



-power in control



## DATA SHEET



### **Advanced Graphical Interface, AGI 300 series**

- For dedicated HMI solutions
- Advanced programming software
- For marine and harsh environments
- Available in 3 sizes: 4.3", 7" and 15"



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# 1. General information

## 1.1 Application and advantages

### 1.1.1 Application

A comprehensive HMI solution, DEIF's AGI 300 series connects to all DEIF Multi-line controllers and third party controllers via standard communication protocols, featuring functionalities which eliminate the need for other instruments, thus saving you both space and wiring.

The AGI 300 series is intended for visualisation and active control in multiple applications managed on board maritime vessels or platforms, where it provides full graphical overviews and user-friendly touch screen control with a quality display that is easily readable even at sharp angles. Monitor or control multiple setups simultaneously, or share data via Ethernet connections, effectively enabling the DEIF HMI to be used as a small SCADA system.

#### Application examples

- **Energy monitoring system (EMS)**  
Monitor and track your energy consumption to optimise and implement the energy awareness on board the vessel.
- **Alarm handling and monitoring**  
Use the AGI to monitor alarms. View historical alarm data and accept active alarms.
- **Power management systems - control and supervision**  
When you have multiple gensets, bus tie breakers, etc., and you need to have the overall overview, the AGI can communicate with the controllers to create this overview and let you manage the PMS from one point.
- **Graphical interface - mechanical and electrical systems**  
Interface to mechanical and electrical equipment to have a system overview locally. Trend measured values to monitor operation performance or when making fault findings on the equipment.



**All systems mentioned above must comply with the guidelines of the classification societies.**

### 1.1.2 Advantages

#### Hardware

AGI 304\*, AGI 307\*, AGI 315\*\*:

- TFT colour display, LED backlight
- 64K colours
- Resistive touch screen
- 2 Ethernet ports with switch function
- 2 USB host ports (1 USB AGI 304)
- Serial port
- SD card slot
- Optional plug-in module for CANopen communication
- Slim design. Mounting depth less than 50 mm
- Display backlight dimmable to 0 %

*\* Not recommended for new design*

*\*\* No longer for sale.*

AGI 307G\*\*, AGI 315G\*\*:

- High brightness TFT colour display, LED backlight
- 64K colours
- Projected capacitive touch screen (PCT)
- 2 Ethernet ports with switch function
- 2 USB host ports
- Serial port
- SD card slot
- Optional plug-in module for CANopen communication
- Slim design. Mounting depth less than 50 mm
- Display backlight dimmable to 0 %
- ATEX approved
- Expanded temperature range (-20 to +60 °C)

**\*\* No longer for sale.**

### Software

The AGI 300 series uses the Windows CE 6.0 operating system, and the platform has been designed to run the DEIF AGI software.

- AGI Runtime included. Full compatibility with AGI Creator software.
- Full vector graphic support. Native support of SVG graphic objects. Transparency and alpha blending.
- Full object dynamics: Control visibility and transparency, move, resize and rotate any object on screen. Change properties of basic and complex objects.
- TrueType fonts.
- Multi-language applications. Easily create and manage your applications in multiple languages to meet global requirements. Far East languages are supported. Tools available in AGI Creator support easy third party translations and help to reduce development and maintenance costs of the application.
- Data display in numerical, text, bar graph, analogue gauges and graphic image formats.
- Rich set of state-of-the-art HMI features: Data acquisition, alarm handling, scheduler and timed actions (daily and weekly schedulers, exception dates), recipes, users and passwords, email and RSS feeds, rotating menus.
- Multiple drivers communication capability.
- Remote monitoring and control. Client-server functionality. Mobile clients supported.
- Offline simulation with AGI Creator.
- Powerful scripting language, JScript, for automating HMI applications. Script debugging improves efficiency in application development.
- Rich gallery of symbols and objects.
- MediaPlayer widget (only AGI 315\*\*, AGI 315G\*\*).
- IP camera widget.

