

Operating and monitoring systems

Operator Interface SERIES 300

Device platform EAGLE

PM ET-336-TX



- Operator Interface for panel mounting
- 15" display, 1024 x 768 pixels with resistive foil touch screen
- 8 function keys
- Zone 1, 2, 21, 22 und Division 2, can be installed in hazardous areas without additional enclosure
- Data is transmitted via Ethernet as 10/100Base-TX via CAT5 cable up to 100 m.

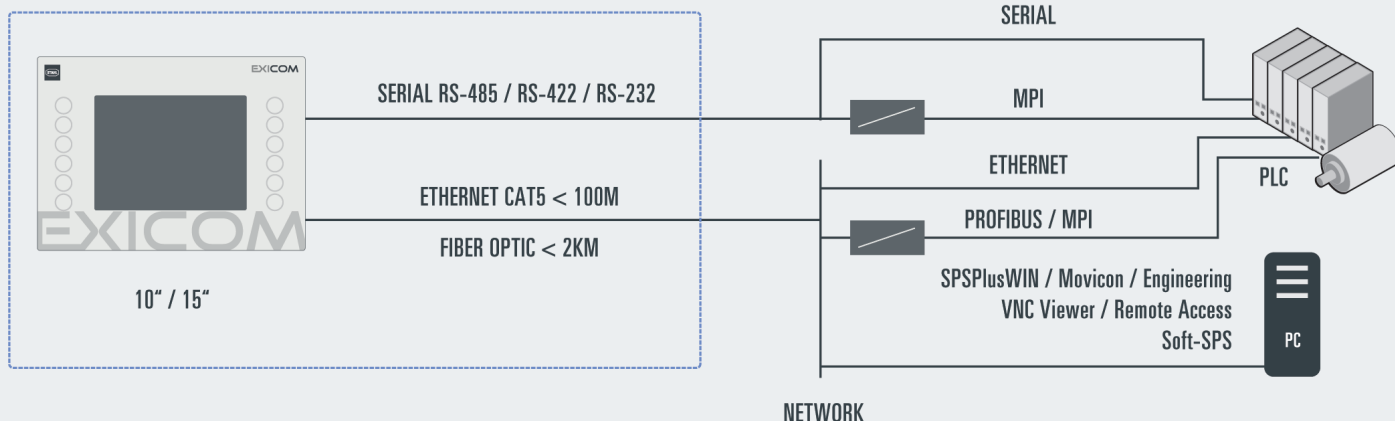
WebCode **ET336AA**



R. STAHL's PM ET-336 HMI systems are Operator Interfaces for panel mounting in hazardous zones 1, 2, 21 and 22 as well as Division 2. Their brilliant 15" displays with analogue-resistive touch screen, optionally sunlight-readable, have a resolution of 1024 x 768 pixels (format 4:3). Country-specific keyboards, pointer instruments and RFID and barcode scanners are useful accessories making work easier and extending functionality. For visualisation, you can choose either Movicon CE or SPSPlus RT from our software portfolio. Data is transmitted via Ethernet as 10/100Base-TX via CAT5 cable up to 100 m.

OPERATOR INTERFACES EAGLE (SERIES 3X6)

Zone 1 / 2 / 21 / 22 – Class I, Div 2 / Class I, Zone 2 / Class II, Div 1 / Class III



Technical Data

General

Series	Product Series PM ET-336
Product description	15" Operator Interface
Technology	Operator Interface
HMI type	Panel-mount device
WebCode	ET336AA

Operating and monitoring systems

Operator Interface SERIES 300

Device platform EAGLE

PM ET-336-TX

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
Certification IECEx	IECEx TUR 11.0006X
Certification ATEX	TÜV 11 ATEX 7041 X
Certification EAC	TC RU C-DE.ГБ04.В00334
Certification NEC	20130611-E202379
Certification CEC	2512677
Certification INMETRO	UL-BR 12.0265X
Certification CNEX	CNEx14.0065X
Certification KGS	12-GA4BO-0215X 12-GA4BO-0317X
Certification PESO	A/P/HQ/MH/104/5004(P391127) P391127/1
Certification DNV / GL	Certificate number: A-12989 File number: 899.60 Order number: 262.1-001689-6
Certification LR	11/20032
Certification ABS	15-HG1418766-1-PDA
Gas explosion protection IECEx	ET-336-A-TX Ex d e ia ib mb [ia ib] IIC T4 Gb ET-336-A-FX Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection IECEx	ET-336-A-TX Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-336-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Gas explosion protection ATEX	ET-336-A-TX II 2 (2) G Ex d e ia ib mb [ia ib] IIC T4 Gb ET-336-A-FX II 2 (2) G Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection ATEX	ET-336-A-TX II 2 (2) D Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-336-A-FX II 2 (2) D Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Gas explosion protection EAC	ET-336-A-TX 1Ex d e ia ib mb [ia ib] IIC T4 Gb X ET-336-A-FX 1Ex d e ia ib mb [ia ib op is] IIC T4 Gb X
Dust explosion protection EAC	ET-336-A-TX Ex ia tb [ia ib] IIIC T80°C Db ET-336-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db
Explosion protection NEC	Class I, Division 2, Groups A, B, C, D Class II, Division 2, Groups F, G Class III Class I, Zone 2, Group IIC

