

Operating and monitoring systems

Thin Client SERIES 500

Device platform EAGLE

OS ET-556-TX



- Thin Client Operator Station, 19" display, 1280 x 1024 pixels
- Zone 1, 2, 21, 22, stainless-steel enclosure, optional acc. to GMP
- 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.

WebCode **ET556AA**



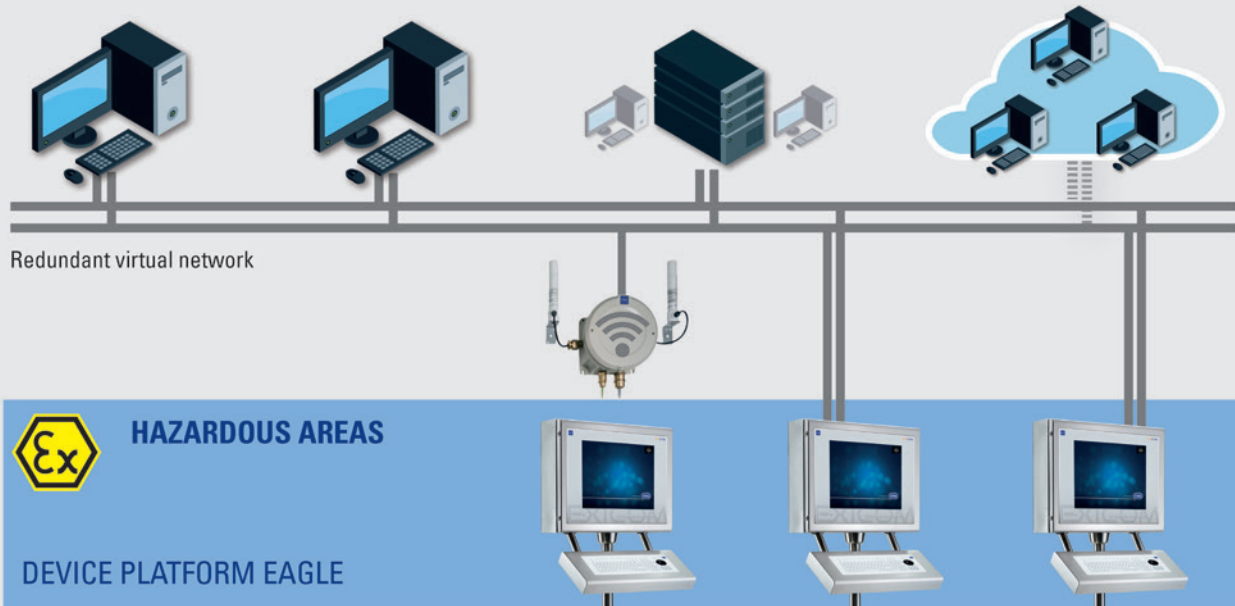
R. STAHL's OS ET-556 HMI systems are Thin Client Operator Stations for hazardous zones 1, 2, 21 and 22 as well as Division 2. Their brilliant 19" displays with analogue-resistive touch screen have a resolution of 1280 x 1024 pixels (format 5:4). The stainless steel enclosures (SS304 or SS316L) are available with a front opening or in cleanroom-compliant design and with different mounting options. Accessories to extend functionality include country-specific keyboards, pointer instruments and RFID and barcode scanners. Data is transmitted via Ethernet as 10/100Base-TX via CAT5 copper cable up to 100 m.

THIN CLIENT INTEGRATION

PC WORKSTATIONS

VIRTUALIZED SERVERS AND WORKSTATIONS

AUTOMATION IN THE CLOUD



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Technical Data

General

| | |
|---------------------|---|
| Series | Operator Station OS ET-556 (discontinued) |
| Product description | 19" Thin Client |
| Technology | Remote HMI Thin Client |
| HMI type | Operator Station |
| WebCode | ET556AA |

Explosion Protection

| | |
|---------------------------------|---|
| Application range (zones) | 1 2 21 22 |
| Application range (divisions) | Class I, Division 2 Class II, Division 1 and 2 Class III |
| Certifications | ATEX, IECEx, NEC, CEC, EAC, INMETRO, CNEX, KGS, PESO |
| Ship certificates | DNV, LR, ABS |
| IECEx certification | IECEx TUR 11.0006X |
| ATEX certification | TÜV 11 ATEX 7041 X |
| NEC certification | 20130611-E202379 |
| CEC certification | 2512677 |
| INMETRO certification | UL-BR 12.0265X |
| CNEX certification | CNEx14.0065X |
| KCS certification | 12-GA4BO-0215X 12-GA4BO-0317X |
| PESO certification | A/P/HQ/MH/104/5004(P391127) P391127/1 |
| DNV certification | Certificate number: A-12989 File number: 899.60 Order number: 262.1-001689-6 |
| LR certification | 11/20032 |
| ABS certification | 15-HG1418766-1-PDA |
| Notice certification | The certificates and explosion protection markings apply to a standard device combination of display and enclosure. Any additional built-in or added components may have an impact on / change these. |
| IECEx gas explosion protection | ET-556-A-TX Ex db eb ia ib mb [ia ib] IIC T4 Gb ET-556-A-FX Ex db eb ia ib mb [ia ib op is] IIC T4 Gb |
| IECEx dust explosion protection | ET-556-A-TX Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-556-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db IP66 |
| ATEX gas explosion protection | ET-556-A-TX II 2 (2) G Ex db eb ia ib mb [ia ib] IIC T4 Gb ET-556-A-FX II 2 (2) G Ex db eb ia ib mb [ia ib op is] IIC T4 Gb |