**\*\* No longer for sale.**

## 2. Technical information

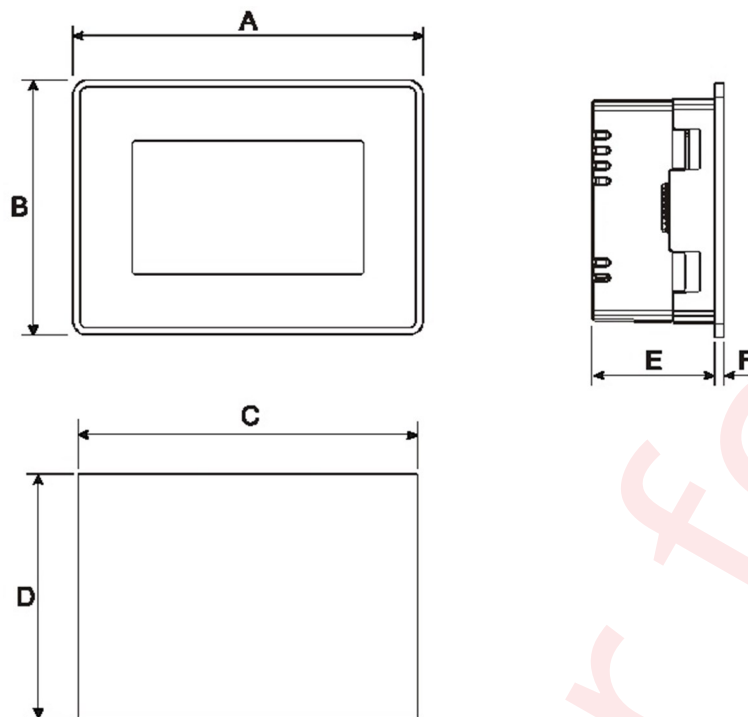
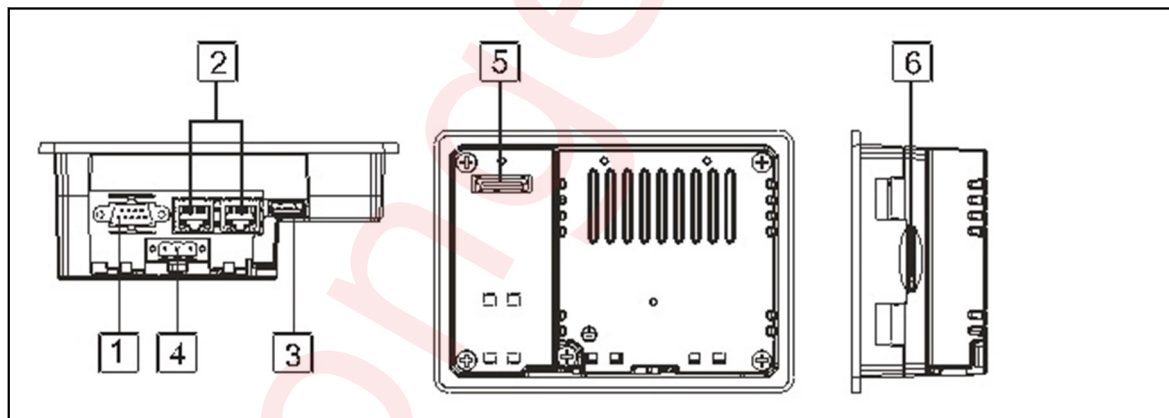
### 2.1 Specifications

#### 2.1.1 Product data and dimensions, AGI 304

<b>Display</b>	
Type	TFT
Resolution	480 x 272 pixel
Active display area	4.3" diagonal (95.4 x 53.9 mm)
Colours	64K
Backlight	LED
Brightness	150 Cd/m <sup>2</sup> typ.
Dimming	Yes
Backlight service time	40,000 h or more*
<b>System resources</b>	
Operating system	Microsoft Windows CE 6.0
CPU	ARM Cortex-A8 - 600 MHz
User memory	128 MB Flash
RAM	256 MB DDR
<b>Operator interface</b>	
Touch screen	Analogue resistive
Operations	>1 mill.
<b>Interface</b>	
Ethernet	2 10/100 Mbit with integrated switch
USB	1 host interface v. 2.0
Serial	RS-232, RS-485, RS-422, software configurable
Expansion slot	1 optional plug-in
Memory card	SD card slot
<b>Functionality</b>	
Vector graphics	Yes. Includes SVG support
Object dynamics	Yes. Visibility, opacity, position, size, rotation for most object types
TrueType fonts	Yes
Multiple driver communication	Yes
Data acquisition and trend presentation	Yes. Flash memory storage limited only by available memory

