ethernet / Data | 10/100Base-TX (Ex nA) |
| Data cable | CAT5 installation cable AWG22 |
| Data cable length | max. 100 m |
| Interface medium | CAT5 Data transmission |
| Interface USB | 2 x USB (Ex ib) 2 x USB (Ex nA) |
| Interface serial | 1 x RS-232 / RS-422 / RS-485 (Ex nA) |
| Interface PS/2 | for external keyboard (Ex ia) |
| Optional interface 2 reader | optional, reader interface (Ex ib) |
| 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) |

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Electrical Data

| | |
|-----------------------------------|---|
| Connection compartment | Power supply direct in integrated connection box |
| Connections | via screw terminals, 2.5 mm ² green (AWG14) (Ex nA) |
| Wiring | Flexible conductors 0.2 to 2.5 mm ² (AWG24 to AWG14) Rigid conductors 0.2 to 2.5 mm ² (AWG24 to AWG14) |
| Plug version USB | 1x USB connector type A |
| Max. input voltage U _m | 30 V DC |
| 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 |
| Status LED | below the back lid: for activity on: - Solid state drive or HD - Ethernet Link - COM 1 and COM 2 |

Display

| | |
|---|---|
| Display version | TFT Color display |
| Display version 2 | 16.7 million colours |
| Display size inch | 10.4 |
| Display size centimetres | 26 |
| Display resolution | 800 x 600 |
| Total pixels | 800 x 600 |
| Display dimensions | 4:3 |
| Display brightness | 400 cd/m ² |
| Display contrast | 700:1 |
| Touchscreen | resistive foil touchscreen |
| Touchscreen technology | 5-wire foil touch |
| Touchscreen activation | Foil touch: low activation pressure (0.1 to max. 1 N) |
| Touchscreen input method | Finger, gloved finger or stylus |
| Touchscreen durability | Polyester foil is easily scratched, with high pressure force the spacer dots could be damaged |
| Touch screen scratch hardness MoHS | - |
| Touchscreen scratch hardness pencil test ISO15184 | 3H |
| Touchscreen transmissivity / optic | slightly milky effect due to foil |
| 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 | 70000 h at +25 °C 35000 h at +55 °C |
| Front plate (display) | Polyester foil on aluminium |
| Function keys | 12 |

Ambient Conditions

| | |
|-------------------------------|--|
| Ambient temperature operation | -20 °C ... +55 °C |
| Storage temperature | -30 °C ... +60 °C |
| Temperature note 1 | Operating temperature +55 °C for a maximum of 5 h, for constant operation (24/7) +50 °C. |

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Ambient Conditions

| | |
|-----------------------------|--|
| Heat dissipation | about 50% via the front plate and 50% via the enclosure |
| Relative humidity | 90% at +40 °C [+104 °F], without condensation |
| Damp heat | +55 °C / 95 % |
| Damp heat cyclic | +55 °C / 90-100 % +20 °C / 80-100 % |
| Corrosion resistance | ISA-S71.04-1985, severity G3 |
| Vibration sinus | 5 to 13.2 Hz: ±1 mm 13.2 to 100 Hz: ±0.7 g Axis X, Y, Z |
| Vibration sinus 1 | 10 Hz, 1 g 450 Hz, 1 g Change cycle 1 oct/min Operating mode 1.2 Axis X, Y, Z |
| Vibration broadband random | 10 Hz, 0.01 PSD[(m/s ²) ² /Hz] 450 Hz, 0.01 PSD[(m/s ²) ² /Hz] Grms 2.11 Axis X, Y, Z |
| Shock | 20 Schocks 20 g/11 ms |
| EMC Immunity | Acc. to IEC 61000-6-2 (01/2005) and DIN EN 61323-1 (10/2006) for industrial areas |
| EMC Emission | Acc. to IEC 61000-6-4 (02/2011), DIN EN 55011 / CISPR 11 (03/2008) for industrial environments and DIN EN 55022 / CISPR 22 (05/2008) for Class A |
| Positive pressure operation | <= 20 mbar |

Mechanical Data

| | |
|----------------------------------|--|
| Dimensions (WxHxD) | 372 mm x 270 mm 150 mm |
| Cut-out (WxH) | 359.5 mm x 257.5 mm |
| Wall thickness | ≤ 8 mm |
| Depth of cut-out | 150 mm |
| Mounting position | vertical or horizontal |
| Weight | 13.2 kg |
| Material front | Polyester on aluminium |
| Material back | Stainless steel |
| Ingress protection | IP66 |
| IP enclosure front | IP66 |
| IP enclosure back | IP66 |
| Fixing frame | yes |
| Cable gland type | 8161 (Ex e) |
| Cable gland number | 6 x M16, 3 x M20 |
| Cable gland thread size | M16 x 1.5 / M20 x 1.5 |
| Cable gland cable diameter range | M16 = 5 ... 9 mm / M20 = 7 ... 13 mm |
| Cable gland wrench size | M16 = SW 20 / M20 = SW 24 |
| Breather | yes, part of the enclosure and device approval |
| Weight | - |

Mounting / Installation

| | |
|-----------------|--------------------|
| Mounting option | Front installation |
|-----------------|--------------------|

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