Operating and monitoring systems

Operator Interface SERIES 300

Device platform EAGLE

PM ET-336-TX

Explosion Protection

Explosion protection CEC	Ex d e ia ib mb [ia ib] IIC T4 Gb, Type 4X, IP66 Ex ia tb [ia ib] IIIC T80°C Db, IP66 Class II, Division 1, Groups E, F, G, T80°C
Gas explosion protection CNEX	Ex d e ia ib mb [ia ib] IIC T4 Gb
Explosion protection KGS	Ex d e ia ib mb [ia ib] IIC T4 Ex ia tb [ia ib] IIIC T80°C Db IP66
Gas explosion protection INMETRO	ET-336-A-TX Ex d e ia ib mb [ia ib] IIC T4 Gb ET-336-A-FX Ex d e ia ib mb [ia ib op is] IIC T4 Gb
Dust explosion protection INMETRO	ET-336-A-TX Ex ia tb [ia ib] IIIC T80°C Db IP66 ET-336-A-FX Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Explosion protection NEC	Ex d e ia ib mb [ia ib] IIC T4 Gb

Electrical Data

Processor type	ATOM E3815
Processor details	Intel Bay Trail (BT); 1.46 GHz; single core
RAM	2 GB
Data memory	16 GB
Graphics controller	integrated Intel Gen. 7 HD Graphics
Memory technology	Flash memory (SATA)
Operating system	Windows Embedded Compact 7
Language support	global, multilingual language support
Image	via - SPSPPlusWIN project file (SPSPPlus RT) - Movicon project file (Movicon CE 4096 I/O)
Additional software	SPSPPlusWIN V 6 Progea Movicon11
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)
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
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)
Max. input voltage Um	30 V DC
Plug version USB	1x USB connector type A
Real-time clock	yes
Real-time clock data buffer	Lithium battery and capacitor buffered, maintenance-free

Operating and monitoring systems

Operator Interface SERIES 300

Device platform EAGLE

PM ET-336-TX

Electrical Data

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	15
Display size centimetres	38
Display resolution	XGA
Total pixels	1024 x 768
Display dimensions	4:3
Display brightness	TFT 350 cd/m ²
Display contrast	TFT 700:1
Touch screen	analogue resistive
Touch screen technology	5-wire
Backlight	LED Technology
Backlight service life	70 000 h at +25 °C 35 000 h at +55 °C
Front plate (display)	Polyester on aluminium
Function keys	8

Software

Number of protocol drivers	a maximum of 4 simultaneously
Number of process images	>1000 dynamic
Number of text messages	dynamically limited by main memory
Number of variables	255 per image
Number of messages	4096 fault messages 4096 operation messages
Font sets	4 independent Windows uncondensed fonts

Ambient Conditions

Ambient temperature operation	-20 °C ... +55 °C
Ambient temperature operation 1	-30 °C ... +55 °C with heater
Storage temperature	-30 °C ... +60 °C
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 G3
Vibration sinus	5 to 13.2 Hz: ±1 mm 13.2 to 100 Hz: ±0.7 g Axis X, Y, Z

Operating and monitoring systems

Operator Interface SERIES 300

Device platform EAGLE

PM ET-336-TX

Ambient Conditions

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
Positiv pressure operation	< = 20 mbar (not SR devices)

Mechanical Data

Dimensions (WxHxD)	440 mm x 340 mm 165 mm
Cut-out	427.5 mm x 327.5 mm
Wall thickness	≤ 8 mm
Depth of cut-out	165 mm
Mounting position	vertical or horizontal
Weight	18 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

Mounting / Installation

Mounting option	Panel mount
-----------------	-------------

Components

Keyboard	optional, 105 keys
----------	--------------------

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.