Multi-language	Yes. With runtime language switching
Recipes	Yes. Flash memory storage limited only by available memory
Alarms	Yes
Historical event list	Yes
Users and passwords	Yes
Hardware real-time clock	Yes. With battery backup
Screen saver	Yes
Buzzer	Yes. Audible feedback for touch screen
<b>Ratings</b>	
Power supply voltage	24 V <sub>dc</sub> (10 to 32 V <sub>dc</sub> )
Current consumption	0.55 A at 24 V <sub>dc</sub> (max.)
Fuse	Automatic
Weight	Approximately 1.0 kg
Battery	Rechargeable Lithium battery, not user-replaceable
<b>Environmental conditions</b>	
Operating temperature	0 to 50 °C (vertical installation)
Storage temperature	-20 to +70 °C
Operating and storage humidity	5 to 85 % relative humidity, non-condensing
Protection class	IP66 (front) IP20 (rear)
<b>Dimensions</b>	
Faceplate A x B	147 x 107 mm (5.78 x 4.21")
Cutout C x D	136 x 96 mm (5.35 x 3.78")
Depth E + F	56 + 4 mm (2.40 + 0.16")
<b>Approvals</b>	
CE	Emission EN 61000-6-4 Immunity EN 61000-6-2 For installation in industrial environments
DNV	DNV Type Approval Certificate
UL	UL508 Listed Haz. Loc. Class I, Division 2, Groups A, B, C and D

\* Time of continuous operation until the brightness of the backlight reaches 50 % of the rated value when the surrounding air temperature is 25 °C. Extended use in environments where the surrounding air temperature is 40 °C or higher may degrade backlight quality/reliability/durability.

**Dimensions****Connections and ports**

## 2.1.2 Product data and dimensions, AGI 307

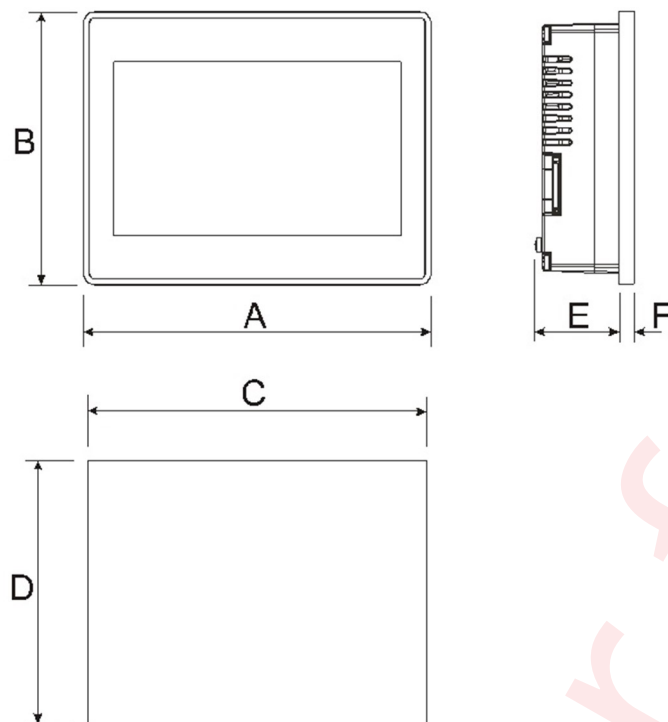
<b>Display</b>	
Type	TFT
Resolution	800 x 480, WVGA
Active display area	7" diagonal
Colours	64K
Backlight	LED
Brightness	300 Cd/m <sup>2</sup> typ.
Dimming	Yes
Backlight service time	40,000 h or more*
<b>System resources</b>	
Operating system	Microsoft Windows CE 6.0
CPU	ARM Cortex-A8 - 600 MHz
User memory	128 MB Flash
RAM	256 MB DDR
<b>Operator interface</b>	
Touch screen	Analogue resistive
Operations	>1 mill.
<b>Interface</b>	
Ethernet	2 10/100 Mbit with integrated switch
USB	2 host interface (1 v. 2.0, 1 v. 2.0 and 1.1)
Serial	RS-232, RS-485, RS-422, software configurable
Expansion slot	2 optional plug-in
Memory card	SD card slot
<b>Functionality</b>	
Vector graphics	Yes. Includes SVG support
Object dynamics	Yes. Visibility, opacity, position, size, rotation for most object types
TrueType fonts	Yes
Multiple driver communication	Yes
Data acquisition and trend presentation	Yes. Flash memory storage limited only by available memory
Multi-language	Yes. With runtime language switching
Recipes	Yes. Flash memory storage limited only by available memory



