Product information

Part number: A.008904

Ex Z1 HMI panel PC 15"

- Panel PC, Core i5, 15" display, optional sunlight- readable 1200 cd/m²
- Rugged design: IP66, shock, vibration and seawater-proof, temperature range -40 °C to +65 °C
- Compact, lightweight HMI design < 25 kg
- Data is transmitted via dual Ethernet as 10/100/1000Base-TX via CAT7 up to 100 m

The A.008904 operating device is explosion-protected. Its rugged design with degree of protection IP66 makes it shock, vibration and seawater-proof and suitable for temperatures ranging from -40 °C to +65 °C. A chemically hardened, glare-free glass screen protects the display, the function keys and a projected-capacitive multi-touch touch screen. The A.008904 is a Panel PC for Zones 1, 2, 21 and 22 with a 15" display, optionally available as a sunlight-readable version (1200 cd/m²). Data is transmitted via Dual Ethernet as 10/100/1000Base-TX via CAT7 up to 100 m. Configuration options include processors (Intel Core i5), memory sizes and SSDs.

Technical Data

General	
Product description	15" Panel PC
Technology	Panel PC
HMI type	Rugged Panel
Explosion Protection	
Application range (zones)	1 2 21 22
Application range (divisions)	Class I, Zone 1 Class I, Division 2 Class II, Division 1 and 2 Class III
Scope	EU (CE / ATEX) International (IECEx) USA (NEC) Canada (CEC) China (CCC / CNEx) India (PESO) Australia (RCM) Marine / ship certification ABS Marine / ship certification DNV

data sheet

Product information

Explosion Protection	
IECEx gas explosion protection	Ex eb q [ia op is Ga] IIC T4 Gb
IECEx dust explosion protection	Ex tb [ia op is Da] IIIC T115°C Db
ATEX gas explosion protection	II 2 (1) G Ex e q [ia op is Ga] IIC T4 Gb
ATEX dust explosion protection	II 2 (1) D Ex tb [ia op is Da] IIIC T115°C Db
NEC gas explosion protection	Class I, Zone 1 AEx eb q [ia op is Ga] IIC T4 Gb Class I, Div. 2 Groups A, B, C, D T4
NEC dust explosion protection	Zone 21, AEx tb [ia op is Da] IIIC T115°C Db Class II, Div. 2 Groups F, G T4 Class III
CEC gas explosion protection	Ex eb q [ia Ga] IIC T4 Gb Class I, Div. 2 Groups A, B, C, D T4
CEC dust explosion protection	Zone 21, Ex tb [ia Da] IIIC T115°C Db Class II, Div. 1 Groups E, F, G T4 Class III
CNEX gas explosion protection	Ex eb q [ia op is Ga] IIC T4 Gb
CNEX dust explosion protection	Ex tb [ia op is Da] IIIC T115°C Db
PESO explosion protection	Ex eb q [ia op is Ga] IIC T4 Gb
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
Frequency range	50 – 60 Hz
Power consumption DC	4.6 A at 24 VDC (6.9 A with heater)
Power consumption AC 1	0.6 A at 230 VAC (0.8 A with heater)
Power consumption AC 2	1.1 A at 110 VAC (1.7 A with heater)
Protection fuse DC	12 A
Protection fuse AC	5 A
Rated operational power	typically 100 W / max. 150 W (typically 340 BTU / max. 510 BTU)
Processor type	AMD GX-222GC Intel® Core™ i5-6442EQ with TPM
Processor details	AMD: 2.2 GHz, Dual Core, 10W TDP Intel i5: 1.9 GHz (2.7 GHz), Quad Core, 4 threads, 6 MB Cache, 25W TDP
Operating system	Windows 10 IoT Enterprise (64 bit) (included in standard delivery) Windows 10 IoT Enterprise (32 bit) (optional on USB stick)
Language support	Multilanguage operating system: en, de, fr, es, it, br, ru, kr
Cameras	optional, 5 megapixels front
Ethernet / Data	2x 100/1000Base-TX (Ex e)