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Explosion Protection

| | |
|-----------------------------------|---|
| ATEX dust explosion protection | ET-556-A-TX II 2 (2) D Ex ia tb [ja ib] IIIC T80°C Db IP66 ET-556-A-FX II 2 (2) D Ex ia tb [ja ib op is] IIIC T80°C Db IP66 |
| NEC explosion protection | Class I, Division 2, Groups A, B, C, D Class II, Division 2, Groups F, G Class III Class I, Zone 2, Group IIC |
| CEC explosion protection | Ex d e ia ib mb [ja ib] IIC T4 Gb, Type 4X, IP66 Ex ia tb [ja ib] IIIC T80°C Db, IP66 Class II, Division 1, Groups E, F, G, T80°C |
| CNEX gas explosion protection | ET-556-A-TX Ex d e ia ib mb [ja ib] IIC T4 Gb ET-556-A-FX Ex d e ia ib mb [ja ib op is] IIC T4 Gb |
| CNEX dust explosion protection | ET-556-A-TX Ex ia tb [ja ib] IIIC T80°C Db IP66 ET-556-A-FX Ex ia tb [ja ib op is] IIIC T80°C Db IP66 |
| KCS explosion protection | Ex d e ia ib mb [ja ib] IIC T4 Ex ia tb [ja ib] IIIC T80°C Db IP66 |
| INMETRO gas explosion protection | ET-556-A-TX Ex d e ia ib mb [ja ib] IIC T4 Gb ET-556-A-FX Ex d e ia ib mb [ja ib op is] IIC T4 Gb |
| INMETRO dust explosion protection | ET-556-A-TX Ex ia tb [ja ib] IIIC T80°C Db IP66 ET-556-A-FX Ex ia tb [ja ib op is] IIIC T80°C Db IP66 |
| PESO explosion protection | Ex d e ia ib mb [ja ib] IIC T4 Gb |

Electrical Data

| | |
|------------------------------|---|
| Rated operational voltage DC | 24 V |
| Voltage range DC | 20.4 – 28.8 V |
| Rated operational voltage AC | optional, external power supply 230 V |
| Voltage range AC | 90 – 253 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 | via operating system |
| Image | Remote Firmware |
| Ethernet / Data | 10/100Base-TX (Ex e) |
| Data cable | CAT5 installation cable AWG22 |

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Electrical Data

| | |
|-----------------------------------|---|
| Data cable length | max. 100 m |
| Interface medium | CAT5 data transmission |
| Frequency range | 47 – 63 Hz |
| Interface USB | 2 x USB (Ex ib) 2 x USB (Ex e) |
| Interface serial | 1 x RS-232 / RS-422 / RS-485 (Ex e) |
| Interface PS/2 | for external keyboard (Ex ia) |
| Optional interface 1 | - |
| Optional interface 2 reader | optional, reader interface (Ex ib) |
| Interface audio | 1 x Audio line out (Ex e) |
| Connection compartment | Power supply direct in integrated Ex e connection box |
| Connections | via screw terminals, green, 2.5 mm ² (AWG14) (Ex e) |
| 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 VDC |
| 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 Colour display |
| Display version 2 | 16.7 million colours |
| Display size inch | 19 |
| Display size centimetres | 48 |
| Display resolution | SXGA |
| Total pixels | 1280 x 1024 |
| Display dimensions | 5:4 |
| Display brightness | TFT 350 cd/m ² |
| Display contrast | TFT 700:1 |
| Touchscreen | analogue resistive |
| Touchscreen technology | 5-wire |
| Touchscreen activation | Low activation pressure (0.1 up 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 | Small milky effect due to the foil |
| 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 | 70000 h at +25 °C 35000 h at +55 °C |
| Front plate (display) | Polyester on aluminium (optional: stainless steel on aluminium) |
| Function keys | 8 |

Ambient Conditions

| | |
|---------------------------------|---|
| Ambient temperature operation | -20 °C ... +50 °C |
| Ambient temperature operation 1 | -30 °C ... +50 °C with heater |
| Storage temperature | -30 °C ... +60 °C |
| Temperature note 2 | The heater used must be of such a design that the temperature inside the HMI's enclosure does not fall below -20 °C (-30 °C at the front only). |
| Temperature note 3 | The components integrated in the enclosure may only be operated when the temperatures inside the enclosure are within the permitted (certified) temperature range for these components. Further measures may be necessary. |
| Temperature note general | The temperature details apply to a standard device combination with display and enclosure. Any additional built-in or added components may have an impact on / change these. |
| Heat dissipation | about 50% via the front plate and 50% via the enclosure |
| Relative humidity | 90% at +40 °C, 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 level 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 Shocks 20 g/11 ms |
| EMC Immunity | According IEC 61000-6-2 (01/2005) and DIN EN 61323-1 (10/2006) for industrial areas |
| EMC Emission | According 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) | 740 mm x 872 mm x 400 mm |
| Weight | 57 kg |
| Material front | Polyester or stainless steel on aluminium / stainless steel |
| Material back | Stainless steel |
| Ingress protection | IP66 |
| Breather | optional |

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Mechanical Data

| | |
|----------------------|--|
| Keyboard note | With a keyboard, the operator station's ingress protection is reduced to IP65 and with a trackball even further to IP54 when the trackball is moved. |
| Mechanical data note | The mechanical data apply to an FR enclosure with display and keyboard. Other enclosure types as well as any additional built-in or added components may have an impact on / change these. |

Mounting / Installation

| | |
|-----------------|--|
| Enclosure type | Stainless steel enclosure (FR) optional CFR |
| Mounting option | Wall, elbow, stand |

Components

| | |
|----------|--|
| Keyboard | optional, 105 keys or 107 keys with integrated trackball / joystick |
|----------|--|

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.