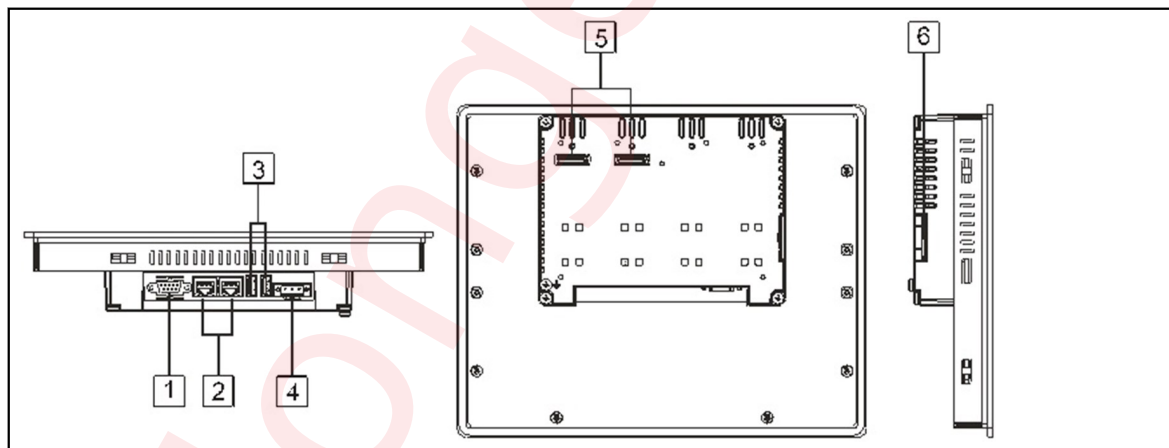
Alarms	Yes
Historical event list	Yes
Users and passwords	Yes
Hardware real-time clock	Yes. With battery backup
Screen saver	Yes
Buzzer	Yes. Audible feedback for touch screen
<b>Ratings</b>	
Power supply voltage	24 V <sub>dc</sub> (10 to 32 V <sub>dc</sub> )
Current consumption	0.65 A at 24 V <sub>dc</sub> (max.)
Fuse	Automatic
Weight	Approximately 1.0 kg
Battery	Rechargeable Lithium battery, not user-replaceable
<b>Environmental conditions</b>	
Operating temperature	0 to 50 °C (vertical installation)
Storage temperature	-20 to +70 °C
Operating and storage humidity	5 to 85 % relative humidity, non-condensing
Protection class	IP66 (front) IP20 (rear)
<b>Dimensions</b>	
Faceplate A x B	187 x 147 mm (7.36 x 5.79")
Cutout C x D	176 x 136 mm (6.93 x 5.35")
Depth E + F	47 + 4 mm (1.85 + 0.16")
<b>Approvals</b>	
CE	Emission EN 61000-6-4 Immunity EN 61000-6-2 For installation in industrial environments
DNV	DNV Type Approval Certificate
UL	UL508 Listed Haz. Loc. Class I, Division 2, Groups A, B, C and D

\* Time of continuous operation until the brightness of the backlight reaches 50 % of the rated value when the surrounding air temperature is 25 °C. Extended use in environments where the surrounding air temperature is 40 °C or higher may degrade backlight quality/reliability/durability.

### Dimensions



### Connections and ports



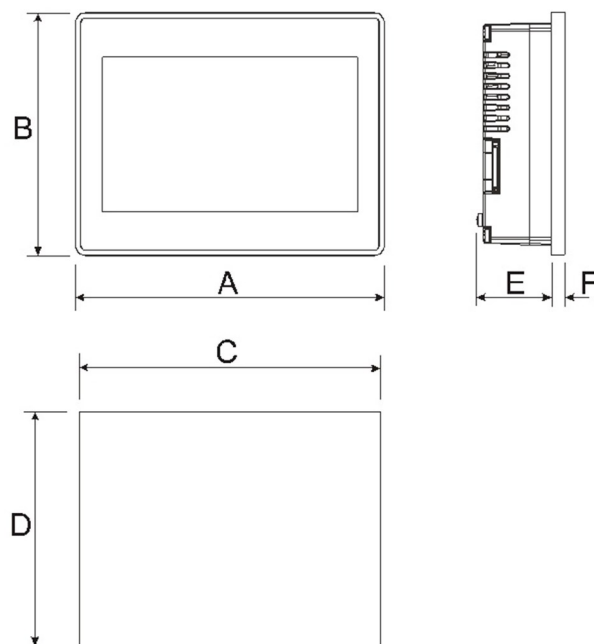
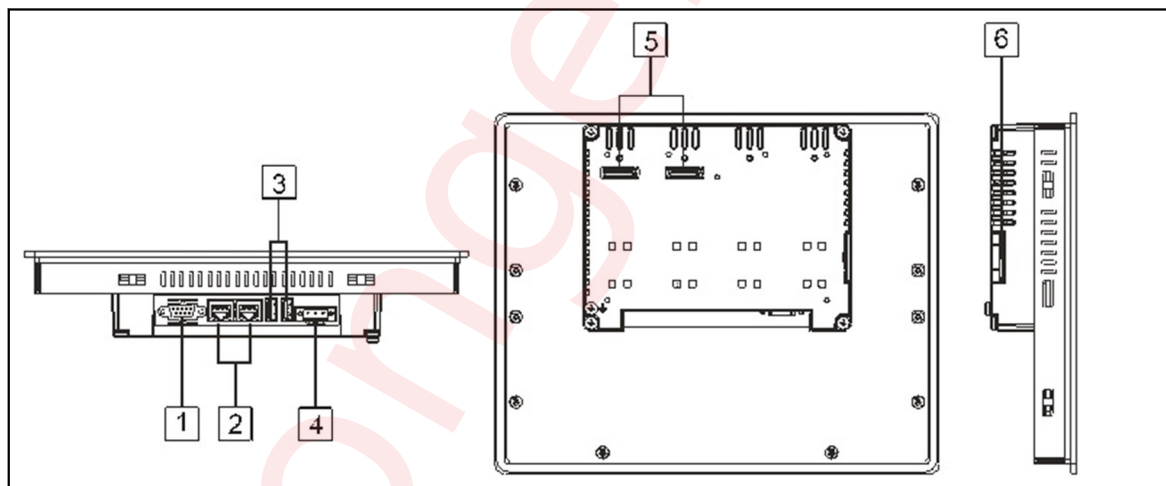
1. Serial port
2. 2 Ethernet ports
3. 2 USB ports
4. Power supply
5. 2 expansion slots for plug-in module
6. SD card slot