data sheet

Product information

Electrical Data	
Data cable	CAT7 installation cable AWG23
Data cable length	max. 100 m
Interface medium	CAT7 Data transmission
Interface USB	3 x USB (Ex ia) 1 x USB (Ex eb)
Interface serial	1 x RS-232 / RS-422 / RS-485 (Ex eb)
Connection compartment	Power supply direct in integrated Ex e terminal box
Connections	Via plug-in screw terminals, green
Wiring	Flexible conductors 0.2 to 2.5 mm² (AWG24 to AWG14) Rigid conductors 0.2 to 2.5 mm² (AWG24 to AWG14)
Plug version USB	USB-A connector
Max. input voltage U_m	250 VAC
Status LED	LEDs for: - on / off (green) - voltage applied to supply line / power supply OK (orange) - heater on (blue)
Display	
Display version	TFT colour display or sunlight-readable display
Display version 2	16.7 million colours
Display size inch	15
Display size centimetres	38
Display resolution	1024 x 768
Total pixels	1024 x 768
Display dimensions	4:3
Display brightness	TFT 450 cd/m² SR 1200 cd/m²
Display contrast	TFT 500:1 SR 600:1
Touchscreen	projected capacitive (PCAP), multi-touch
Touchscreen technology	projected capacitive (PCAP), protected under glass
Touchscreen activation	capacitive, no activation pressure required
Touchscreen input method	Finger, thin gloved finger or special gloves, conductive stylus
Touchscreen durability	Very good
Touch screen scratch hardness MoHS	6
Touchscreen scratch hardness pencil test ISO15184	9H

data sheet

Product information

Display	
Touchscreen transmissivity / optic	very good
Touchscreen surface contaminants	unaffected (may however be affected by conductive fluids such as saltwater)
Touchscreen abrasive resistance	no abrasion by finger or rubber
Backlight	LED Technology
Backlight service life	70000 h at +25 °C
Front plate (display)	Hardened glass front in aluminium enclosure, powder-coated
Function keys	8
Ambient Conditions	
Heater operation	Automatic
Ambient temperature operation	-10 °C … +65 °C
Ambient temperature operation 1	-40 °C … +65 °C with heater
Storage temperature	-40 °C … +70 °C
Cold start temperature	-10 °C or -40 °C
Temperature note 1	The cold-start temperature depends on the "outdoor installation" (with/without heater).
Temperature note 2	Cold-start temperature: If the HMI device is switched on at temperatures below -10 °C, the electronics and the display will need a certain warm-up time before everything works smoothly and the display starts to be legible. Depending on how low the temperature is, this process may last up to 3 hours.
Heat dissipation	Via heat pipes and cooling fins
Damp heat	+55 °C / 95 %
Damp heat cyclic	+55 °C (±2 °C) ≥ 95 % Humidity location class B
Corrosion resistance	Salt water 5 % NaCl / +20 °C / 2 h 93 % r.H. / +40 °C / 168 h ISA-S71.04-1985, severity G3
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	5 to 58 Hz: ±0.075 mm 58 to 500 Hz: ±1 g Change cycle 1 oct/min Axis X, Y, Z
Vibration sinus 2	5 to 1000 Hz 5 g
Shock	18 Shocks 25 g / 6 ms Axis X, Y, Z
Mechanical Data	
Enclosure / Design (1)	VESA 200 Standard
Dimensions (WxHxD) (1)	380 mm x 394 mm x 137 mm (+52 mm for cable entries)
Cable gland type (1)	HSK-MZ-Ex
Cable gland number (1)	3 x M16, 3 x M20, 2 x M25
Cable gland thread size (1)	M16 x 1.5 / M20 x 1.5 / M25 x 1.5

data sheet

Product information

Mechanical Data	
Cable gland cable diameter range (1)	M16 = 4 … 8 mm / M20 = 10 … 14 mm / M25 = 14 … 18 mm
Cable gland wrench size (1)	M16 = SW 19 / M20 = SW 22 / M25 = SW 30
Enclosure / Design (2)	VESA 200 Top Connect
Dimensions (WxHxD) (2)	380 mm x 394 mm x 212 mm
Cable gland type (2)	Screw plug
Cable gland number (2)	3 x M16, 3 x M20
Cable gland thread size (2)	M16 x 1.5 / M20 x 1.5
Mounting possibility	Panel mount with xx8 Mounting-Kit
Cut-out (WxH)	for xx8 Mounting-Kit: 360 mm x 364 mm (±1 mm)
Mounting position	any
Weight	25 kg
Material front	Seawater resistant and coated aluminium, hardened glass
Material back	Seawater-resistant powder coated aluminum
Ingress protection	IP66
IP enclosure front	IP66
IP enclosure back	IP66
Breather	yes, part of the enclosure and device approval
Mounting / Installation	
Enclosure type	Rugged Panel Design (RP)
Enclosure design	VESA 200 Standard, VESA 200 Top Connect
Mounting option	Yoke and wall-mounting, handle and feet, sun protection roof, panel mount (with xx8 Mounting-Kit)
Mounting type	when switched on: a fixed device (stationary, non-portable equipment)

data sheet