### 2.1.3 Product data and dimensions, AGI 307G

<b>Display</b>	
Type	TFT
Resolution	800 x 480, WVGA
Active display area	7" diagonal
Colours	64K
Backlight	White LED
Brightness	400 Cd/m <sup>2</sup> typ.
Dimming	Yes
Backlight service time	40,000 h or more*
<b>System resources</b>	
Operating system	Microsoft Windows CE 6.0
CPU	ARM Cortex-A8 - 600 MHz
User memory	128 MB Flash
RAM	256 MB DDR
<b>Operator interface</b>	
Touch screen	True glass projected capacitive
<b>Interface</b>	
Ethernet	2 10/100 Mbit with integrated switch
USB	2 host interface (1 v. 2.0, 1 v. 2.0 and 1.1)
Serial port 1	RS-232, RS-485, RS-422, software configurable
Expansion slot	2 optional plug-in
Memory card	SD card slot
<b>Functionality</b>	
Vector graphics	Yes. Includes SVG support
Object dynamics	Yes. Visibility, position, size, rotation for most object types
TrueType fonts	Yes
Multiple driver communication	Yes
Data acquisition and trend presentation	Yes. Flash memory storage limited only by available memory
Multi-language	Yes. With runtime language switching
Recipes	Yes. Flash memory storage limited only by available memory
Alarms	Yes
Historical event list	Yes

Users and passwords	Yes
Hardware real-time clock	Yes. With battery backup
Screen saver	Yes
Buzzer	Yes. Audible feedback for touch screen
<b>Ratings</b>	
Power supply voltage	24 V <sub>dc</sub> (10 to 32 V <sub>dc</sub> )
Current consumption	0.8 A at 24 V <sub>dc</sub> (max.)
Fuse	Automatic
Weight	Approximately 1.0 kg
Battery	Rechargeable Lithium battery, not user-replaceable
<b>Environmental conditions</b>	
Operating temperature	-20 to +60 °C (vertical installation)
Storage temperature	-40 to +85 °C
Operating and storage humidity	5 to 85 % relative humidity, non-condensing
Protection class	IP69K (front panel) IP20 (rear)
<b>Dimensions</b>	
Faceplate A x B	187 x 147 mm (7.36 x 5.79")
Cutout C x D	176 x 136 mm (6.93 x 5.35")
Depth E + F	47 + 8 mm (1.85 + 0.31")
<b>Approvals</b>	
CE	Emission EN 61000-6-4 Immunity EN 61000-6-2 For installation in industrial environments
DNV	DNV Type Approval Certificate
ATEX	Zone 2/22, II 3G / II 3D
UL	UL508 Listed Haz. Loc. Class I, Division 2, Groups A, B, C and D

\* Time of continuous operation until the brightness of the backlight reaches 50 % of the rated value when the surrounding air temperature is 25 °C. Extended use in environments where the surrounding air temperature is 40 °C or higher may degrade backlight quality/reliability/durability.

**Dimensions****Connections and ports**

1. Serial port
2. 2 Ethernet ports
3. 2 USB ports
4. Power supply
5. 2 expansion slots for plug-in module
6. SD card slot

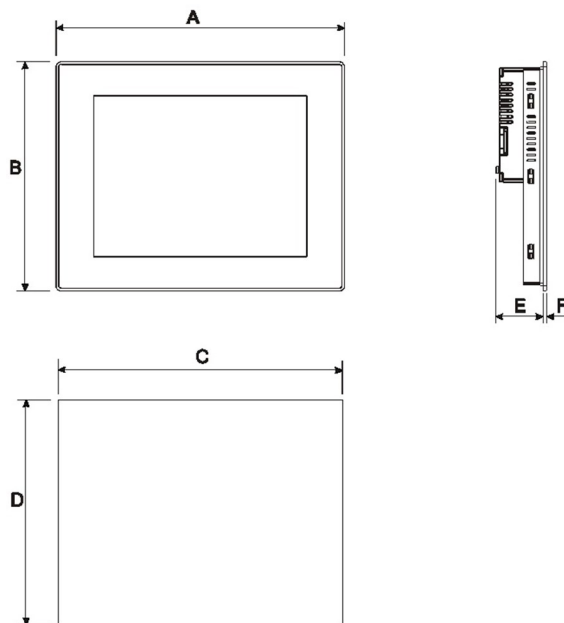
## 2.1.4 Product data and dimensions, AGI 315

<b>Display</b>	
Type	TFT
Resolution	1024 x 768, XGA
Active display area	15"
Colours	64K
Backlight	LED
Brightness	300 Cd/m <sup>2</sup> typ.
Dimming	Yes
Backlight service time	40,000 h or more*
<b>System resources</b>	
Operating system	Microsoft Windows CE 6.0
CPU	ARM Cortex-A8 - 1 GHz
User memory	256 MB Flash
RAM	256 MB DDR
<b>Operator interface</b>	
Touch screen	Analogue resistive
Operations	>1 mill.
<b>Interface</b>	
Ethernet	2 10/100 Mbit with integrated switch
USB	2 host interface (1 v. 2.0, 1 v. 2.0 and 1.1)
Serial	RS-232, RS-485, RS-422, software configurable
Expansion slot	2 optional plug-in
Memory card	SD card slot
<b>Functionality</b>	
Vector graphics	Yes. Includes SVG support
Object dynamics	Yes. Visibility, opacity, position, size, rotation for most object types
TrueType fonts	Yes
Multiple driver communication	Yes. Max. 2 drivers
Data acquisition and trend presentation	Yes. Flash memory storage limited only by available memory
Multi-language	Yes. With runtime language switching
Recipes	Yes. Flash memory storage limited only by available memory

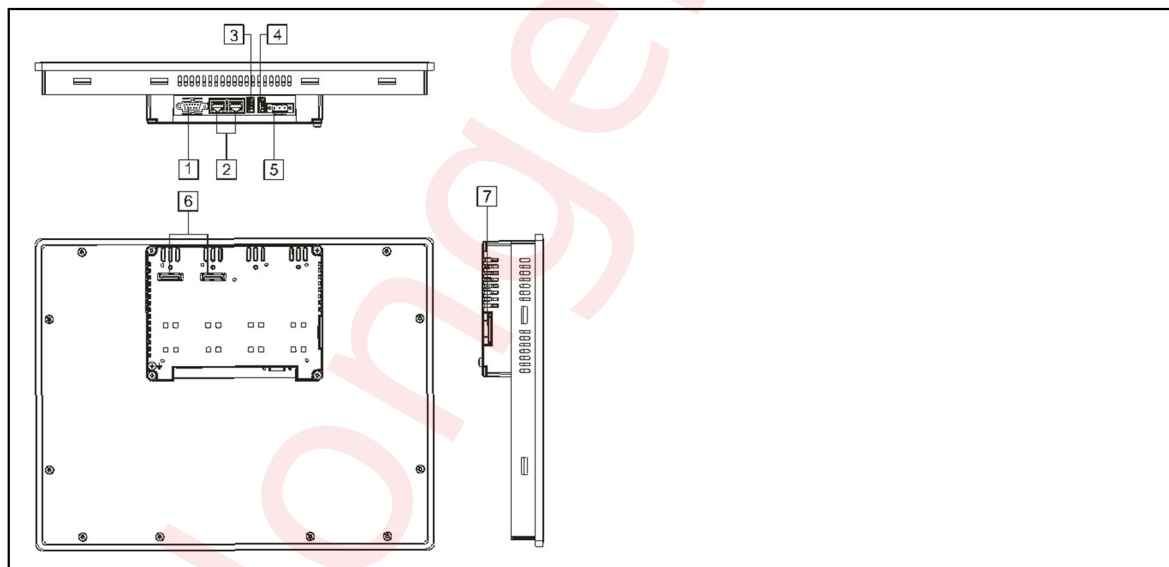
Alarms	Yes
Historical event list	Yes
Users and passwords	Yes
Hardware real-time clock	Yes. With battery backup
Screen saver	Yes
Buzzer	Yes. Audible feedback for touch screen
<b>Ratings</b>	
Power supply voltage	24 V <sub>dc</sub> (10 to 32 V <sub>dc</sub> )
Current consumption	1.25 A at 24 V <sub>dc</sub> (max.)
Fuse	Automatic
Weight	Approximately 3.5 kg
Battery	Rechargeable Lithium battery, not user-replaceable
<b>Environmental conditions</b>	
Operating temperature	0 to 50 °C (vertical installation)
Storage temperature	-20 to +70 °C
Operating and storage humidity	5 to 85 % relative humidity, non-condensing
Protection class	IP66 (front) IP20 (rear)
<b>Dimensions</b>	
Faceplate A x B	392 x 307 mm (15.43 x 12.08")
Cutout C x D	381 x 296 mm (15.00 x 11.65")
Depth E + F	60 + 4 mm (2.36 + 0.16")
<b>Approvals</b>	
CE	Emission EN 61000-6-4 Immunity EN 61000-6-2 For installation in industrial environments
DNV	DNV Type Approval Certificate
UL	UL508 Listed Haz. Loc. Class I, Division 2, Groups A, B, C and D

\* Time of continuous operation until the brightness of the backlight reaches 50 % of the rated value when the surrounding air temperature is 25 °C. Extended use in environments where the surrounding air temperature is 40 °C or higher may degrade backlight quality/reliability/durability.

## Dimensions



## Connections and ports



1. Serial port
2. 2 Ethernet ports
3. USB port (version 2.0 - 1.1)
4. USB port (version 2.0 high speed only)
5. Power supply
6. 2 expansion slots for plug-in module
7. SD card slot



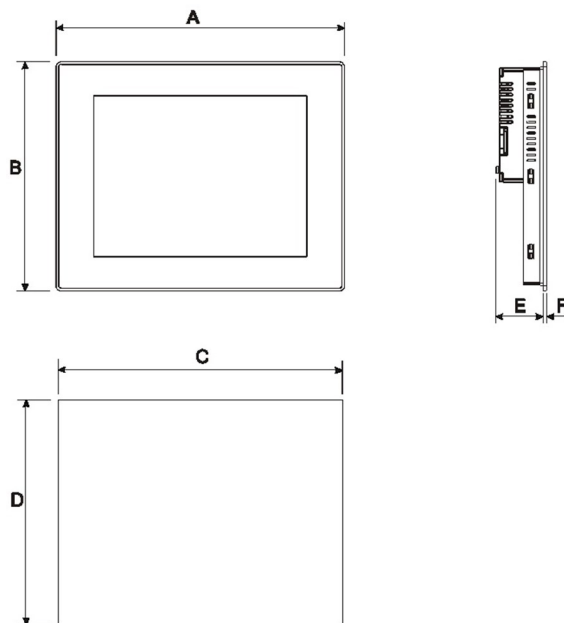
## 2.1.5 Product data and dimensions, AGI 315G

<b>Display</b>	
Type	TFT
Resolution	1024 x 768, XGA
Active display area	15" diagonal
Colours	64K
Backlight	LED
Brightness	1500 Cd/m <sup>2</sup> typ.
Dimming	Yes
Backlight service time	40,000 h or more*
<b>System resources</b>	
Operating system	Microsoft Windows CE 6.0
CPU	ARM Cortex-A8 - 1 GHz
User memory	256 MB Flash
RAM	256 MB DDR
<b>Operator interface</b>	
Touch screen	Projected capacitive
<b>Interface</b>	
Ethernet	2 10/100 Mbit with integrated switch
USB	2 host interface v. 2.0
Serial port 1	RS-232, RS-485, RS-422, software configurable
Expansion slot	2 optional plug-in
Memory card	SD card slot
<b>Functionality</b>	
Vector graphics	Yes. Includes SVG support
Object dynamics	Yes. Visibility, position, size, rotation for most object types
TrueType fonts	Yes
Multiple driver communication	Yes
Data acquisition and trend presentation	Yes. Flash memory storage
Multi-language	Yes. With runtime language switching
Recipes	Yes. Flash memory storage
Alarms	Yes
Historical event list	Yes

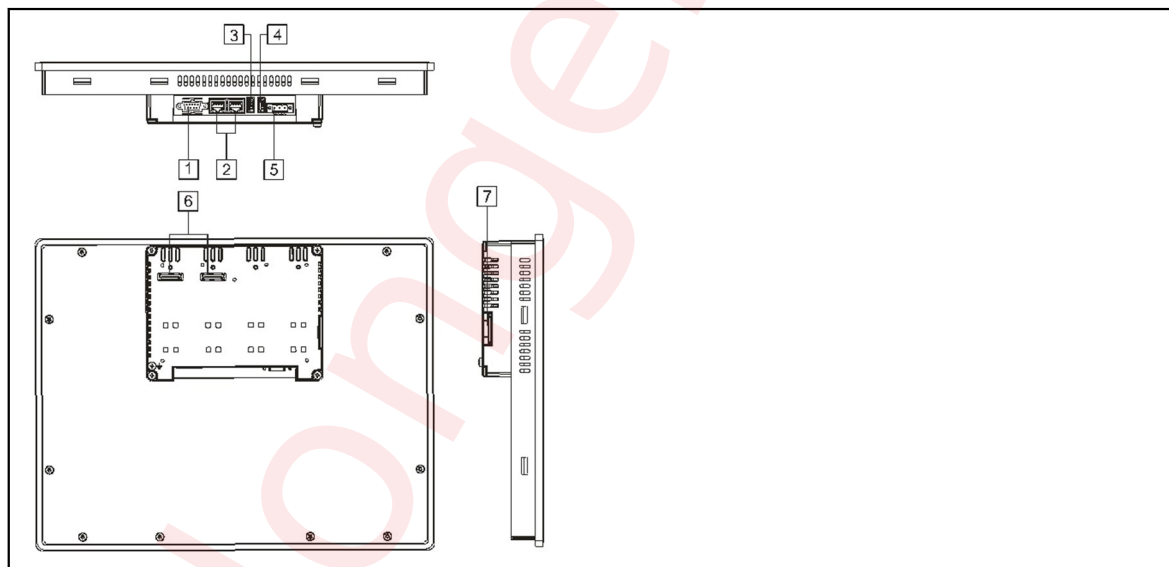
Users and passwords	Yes
Hardware real-time clock	Yes. With battery backup
Screen saver	Yes
Buzzer	Yes. Audible feedback for touch screen
<b>Ratings</b>	
Power supply voltage	24 V <sub>dc</sub> (10 to 32 V <sub>dc</sub> )
Current consumption	1.4 A at 24 V <sub>dc</sub> (max.)
Fuse	Automatic
Weight	Approximately 4.0 kg
Battery	Rechargeable Lithium battery, not user-replaceable
<b>Environmental conditions</b>	
Operating temperature	-20 to +60 °C (vertical installation)
Storage temperature	-40 to +85 °C
Operating and storage humidity	5 to 85 % relative humidity, non-condensing
Protection class	IP69K (front panel) IP20 (rear)
<b>Dimensions</b>	
Faceplate A x B	392 x 307 mm (15.43 x 12.08")
Cutout C x D	381 x 296 mm (15.00 x 11.65")
Depth E + F	56 + 8.5 mm (2.20 + 0.33")
<b>Approvals</b>	
CE	Emission EN 61000-6-4 Immunity EN 61000-6-2 For installation in industrial environments
DNV	DNV Type Approval Certificate
UL	UL508 Listed (Pending approval)
ATEX	Zone 2/22, II 3G / II 3D

\* Time of continuous operation until the brightness of the backlight reaches 50 % of the rated value when the surrounding air temperature is 25 °C. Extended use in environments where the surrounding air temperature is 40 °C or higher may degrade backlight quality/reliability/durability.

## Dimensions



## Connections and ports



1. Serial port
2. 2 Ethernet ports
3. USB port (version 2.0 - 1.1)
4. USB port (version 2.0 high speed only)
5. Power supply
6. 2 expansion slots for plug-in module
7. SD card slot

### 3. Ordering information

#### 3.1 Order specifications and disclaimer

##### 3.1.1 Order specifications

###### Touch display

Item no.	Type
2912460010.01	AGI 304*
2912460010.02	AGI 307*
2912460010.03	AGI 315**
2912460010.04	AGI 307G**
2912460010.05	AGI 315G**

\* Not recommended for new design.

\*\* No longer for sale.

###### Accessories and software licences

Item no.	Type
2912990120.01	EXM CAN-CDS (CANopen extension module)
2912990120.02	AGI Creator licence (includes 10 activation licences)
2912460020.05	AGI PC Runtime licence

##### 3.1.2 Disclaimer

DEIF A/S reserves the right to change any of the contents of this document without prior notice.